

A Cross-Cultural Study of Self-harm Comparing the UK and Thailand

Rungarun Anupansupsai

*Thesis submitted to the University of Nottingham
for the degree of Doctor of Philosophy*

April 2019

Abstract

Self-harm is a serious public health concern with a large academic literature. Though different cultures have reported different self-harm prevalence, there is limited literature focusing on cultural influences on self-harm. To broaden our understanding, this thesis investigated the differences in self-harm comparing the United Kingdom and Thailand. Thailand is a growing economy, in which self-harm is increasing, but has a culture of mindfulness which has been found to manage mental health problems in other societies.

This thesis comprises three studies (Chapters Three, Four, and Five): the first examined the differences in the characteristics of self-harm in the UK and Thailand, the second examined the differences between various subgroups of self-harm, and the third develops and assesses a guideline for self-harm early intervention for Thai clinicians. The first two studies were conducted quantitatively using the same online survey. The third followed the Delphi method, and included a feasibility study to validate the acceptability of the guideline.

Chapter Three revealed that the prevalence, methods, frequency, number of methods, and motives of self-harm were significantly different between the UK and Thailand. In both cultures, the most common motive was the “cry of pain” (to get relief from a terrible state of mind), the age of onset was in adolescence, and not seeking help was reported at similar rates in both cultures. The lifetime self-harm prevalence was lower in Thailand than in the UK (16.8% vs. 36.7%). Culture affected the methods of self-harm; cutting was the most common method in the UK, whereas punching was the most common in Thailand. Skin injury and drug consumption were not as common in Thailand as in the UK. British people reported a higher frequency of self-harm and higher number of self-harm methods than Thai people, and “cry for help” motives were more common in Thailand than in the UK.

Despite cultural differences, interactions of culture and self-harm on risk factors were not significant, and risk factors for self-harm were similar across both societies. Being British, female gender, non-heterosexuality, unemployment,

chronic physical illness, psychiatric service history, drug consumption, and exposure to the self-harm of others were all associated with self-harm. Emotionality, Negative Urgency, Difficulties in Emotion Regulation, Rumination, Depression, and Anxiety showed positive associations with self-harm, whereas Extraversion and all scales of Mindfulness (except Observing) showed negative associations. However, only female gender, non-heterosexuality, chronic physical illness, psychiatric service history, drug consumption, Non-reactivity Mindfulness, and Depression were associated with self-harm in a multivariate logistic regression.

Chapter Four examined the differences between subgroups of self-harm (recency, frequency, and motivation), comparing the UK and Thailand. No interactions between culture and subgroups on psychosocial factors and psychological characteristics were significant. The findings also revealed that almost all psychosocial factors were comparable between subgroups; only culture distinguished repetitive from occasional self-harm, and only having psychiatric service history distinguished recent from past self-harm. However, several psychological characteristics distinguished between all subgroups. The recent self-harm group reported higher scores on Goal DER (Difficulties in Emotion Regulation), Strategies DER, Negative Urgency, and Depression, and lower scores on Awareness Mindfulness, Non-reactivity Mindfulness, and Extraversion. The repetitive self-harm group reported lower scores on Agreeableness and Extraversion, and higher scores on Goal DER, Strategies DER, Depression, and Anxiety. The Motivation to die group reported higher scores for Depression, Brooding Rumination, Negative Urgency, Goal DER, Strategies DER, and Impulsive DER, and lower scores for Awareness Mindfulness, and Extraversion. In addition, more severe subgroups indicated more adverse psychological problems in their histories than less severe subgroups.

Chapter Five revealed that the guideline for self-harm early intervention developed from these results for Thai clinicians was feasible when implemented in a healthcare service. The guideline was of good quality (clear, concise, and comprehensive, with an attractive design) and Thai clinicians who worked in hospitals reported that the guideline was acceptable, practical, effective, and

user-friendly. However, the guideline may require adaption to be more suitable for healthcare settings lacking emergency units or inpatient wards.

The findings of this research suggest that clinicians should consider the influence of cultural differences and self-harm characteristics of subgroups when providing appropriate treatment for patients who self-harm. This research recommends implementing the guideline for self-harm early intervention to improve clinical services for these patients in Thailand.

Key words: cross-cultural study, self-harm, personality, impulsivity, emotion regulation, mindfulness, rumination, guideline, early intervention

Acknowledgements

Firstly, I would like to thank the Faculty of Medicine Siriraj Hospital, Mahidol University for granting me the Siriraj Development Scholarship, which allowed me to study at the University of Nottingham. I wish to thank Associate Professor Sucheera Phattharayuttawat, Associate Professor Thienchai Ngamthipwatthana, and Associate Professor Sudsabuy Chulakadabba for their support. It would not have been possible to complete this thesis without their investment and trust, for which I am very grateful. I also extend my thanks to Associate Professor Kanokrat Sukhatungkha for her kindness, support, and I have always followed her example as a clinical psychologist.

I would like to thank my primary supervisor Associate Professor Vincent Egan for being a great role model and for offering useful academic advice. I was fortunate to have him as my supervisor. His patience and continuous support have been invaluable. I wish to thank my secondary supervisor Professor Thomas Schroder for his professional guidance. I would like to express my sincere gratitude to both of them for their mentoring and kindness and they have been a pleasure to work with.

I would also like to thank Associate Professor Claire Lawrence who was my first and second year internal assessor for her useful suggestions. I am very grateful to Professor Ellen Townsend and Professor Rory O'Connor for accepting to be my internal and external examiners in the final viva. I much appreciated their valuable feedback, guidance, and important views on self-harm.

I would like to extend my appreciation to the participants, experts and stakeholders of this study for investing so much of their time. Their input and insights were essential to the research.

I am forever grateful to my family for their continued help and support throughout the challenges I have faced. My aunt has always been my inspiration. Finally, I would like to thank my husband for his reassurance and encouragement.

Contents

Abstract.....	i
Acknowledgements	iv
Contents.....	v
List of Tables.....	x
List of Figures.....	xii
Chapter 1: Introduction and Literature Review	1
1.1. Introduction	1
1.1.1 Aim of the Thesis.....	3
1.1.2 Structure of the Thesis.....	4
1.2. Literature Review	6
1.2.1 Self-Harm.....	6
1.2.2 Risk Factors for Self-Harm	14
1.2.3 Protective Factors for Self-harm	23
1.2.4 Culture and Self-harm.....	25
Chapter 2: Methodology of Quantitative Studies	26
2.1 Recruitment of Participants.....	26
2.2 Study Design	27
2.3 Procedure.....	27
2.4 Instruments	28
2.5 Translation Process.....	32
2.6 Reliability	38
2.7 Content Validity	40
2.8 Equivalence of Factor Structure.....	40
2.9 Data Analysis.....	42
2.10 Ethical approval	44

2.11 Summary	44
Chapter 3: Differences in Self-harm between the UK and Thailand	45
3.1 Introduction	45
3.2 Objectives	46
3.3 Literature Review	46
3.3.1 Cultural Differences	46
3.3.2 The View of Buddhism towards Suicide.....	49
3.3.3 Prevalence of Self-harm	49
3.3.4 Methods of Self-harm.....	51
3.3.5 Onset of Self-harm	51
3.3.6 Help-seeking Behaviours	52
3.3.7 Motives for Self-harm	53
3.3.8 Risk Factors for Self-harm	54
3.4 Hypotheses	55
3.5 Method	56
3.5.1 Matching model.....	57
3.5.2 Participants of this Study.....	57
3.6 Data Analysis.....	58
3.7 Results	59
3.7.1 Self-harm Characteristics	59
3.7.2 Risk Factors for Self-harm	72
3.7.3 Characteristics of British and Thai People.....	84
3.8 Discussion	87
3.8.1 Self-harm Characteristics	87
3.8.2 Risk Factors for Self-harm	93
3.8.3 Model of Self-harm Prediction for the UK and Thailand	101
3.8.4 Characteristics of British and Thai People.....	102
3.9 Conclusion.....	106

3.9.1 Clinical Implications	108
3.9.2 Strengths, Limitations, and Future Research	108
Chapter 4: Psychosocial Factors and Psychological Characteristics that Differentiate Subgroups of Self-harm.....	110
4.1 Introduction	110
4.2 Objectives	111
4.3 Literature Review	111
4.3.1 Recency of Self-harm	111
4.3.2 Frequency of Self-harm	112
4.3.3 Motivation to Die	113
4.3.4 Culture and Subgroups of Self-harm	115
4.4 Method	115
4.4.1 Matching Model	115
4.4.2 Participants of this Study	116
4.4.3 Definition of Subgroups of Self-harm	116
4.5 Data Analysis.....	117
4.6 Results	117
4.6.1 Recency	119
4.6.2 Frequency	128
4.6.3 Motivation to die as a motive for Self-harm	134
4.7 Discussion	136
4.7.1 Role of Culture in Subgroups of Self-harm	136
4.7.2 Recency	137
4.7.3 Frequency	141
4.7.4 Motivation to Die	145
4.8 Conclusion.....	148
4.8.1 Clinical Implications	150
4.8.2 Strengths, Limitations, and Future Directions.....	152
Chapter 5: Guideline for Self-harm Early Intervention for Thai Clinicians....	154

5.1 Introduction	154
5.2 Objectives	155
5.3 Literature Review	155
5.3.1 Mental Healthcare System in Thailand	155
5.3.2 Guidelines	156
5.3.3 Guideline for Self-harm Early Intervention created for Delphi Study	158
5.3.4 Delphi Technique.....	160
5.3.5 Feasibility Study	163
5.4 Delphi Technique.....	164
5.4.1 Participants of the Delphi Method	164
5.4.2 Delphi Process	164
5.4.3 Delphi Analysis.....	166
5.4.4 Ethical Considerations	168
5.4.5 Results of the Delphi Study.....	169
5.5 Feasibility Study.....	173
5.5.1 Participants of the Feasibility Study	173
5.5.2 Methods	174
5.5.3 Results.....	174
5.6 Discussion and Conclusion	185
5.6.1 Guideline Evaluation	185
5.6.2 Strengths and Limitations.....	188
5.6.3 Research Implications	188
5.6.4 Clinical Implications	188
Chapter 6: Conclusion	190
6.1 Summary of Each Study.....	190
6.1.1 Summary of Chapter 3: Differences in Self-harm between the UK and Thailand	191
6.1.2 Summary of Chapter 4: Psychosocial Factors and Psychological Characteristics that Differentiate Subgroups of Self-harm	193

6.1.3 Summary of Chapter 5: Guideline for Self-harm Early Intervention for Thai Clinicians	196
6.2 General Discussion	198
6.2.1 The Role of Culture in Self-harm.....	198
6.2.2 The Role of Risk Factors regarding Self-harm and Subgroups of Self-harm.....	202
6.2.3 Guideline for Self-harm Early Intervention for Thai Clinicians	212
6.3 Clinical Implementation.....	213
6.4 Strengths, Limitations, and Further Research.....	214
References.....	217
Appendices	237
Appendix 1: Participant Information for Quantitative Studies.....	237
Appendix 2: Participant Consent for Quantitative Studies.....	240
Appendix 3: Questionnaires for Quantitative Studies	241
Appendix 4: Syntax of FDR using SPSS	246
Appendix 5: Correlation between Psychological Characteristics	247
Appendix 6: Participant Information for Qualitative Study	248
Appendix 7: Participant Consent for Qualitative Study	251
Appendix 8: Guideline for Round 1	252
Appendix 9: Guideline Evaluation Sheet 1	254
Appendix 10: Guideline for Round 2	258
Appendix 11: Final Guideline for Feasibility Study	261
Appendix 12: Quality check for Delphi Round 1	264
Appendix 13: Definitions of Analysis Framework	271
Appendix 14: Quality Check for Feasibility Study	273
Appendix 15: An Example of Transcripts from Feasibility Interview categorised into Framework of Feasibility.....	277
Appendix 16: Questions of Semi-structured Interviews.....	278

List of Tables

Table 1 Participants of pilot study	35
Table 2 Cronbach's alphas and the comparison of alphas between the original questionnaire and the pilot study questionnaire	36
Table 3 Cronbach's alphas and the comparison of alphas between the original questionnaire and the Thai version of the questionnaire.....	39
Table 4 Factor analysis of the UK and Thailand	41
Table 5 Correlation of factors between the UK and Thailand	42
Table 6 Multicollinearity of variables.....	43
Table 7 Demographic data of UK and Thailand before and after matching by Pearson chi-square test (matched cases in italics).....	58
Table 8 Self-harm prevalence in the UK and Thailand	59
Table 9 Methods of self-harm	60
Table 10 Ranking of methods.....	61
Table 11 Frequency of self-harm	63
Table 12 Single/multiple methods and number of methods of self-harm	64
Table 13 Onset of self-harm.....	64
Table 14 Onset of self-harm in each method	65
Table 15 Hospitalisation after self-harm acts.....	67
Table 16 Self-harm disclosure	68
Table 17 Ranking the number of motives reported.....	69
Table 18 Motives for self-harm	70
Table 19 Chi-square of risk factors for self-harm	72
Table 20 Univariate logistic regression of risk factors for self-harm in the UK and Thailand	74
Table 21 Differences of psychological characteristics between people who self-harm and people who do not in both countries	76
Table 22 Two-way ANOVA results from self-harm and psychological characteristics	77
Table 23 Univariate logistic regression exploring the risk factors for self-harm in both countries.....	80
Table 24 Univariate logistic regression exploring the risk factors for self-harm	81
Table 25 Logistic regression exploring the risk factors for self-harm controlling for culture, age, gender	82

Table 26 Final model of risk factors in the UK and Thailand	83
Table 27 Different personal habit characteristics of people in the UK and Thailand	85
Table 28 Multivariate logistic regression of cultural differences	86
Table 29 Matching data	116
Table 30 Self-harm characteristics of subgroups of self-harm	118
Table 31 Personal information of recency subgroups	119
Table 32 Association between personal information and recency subgroups	120
Table 33 Psychological characteristics of the recency subgroups	121
Table 34 Personal information of the frequency subgroups.....	125
Table 35 Association between personal information and frequency subgroups	126
Table 36 Psychological characteristics of frequency subgroups	127
Table 37 Personal information of motivation to die subgroup.....	131
Table 38 Association between personal information and motivation to die subgroups.....	132
Table 39 Psychological characteristics of motivation to die subgroups	133
Table 40 The number of the items in the criteria	170
Table 41 Inclusion criteria of participants.....	173
Table 42 Demographic data of the clinicians in the feasibility study.....	175

List of Figures

Figure 1 Structure of the thesis	5
Figure 2 Integrated Motivational-Volitional Model of Suicidal Behaviour (O'Connor, 2011 as cited in O'Connor, Rasmussen, & Hawton, 2012)	12
Figure 3 Potential factors that influence self-harm in the present study	14
Figure 4 Number of participants for data analysis	27
Figure 5 A bar chart of self-harm methods.....	61
Figure 6 A bar chart showing motives of self-harm	69
Figure 7 Graph of interaction on Anxiety.....	79
Figure 8 Timeline of the Delphi method	166
Figure 9 Delphi Method and Feasibility Study Process.....	168
Figure 10 Flow chart of items in the Delphi method	169

Chapter 1: Introduction and Literature Review

1.1. Introduction

Self-harm is a serious public health concern. More than 800,000 deaths by suicide per year are reported (World Health Organization, 2014). It is a major cause of admission to hospital for adolescents and is also the best predictor of suicide (Hawton, Saunders, & O'Connor, 2012). Self-harm has grave implications — in one study 19% of individuals who engaged in self-harm subsequently died by suicide (Hawton et al., 2015). A significant amount of research has been conducted on patients who present to the hospital with self-harm. However, it has also been reported that many individuals who engage in self-harm do not present to the hospital (Hawton, Rodham, Evans, & Harriss, 2009). Studying a nonclinical population enables an understanding of the whole picture of self-harm, enabling appropriate prevention and early intervention across the self-harming population.

It is possible to improve predictions of self-harm by studying self-harm characteristics and risk factors. Females are more likely to engage in self-harm than males (Hawton et al., 2012). The individual's environment is related to self-harm occurrence (e.g. living alone, exposure to self-harm of friends and family members, and living in urban areas) (Adrian, Zeman, Erdley, Lisa, & Sim, 2011; Harriss & Hawton, 2011; Larkin, Di Blasi, & Arensman, 2014; Mars et al., 2014).

Regarding vulnerability characteristics, personality is considered salient; individuals who self-harm have significantly higher levels of neuroticism and lower levels of extraversion than those who do not (Brezo, Paris, & Turecki, 2006). Many studies also pay attention to impulsivity, finding that individuals who engage in self-harm have higher impulsivity scores than those who do not (Hamza, Willoughby, & Heffer, 2015). Impulsivity is a common difficulty in persons with mental disorders (Buckholtz & Meyer-Lindenberg, 2012).

The ability for an individual to manage their emotions is very important. Poor emotional regulation shows significant association with self-harm engagement;

individuals who engage in self-harm report higher scores in emotional dysregulation (Adrian et al., 2011). Rumination is also linked to self-harm; individuals who self-harm have higher scores on rumination indices (Morrison & O'Connor, 2008). One of the common risk factors is mental health: depression and anxiety are positively associated with self-harm (Fliege, Lee, Grimm, & Klapp, 2009). Mindfulness has a protective association with self-harm, reducing its probability. Individuals with self-harm report significantly lower scores on Mindfulness (Lundh, Karim, & Quilisch, 2007; Yusainy & Lawrence, 2014). Although Mindfulness originated from Eastern traditions, Mindfulness meditation practices have been adapted for several mental health interventions in Western countries (Baer, Smith, Hopkins, Krietemeyer, & Toney, 2006). It is important to understand mindfulness in the context of self-harm and different cultures.

Culture plays an important role in determining both the risk factors and the protective factors for self-harm, and self-harm in different cultures shows different epidemiologies. Although a few cross-cultural studies have been conducted, the majority of countries compared have been in Europe (Portzky, De Wilde, & van Heeringen, 2008). Comparison of self-harm across Western and Eastern cultures is still limited.

Thailand is located in Southeast Asia, and the majority (93.6%) of its people are raised to be Buddhist (National Statistical Office, 2010). Buddhism influences the way of living; especially family values such as adult children living with, and looking after their ageing parents. Buddhism also emphasizes important psychological characteristics such as Mindfulness. For these reasons, a comparison of self-harm in British and Thai cultures will greatly benefit the literature.

Different facets pertaining to self-harm have different psychological characteristics. Although the majority of the literature focuses on lifetime self-harm, people who currently self-harm have markedly different characteristics from people who have discontinued self-harming. Other important subgroups are repetitive self-harm relative to occasional self-harm. Repetitive self-harm predicts higher risk of dying by suicide (Bergen et al., 2012) and more severe psychological problems than occasional self-harm (Brunner et al., 2007; Lüdtke et al., 2017). The last crucial consideration is if people who self-harm express the motivation to die, or another motivation. One study found the motivation to

die group had more severe mental problems than the “other motivations” group (Mars et al., 2014). Understanding such differences may allow clinicians to provide more specific and appropriate treatment based on the profile of the patient.

Intervention is required for individuals who self-harm. Unfortunately, they rarely attend follow-up in hospital (Granboulan, Roudot-Thoraval, Lemerle, & Alvin, 2001). Early assessments and interventions are therefore required to encourage individuals to engage in long-term treatment, and to give them some basic coping skills straight away. Guidelines enhance the quality and consistency of care (Woolf, Grol, Hutchinson, Eccles, & Grimshaw, 1999). Thailand lacks guidelines regarding early-stage treatment for self-harm, regardless of suicidal intention. In addition, psychological intervention needs to be provided with a consideration of cultural differences, rather than uncritically applying a Western model (Hall, Ibaraki, Huang, Marti, & Stice, 2016).

1.1.1 Aim of the Thesis

The primary aim of this thesis is to understand the differences in self-harm, irrespective of suicidal intention, in the UK and Thailand. The thesis has three aims:

1. Examine the differences (self-harm characteristics and risk factors) in self-harm comparing the UK and Thailand.
2. Examine the differences of psychosocial factors and psychological characteristics between subgroups of self-harm comparing the UK and Thailand.
3. Develop a guideline for clinician early intervention with patients who self-harm in Thailand.

Overall, this thesis aims to provide an understanding on the role of culture, the risk factors for self-harm, and the differences between subgroups of self-harm between the UK and Thailand, implementing all these insights and putting them into clinical practice by developing a treatment guideline. The thesis structure is presented below.

1.1.2 Structure of the Thesis

The thesis is divided into six chapters as shown in Figure 1. The structure is presented as follows:

1.1.2.1 Chapter 1: Introduction and Literature Review

The introduction describes the background, overall aims, and structure of the thesis, as well as the literature review.

1.1.2.2 Chapter 2: Methodology of Quantitative Studies

This chapter outlines the methodology of the quantitative studies. The first two studies (Chapter 3 and Chapter 4) employed the same quantitative method using online surveys.

1.1.2.3 Chapter 3: Differences in Self-harm between the UK and Thailand

The differences in self-harm characteristics and risk factors for self-harm are examined with regard to:

1.1.2.3.1 Self-harm characteristics: prevalence, methods, frequency, number of methods, onset age, hospitalisation, disclosure, and motives of self-harm.

1.1.2.3.2 Risk factors: psychosocial factors and psychological characteristics.

a. The psychosocial factors comprise: age, gender orientation, education level, marital status, employment status, chronic physical illness, psychiatric service history, living status, living area, alcohol abuse, drug consumption, and exposure to the self-harm in others.

b. The psychological characteristics are: personality, impulsivity, difficulties in emotion regulation, mindfulness, rumination, depression, and anxiety.

1.1.2.4 Chapter 4: Psychosocial Factors and Psychological Characteristics that Differentiate Subgroups of Self-harm

Differences were examined between three different subgroups of self-harm:

a. Recency subgroups: recent versus past self-harm

b. Frequency subgroups: repetitive versus occasional self-harm

c. Motivation subgroups: motivation to die versus other motivations

1.1.2.5 Chapter 5: Guideline for Self-harm Early Intervention for Thai Clinicians

This chapter is divided into two processes.

- a. A Delphi method: to develop the guideline with a two round Delphi.
- b. Feasibility study: to verify the feasibility of the guideline.

1.1.2.6 Chapter 6: Conclusion

This chapter consists of summaries of key findings, general discussion, and clinical implications; it closes with a brief discussion of strengths, limitations, and directions for future research.

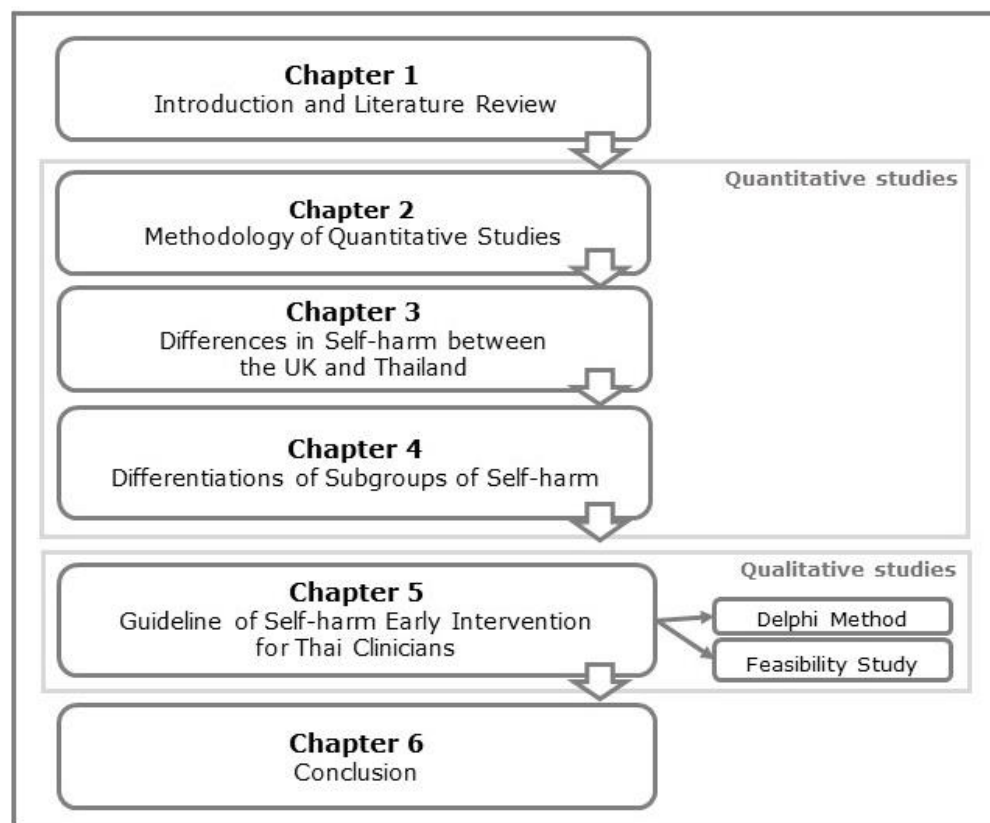


Figure 1 Structure of the thesis

1.2. Literature Review

The awareness of the prevalence of self-harm has increased globally (Nock, 2010). Understanding the behaviour underlying self-harm has great importance regarding understanding and providing appropriate treatments for this distressing behaviour. To present a general picture of self-harm, this section will briefly review the associated literature regarding self-harm and related phenomena.

1.2.1 Self-Harm

1.2.1.1 Definition

Self-harm is one of various terms describing self-destructive behaviour. The term supersedes synonymously used terms such as deliberate self-injury, moderate self-mutilation, self-wounding, and parasuicide (Klonsky, Oltmanns, & Turkheimer, 2003).

Inconsistent definitions of self-harm obstruct the clear study of self-harm behaviour (Nock 2010). The commonly approved term for the behaviour in the United States is non-suicidal self-injury (NSSI), which is defined as intentional self-injury resulting in relevant tissue damage such as skin cutting, scratching, and burning, without conscious suicidal intention (Klonsky, 2007; Swannell, Martin, Page, Hasking, & St John, 2014).

The more prevalent descriptive term in European countries and Australia (Fliege et al., 2009) is deliberate self-harm, which includes intentional self-injury or self-poisoning, focusing on a nonfatal outcome regardless of suicidal intention (Hawton & Harriss, 2008). To avoid presumptuous judgment and unclear intention, the adjective "deliberate" has recently been dropped (Kapur, Cooper, O'Connor, & Hawton, 2013).

Considering the differences between both terminologies First, the term NSSI excludes suicidal intention, whereas the term self-harm applies regardless of suicidal intention; this term therefore encompasses both suicide attempts and acts with no suicidal intention. However, intention is sometimes difficult to

assess reliably using self-report due to a patient's bias caused by inaccuracy and/or ambivalence (Kapur et al., 2013; Nock, 2010). Second, the term NSSI restricts the methods to be considered (to cutting, burning, hitting, etc.), so excludes overdosing as it does not directly affect body tissue (Favazza, 1998). However, overdosing and self-poisoning play an important role in self-harm studies, as large numbers of individuals take overdoses with no specific suicidal intention (Rodham, Hawton, & Evans, 2004). Individuals who engage in self-harm report switching methods; over 60% of individuals cutting themselves changed to self-poisoning (Kapur et al., 2013).

To not underestimate the prevalence and to enable an understanding of the whole picture of self-harm, the present study endorses the broader definition of self-harm comprising both self-injury and self-poisoning, regardless of motivation to die.

1.2.1.2 Prevalence of Self-harm

Systematic reviews suggest an overall self-harm prevalence of 16.1% in the international nonclinical population (Muehlenkamp, Claes, Havertape, & Plener, 2012). Prevalence is higher in clinical psychiatric groups. After discharge from psychiatric inpatient care, one third (32%) of such patients subsequently self-harmed in the next four weeks (Gunnell et al., 2008).

Self-harm is more common in young people (Townsend, 2014); the most common age of onset is 13-15 years old (Hawton et al., 2012). Female offenders more commonly engage in self-harm (45.9%) than males (Völlm & Dolan, 2009).

People who engage in self-harm and present to hospital have a higher risk of repetitive self-harm. A systematic review and meta-analysis found the estimated one year incidence of repetitive self-harm in patients was 16.3% (Carroll, Metcalfe, & Gunnell, 2014). The Multicentre Study of self-harm in England conducted between 2000-2010 found a 19% suicide mortality rate (Hawton et al., 2015). This was 49 times greater than the general population risk. It was reported that fewer than 13% of people who self-harm present in the hospital. Between a third and one half of people do not disclose self-harm.

This indicates that informal sources of support may be more relevant and common than professional help seeking (Rowe et al., 2014).

1.2.1.3 Methods of Self-harm

In the general population, the most common self-harm method is cutting (69.7%) followed by scratching (11.8%) (Doyle, Treacy, & Sheridan, 2015). For patients in general hospitals, self-poisoning is the most common self-harm method (82.4%), whereas self-injury was observed in 10.1% (Haw, Casey, Holmes, & Hawton, 2015). Hanging was the most common self-harm method causing death (Hawton et al., 2015; Williams, Schmaltz, Castro, Baker, & Safety, 2018). Moreover, most individuals reported using a variety of methods to harm themselves (Nock, 2010).

1.2.1.4 Motives for Self-harm

The question of why people harm themselves could lead to better understanding of self-harm behaviours.

Nock (2010) highlights the positive and negative reinforcement process of interpersonal and intrapersonal functions of self-injury, which divide into four possible reinforcement processes; 1) Intrapersonal negative reinforcement, which acts to reduce aversive thought or feeling (e.g. tension relief); 2) Intrapersonal positive reinforcement, which acts to increase desired thoughts or feelings (e.g. feeling satisfied from punishing oneself); 3) Interpersonal positive reinforcement through a desired social occurrence after self-harm (e.g. attention); and 4) Interpersonal negative reinforcement decreasing negative social occurrence (e.g. stop fighting).

Klonsky (2007) reviewed the literature on the function of self-injury, and proposed seven functions: affect-regulation, anti-dissociation, anti-suicide, interpersonal boundaries, interpersonal-influence, self-punishment, and sensation seeking. The most commonly reported function was affect-regulation; 76% of psychiatric inpatients reported tension release, while 80% of psychiatric inpatients and outpatients reasoned that self-injury provided a distraction from painful feelings. In nonclinical samples, 72% reported that they engaged in self-harm to control their mind when it was racing.

To focus more specifically on self-harm irrespective of suicidal intention, several studies have found that the most common reason for self-harm is to get relief from a terrible state of mind (Jacobson, Batejan, Kleinman, Gould, & Behavior, 2013; Madge et al., 2008; Morey, Corcoran, Arensman, & Perry, 2008). A systematic review also revealed that affect regulation was the most common reason for self-harm (Edmondson, Brennan, & House, 2016). This supports the Cry of Pain model which suggests that self-harm can serve as the way to escape from defeat and entrapment (Williams & Pollock, 2000). The two related models are described below.

1.2.1.5 Models of Self-harm

Several theoretical models have explained the potential factors and mechanisms of self-harm. The models of self-harm are selectively reviewed below.

1.2.1.5.1 Three-Step Theory (3ST)

The 3ST is a new model positioned within an ideation-action framework (Klonsky & May, 2015), which conceptualises the formation of suicidal ideation and transition between suicidal ideation and suicide attempts. There are three steps as follows:

Step 1: Development of suicidal ideation

The theory hypothesises that suicidal ideation results from the combination of pain (usually psychological pain) and hopelessness. According to behavioural condition, emotional pain acts as a punishment of living. As a result, an individual's desire to live decreases when suffering with emotional pain thus initiating thoughts about suicide. However, pain alone is not sufficient to produce suicidal ideation, living without hope that the pain will improve is also required.

Step 2: Strong versus moderate ideation

Among those experiencing both pain and hopelessness, connectedness is a key protective factor against escalating ideation. Connectedness refers to connection to others, but also includes an attachment to jobs, interests, and a sense of perceived purpose or meaning of living. If one's connectedness to life is greater than one's pain, the persons will not progress to active desire for

suicide (suicidal ideation remains moderate). Whereas, people with pain and hopelessness but without or less connectedness (comparing to pain), the person will have strong suicidal ideation.

Step 3: Progression from ideation to attempts

The theory views the progression from ideation to attempts as facilitated by dispositional, acquired, and practical contributors to the capacity to attempt suicide. *Dispositional* refers to relevant variables that are driven largely by genetics such as pain sensitivity and blood phobia. Someone born with low pain sensitivity will have a higher capacity to attempt suicide, whereas someone born with a blood phobia will have a lower capacity. *Acquired* refers to habituation to experiences associated with pain, injury, fear, and death can lead over time to higher capacity for a suicide attempt. *Practical* refers to concrete factors that make it easier for people to perform suicide such as access to means and have knowledge of suicide methods (i.e. how to end one's life painlessly).

1.2.1.5.2 Experimental Avoidance Model (EAM)

The EAM explains the primary function of self-harm as avoidance of or escape from unwanted or aversive states of emotional arousal (Chapman, Gratz, Brown, & therapy, 2006). This model focuses on self-harm without suicidal intention. The model explains when triggers or evocative events elicit aversive negative responses (anger, shame, sadness, and frustration), individuals will escape from the state of emotional arousal using self-harm. The potential mechanisms of escaping from emotional arousal are that self-harm serves as a way to get relief from emotional distress as endogenous opioid release; as a distraction to shift attention away from emotional pain to physical pain; and as self-punishment. Individuals believe that they deserve the punishment; they will have a sense of control and diminish their emotional arousal after self-harm. As a result, the temporary relief acts as negative reinforcement and becomes the condition. EAM also delineates additional factors that may enhance experiential avoidance such as emotional intensity, deficits in emotion regulation skills, and distress intolerance.

1.2.1.5.3 The Integrated Motivational–Volitional (IMV) Model

The IMV model is a predominant framework that was developed to understand suicidal behaviour and applies to self-harm, regardless of suicidal intention

(O'Connor & Kirtley, 2018). The IMV model has a three-phase approach (see figure 2):

The Pre-motivational Phase outlines the background factors and triggering events. Diathesis, social and environmental contexts and life events influence the emergence of suicidal ideation and behaviour. Diathesis comprises factors that lead to vulnerability, such as neurotransmitters and personality increasing the likelihood of feeling defeat. Combining this with social and environment problems such as socioeconomic difficulties and stressful life events, including early adversity, triggers the latter phases (defeat and entrapment).

Next, the Motivational Phase outlines the factors that influence the formation of suicidal ideation/intention. This phase is consistent with the findings of Williams' Cry of Pain model (addressed in following section). Central to this phase is the theory that feelings of defeat and humiliation can trigger feelings of entrapment, which in turn, determine suicidal intention. However, entrapment is not inevitable. Threats to self-moderators (TSMs) are constructs that can strengthen or weaken the relationship between defeat and entrapment. Examples of TSMs are social problem-solving, memory biases, and rumination, especially brooding rumination. This phase also hypothesised that individuals with less negative attitudes toward suicide are more likely to choose self-harm /suicide. Suicidal behaviours are conceived as a potential solution to escape from the feelings of being trapped. This phase also includes factors that allow individuals who are trapped to feel less pain by perceiving positives in their lives such as alternative solutions, positive future, goal pursuit, belongingness, and connectedness.

The final Volitional Phase outlines the factors that influence the transition from suicidal ideation to suicidal enactment. Environmental accessibility to the means of suicide/self-harm is an important risk. Cognitive accessibility to the idea of suicidality, such as exposure to the suicidal behaviours of others, increases the likelihood when individuals face stressful situations. Vulnerable individuals may be influenced by media representations. Impulsivity or planning is the process of enactment. Planning is a form of mental imagery and functions as cognitive rehearsal. In terms of repetitive self-harm, individuals who have self-harmed before can again trigger the formation model as they perceive that they had capability to control their previous acts.

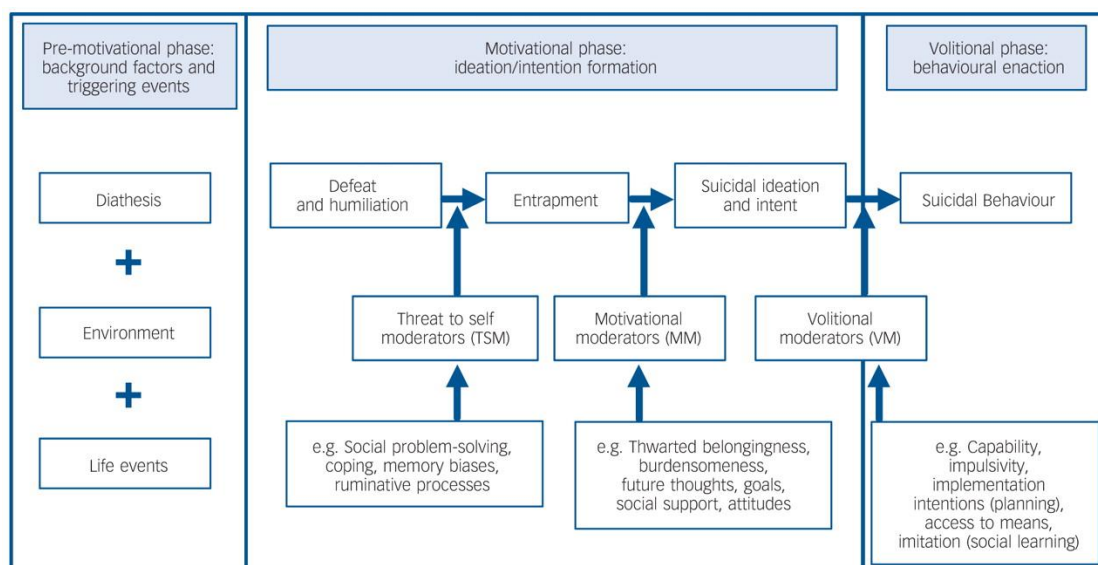


Figure 2 Integrated Motivational-Volitional Model of Suicidal Behaviour (O'Connor, 2011 as cited in O'Connor, Rasmussen, & Hawton, 2012)

1.2.1.5.4 The Cry of Pain Model (CoP)

The Cry of Pain model, devised by Williams and Pollock (2000), suggests suicidal behaviour is conceived from a combination of three factors: feeling defeated; feeling trapped; and no belief of a potential escape or rescue from defeat. The feeling of defeat can be caused by either internal psychological problems (e.g. depression and anxiety) or external conditions such as unemployment or relationship issues. Entrapment is being trapped in a situation in which individuals perceive an inability to escape. This may lead individuals' hopelessness, perceiving no possible rescue in the future. Self-harm or suicide attempts may be viewed as a way to escape. This model suggests that the motive of suicidal behaviours are a "cry of pain", which is a wish to die or to escape from an unbearable situation. However, communicative motive or "cry for help" could also be seen only as secondary (Rasmussen et al., 2010).

The objective of this thesis is to comprehensively understand the differences in self-harm between the UK and Thailand and develop a self-harm early intervention guideline. These four models of self-harm indicate the extent of overlap. Emotional regulation elements have mutually important roles in the CoP, EAM, and IMV models. The transformation of suicidal ideation to enactment is explained in the 3ST, CoP, and IMV models. The IMV model focuses on a broader range of factors that influence self-harm regardless of suicidal intention.

Therefore, this model could help capture the potential factors to understand self-harm and could help with the development of an early intervention guideline. The CoP model is explained in the motivational phase of the IMV model and also describes intrapersonal motives (cry of pain) and interpersonal motives (cry for help), which are important to understand the cultural differences between individualism and collectivism (see explanation in Chapter 3 section 3.3.1). As such, the IMV model has been chosen as the main theoretical framework for this thesis. The CoP model has been chosen as an additional explanation theory.

1.2.1.6 The Overarching Theoretical Framework for this Thesis

In order to examine the differences in self-harm between the two countries, one of the crucial aspects are risk factors. In this present study, proximal risk factors were captured rather than distal risk factors in order to understand the current problems and provide the possible intervention in the developed guideline. These risk factors were mainly captured from the IMV model as described below (see Figure 3).

The Pre-motivational Phase addresses the background and trigger factors for self-harm ideation and behaviour. The trigger factors most likely to lead people to harm themselves were unemployment status, lower income, marital problems, and chronic physical illness. Personality, as a vulnerability factor, was selected. Homosexuality, psychiatric service history, alcohol abuse, drug consumption, and illegal activity were also captured. Environmental factors were living in the British culture (vs. Thai culture) and living in urban areas (vs. rural).

The Motivational Phase addresses the factors that form suicidal ideation/intention. Feelings of defeat and entrapment could determine suicidal intention). Defeat and entrapment were related to depression and anxiety (Taylor, Gooding, Wood, & Tarrier, 2011). Therefore, this present study captured depression and anxiety as the risk factors. This study also considered threats to self-moderators (TSMs) which are the factors that can reduce or increase entrapment. Rumination was one of the TSMs (O'Connor & Kirtley, 2018). Although difficulties in emotion regulation and mindfulness have not been directly tested to be TSMs, emotion regulation was associated with suicidal ideation and enactment (O'Connor & Kirtley, 2017) and mindfulness acted as the protective factor of self-harm (Heath, Carsley, De Riggi, Mills, & Mettler,

2016) that may reduce the relationship between defeat and entrapment. This phase also includes Motivational moderators (MM) perceiving positive, suicidal behaviour could be associated with social isolation (Haw & Hawton, 2011), support, belongingness, and connectedness. In this study, living with others such as family or friends may allow individuals to perceive MM. Hence, rumination, difficulties in emotion regulation, and mindfulness as well as living with someone were captured.

Volitional Phase outlines the transitional factors between suicidal ideation and suicidal enactment. When people feel trapped and have environmental access to the means of self-harm, impulsivity is a potential factor leading people to enactment. Exposure to self-harm, a cognitive accessibility factor, increases the likelihood of enactment in stressful situations. For these reasons, impulsivity and exposure to self-harm were captured as the risk factors.

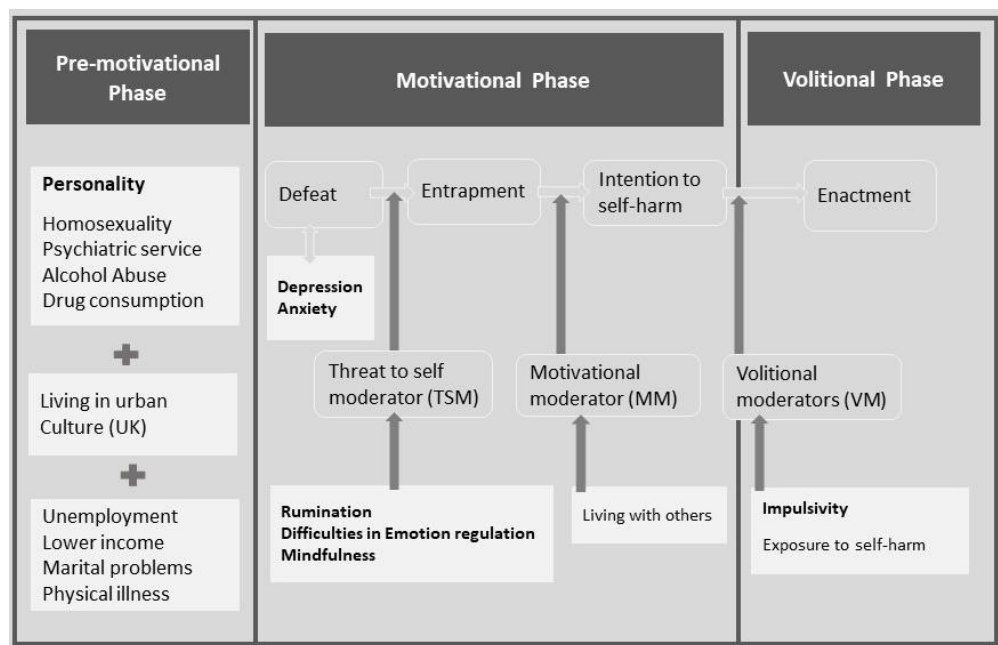


Figure 3 Potential factors that influence self-harm in the present study

1.2.2 Risk Factors for Self-Harm

After understanding the predominant factors, the current study focused on the selective variables to explore the differences in self-harm between the UK and Thailand.

1.2.2.1 Psychosocial factors

A variety of demographic and psychosocial factors have been associated with self-harm. Although, self-harm occurrences appear in all ages, adolescents and young adults are at higher risk than other age groups (Fliege et al., 2009). Gender differences have been noted, in that females were more likely to report self-harm than males (Hawton & Harriss, 2008). As social stress, the systematic literature review revealed that non-heterosexuality appears to carry greater risk of suicidal attempts than heterosexuality (King et al., 2008).

Stressful life problems significantly affect self-harm. Lower household income and social class were the risk factors for self-harm with suicidal intention (Mars et al., 2014). Also, unemployment is a predictor for repetition of self-harm (Fliege et al., 2009). Individuals who have chronic physical illness are also at risk of self-harm (Cooper et al., 2005; Singhal, Ross, Seminog, Hawton, & Goldacre, 2014). Moreover, people with psychiatric disorders have higher risk than people without (Skegg, 2005). Substance abuse has consistently been associated with self-harm (Hawton, Rodham, Evans, & Weatherall, 2002).

Environmental context showed important influences. Persons living alone have a higher risk of self-harm (Haw & Hawton, 2011; Larkin et al., 2014). However, individuals who live with their families also have the risk if the family relationship is problematic (Adrian et al., 2011). Considering the area of living, previous studies have suggested that self-harm rates in urban areas are higher than in rural areas (Harriss & Hawton, 2011). In addition, exposure to the self-harm to others increases self-harm risks for young adults (Doyle et al., 2015).

1.2.2.2 Psychological Characteristics

1.2.2.2.1 Personality

Responding in a particular way to certain circumstances following relatively enduring patterns of thinking, feeling, and behaving reflects action of the personality (Roberts, 2009). Engaging in behavioural self-harm to escape aversive states is very common (Selby & Joiner Jr, 2009); this reflects that individuals may find it difficult to cope with distress (defeat and entrapment),

and raises the question of what the personality traits are that indicate vulnerability and lead individuals to harm themselves.

Cloninger (1987) defines personality in terms of behavioural learning mechanisms which relate to neurotransmitter levels. He proposed underlying dimensions of novelty seeking, harm avoidance, and reward dependence, later adding persistence. These qualities can be assessed using the Temperament Personality Questionnaire (TPQ; Cloninger, Przybeck, and Svrakic (1991)). This model later added three environmentally-acquired dimensions: self-directedness, cooperation, and self-transcendence. Eysenck (1950) initially divided personality into two dimensions: neuroticism and extraversion; psychoticism was added later as a third dimension (Eysenck & Eysenck, 1976). These dimensions combine biological and psychological theories resulting in individual differences to environmental challenges. These characteristic dimensions also result in particular psychological and psychiatric problems (Cloninger, Svrakic, & Svrakic, 1997).

Costa and MacCrae's five-factor model (FFM) is the most powerful non-biological theory of personality in contemporary academic psychology (Egan, 2009). The FFM can be examined behaviourally, or using a lexical approach of personality (Goldberg, 1992) in which terms used by the English language to describe personality traits are analysed. Both find a FFM that comprises some form of Neuroticism, Extraversion, Openness, Agreeableness, and Conscientiousness. Some of these dimensions are associated with psychopathology, and especially personality disorders, which are also related to self-harm engagement. For example, Borderline Personality Disorder is correlated with high Neuroticism, low Agreeableness, and low Conscientiousness (Samuel & Widiger, 2008).

Lee and Ashton (2004) reorganised the FFM into six major dimensions constructed from lexical studies of the shared personality traits derived from seven languages, overcoming concerns that it was a particular form of language structure that was shaping a universal model of personality. The languages used were Dutch, French, German, Hungarian, Italian, Korean, and Polish. From these emerged six rather than five dimensions: Honesty-Humility (H), Emotionality (E), eXtraversion (X), Agreeableness (A), Conscientiousness (C), and Openness to Experience (O): HEXACO. It seems that the five dimensions of

FFM were premature and did not thoroughly assess personality (Ashton, Lee, & de Vries, 2014). H, A, and E factors describe the variation of the personality satisfactorily and empirically. H (weakly associated with FFM N and A) predicts psychopathic and narcissistic tendencies. The combination of H and E is also relevant to delinquency, unethical decision-making, materialism, realistic vocational interests, and risk taking (Ashton et al., 2014). Sensation seeking and risk taking behaviour is associated with H and fearful component of HEXACO E (De Vries, de Vries, & Feij, 2009). In relation to four risk domains (Social, Recreational, Health/safety, and Ethical) and the HEXACO dimensions, H was associated with greater health/safety and ethical risk taking (Weller & Tikir, 2011). As stated above, the HEXACO (six dimensions) therefore seems to measure personality more comprehensively than the FFM.

A number of studies have associated self-harm and personality. Using the FFM, MacLaren and Best (2010) found that individuals who engaged in NSSI had significantly higher levels of Neuroticism and lower levels of Agreeableness and Conscientiousness than those who did not. This is comparable to the finding of Brown (2009), although he also found individuals who self-harm had higher levels of Openness to Experience (FFM) than those who did not NSSI. This personality profile is similar to the dispositional correlates of borderline personality disorder generally (Saulsman & Page, 2004), which are high Neuroticism, low Agreeableness, and low Conscientiousness. The review indicated that high Neuroticism, low Agreeableness, low Conscientiousness, and high Openness related to NSSI.

When applied to the assessment of borderline personality features, the HEXACO found high Emotionality, low Agreeableness and normal Honesty-Humility in such patients (Hepp et al., 2014; Thielmann, Hilbig, & Niedtfeld, 2014). It was noted that the normal level in Honesty-Humility and concurrent low level in Agreeableness shows that borderline personality features are associated with impaired reactive cooperation (Agreeableness), but they are active regarding cooperation and non-exploitation (Honesty-Humility) (Hepp et al., 2014): effectively showing willingness to give, but not forgive (Thielmann et al., 2014). Although there has been no study directly implementing HEXACO on individuals

who self-harm, these studies show the tendency of a relationship between the same basic personality traits and self-harm, despite different assessments.

Focusing on self-harm regardless of suicidal intention, there have been a few studies. Williams, Hassanyeh, and Differences (1983), using Eysenck Personality Questionnaire (EPQ) with psychiatric inpatients, found that female patients who self-mutilate have high Neuroticism and low Extraversion, whereas males were associated with high Psychoticism and Neuroticism. That study also found that there was no difference on self-poisoning. A systematic review revealed that Hopelessness, Emotionality and Introverted are associated with suicidal attempts (Brezo et al., 2006). This review also highlighted that a higher frequency of self-harm was related to Anger and Psychoticism (a combination of Agreeableness and Conscientiousness). Moreover, one study in the review indicated that low Openness to Experience related to suicide. The review suggested that Introversion, anxiety, anger, aggression, and impulsivity may relate to suicide.

Introversion and Neuroticism play a consistent role in self-harm regardless of suicidal intention. Lower on Extraversion and higher on Emotionality are expected to showed in individuals with self-harm than those without in this present study. Moreover, different types of self-harm may indicate different personalities (this will explore in Chapter 4).

1.2.2.2.2 Impulsivity

Due to acting immediately on a whim (especially during negative emotion), and being regardless of long-term consequences, impulsive individuals are likely to engage in problem behaviours such as violence and unhealthy activities (drinking, smoking, consuming recreational substances), as well as self-harm. Individuals who self-injure report high negative emotion and use self-harm in order to distract and feel relief from the distress, which can also be a function of alcohol, drug, and tobacco use (Klonsky, 2007).

Impulsivity is a part of the criteria for psychiatric conditions including bipolar, personality, and substance use disorders (Moeller, Barratt, Dougherty, Schmitz, & Swann, 2001). There is a good accumulation of evidence that patients with

these conditions have a high risk of engaging in self-harm. Impulsivity also plays a crucial role in the IMV model as transition from suicidal ideation to suicidal behaviours (O'Connor & Kirtley, 2018) (as mention above in section 1.2.1.5.3). Understanding impulsivity might therefore be useful in order to comprehend the overall picture of self-harm.

Impulsivity is defined as “actions that are poorly conceived, prematurely expressed, unduly risky, or inappropriate to the situation and that often result in undesirable outcomes” (Evenden, 1999, p. 348). Moeller et al. (2001) also defined impulsivity as a predisposition to rapid unplanned action without regard to negative consequence.

Dickman (1990) has distinguished impulsivity into two types: dysfunctional impulsivity (acting with less forethought than most people, causing difficulty) and functional impulsivity (acting with relatively little forethought but to obtain an advantage). Eysenck, Pearson, Easting, & Allsopp (1985) found all three Eysenck’s personality dimensions (Extraversion, Neuroticism, and Psychoticism) correlated with two subscales of impulsivity: Impulsiveness and Venturesomeness. The Plutchik impulsivity scale (Plutchik & Van Praag, 1989) assesses impulsivity as an immediate reaction without consideration of the consequent outcome. Barratt (1993) developed a measure, the Barratt Impulsiveness Scale (BIS), with three central impulsivity subscales; motor impulsivity (acting without thinking), non-planning impulsivity (focusing on the present without planning ahead), and attentional impulsivity (making decisions rapidly). Whiteside and Lynam (2001) constructed their own measure of impulsivity: the UPPS Impulsive Behaviour scale from the Five Factor Model of personality. The UPPS has five facets: negative urgency, lack of premeditation, lack of perseverance, sensation seeking, and positive urgency. The UPPS is a more theoretically-informed measure of impulsivity.

Hamza et al. (2015) conducted review and meta-analysis of impulsivity and NSSI, and reiterated that NSSI engagement was related to impulsivity. Individuals who reported self-harm reported greater impulsivity than individuals who did not. The most consistent element of the measure is Negative Urgency,

and to a lesser extent lack of premeditation and perseverance. However, this review did not include self-harm regardless of suicidal intention.

In terms of the broad definition of self-harm, impulsivity was assessed mostly by the Plutchick Impulsivity scale. Individuals with self-harm history reported significantly higher impulsivity than individuals with only self-harm ideation (Madge et al., 2011; O'Connor et al., 2012). Riley, Combs, Jordan, and Smith (2015) assessed impulsivity on the BIS and UPPS scales and found that affect impulsivity traits (Negative and Positive Urgency) were risk factors for self-harm, but that cognitive impulsivity (BIS scales and lack of premeditation and lack of perseverance) were not. In a systematic review of impulsivity and self-harm in adolescence, Negative Urgency had the most consistent association with lifetime non-suicidal injury (Lockwood, Daley, Townsend, & Sayal, 2017). This review also suggested that mood-based impulsivity is related to the initiation of self-harm, whereas cognitive facets of impulsive behaviour are related to self-harm maintenance.

The present study focuses on comprehensively exploring the influence of psychological characteristics on self-harm. UPPS, which has both mood-based impulsivity and cognitive facets was used to examine the impulsivity of participants who self-harm in the UK and Thailand.

As reviewed above, it is therefore expected in this present study that individuals who self-harm will report higher scores on Negative Urgency than individuals who did not.

1.2.2.2.3 Emotion Regulation

As has been stated, it is central to self-harm that individuals who engage in self-harm report more negative emotions. However, this seems to be at both ends of the emotional distribution; there are also strong positive relationships between self-harm and emotional inexpressivity. For this reason, individuals with recent and repetitive self-harm report high scores for alexithymia (difficulty identifying ones' emotions) (Borrill, Fox, Flynn, & Roger, 2009). Although the conventional finding is that individuals who have high scores on affect intensity/reactivity have a greater risk of engaging in self-harm (hence harming

themselves due to impaired affect regulation), affect insight may also be relevant to understanding self-harm. These results show that dysfunction of emotion regulation is a key aspect of the mechanism underlying the behaviour.

Gratz and Roemer (2004) define emotion dysregulation as maladaptive ways of responding to emotions involving non-accepting responses, difficulty controlling behaviours in the face of emotional distress, and deficits in the functional use of emotional information.

Previous studies have noted the association between emotion dysregulation and self-injury. Gratz and Chapman (2007) and Gratz and Roemer (2008) found that emotion dysregulation distinguished frequent NSSI men and women from non-NSSI men and women in gender-congruent comparisons of undergraduates. Gratz and Roemer (2008) found that emotion dysregulation distinguished individuals with frequent NSSI from those without NSSI history especially on two subscales: limited access to effective emotion regulation strategies, and lack of emotional clarity. Perez, Venta, Garnaat, and Sharp (2012) support that high scores on the subscale of limited access to effective emotion regulation strategies are more common for those expressing NSSI behaviour.

With regard to self-harm engagement irrespective of suicidal intention, Nielsen, Sayal, and Townsend (2016) examining coping functions in relation to lifetime self-harm, self-harm recency, and frequency, revealed that higher levels of experiential avoidance and avoidance coping, as well as lower levels of approach, reappraisal and emotion regulation coping significantly reported in participants who self-harm than those who did not. However, in multivariate regression, only higher reappraisal (readdressing and reinterpreting the meaning of a situation) associated with less recency of self-harm; and higher approach (dealing with direct problem) with lower lifetime frequency of self-harm. Focusing on emotion regulation coping, participants with a lifetime history of self-harm have lower emotion regulation coping, and increased emotion regulation coping was associated with a longer period since the last episode of self-harm. Difficulties in emotion regulation may therefore be a short term characteristic. If people can cope well with their emotions, they may delay or stop harming themselves.

In order to gain more comprehensive understanding, it is important to examine Difficulties in Emotion Regulation scale, with multiple dimensions, on lifetime self-harm and multiple subgroups of self-harm characteristics.

After review, it is expected in this present study that individuals who self-harm will report higher score on emotional regulation than those who did not, especially for limited access to effective emotion regulation strategies based on the study of Perez et al. (2012).

1.2.2.2.4 Rumination

Rumination is a process in which one thinks perseveratively about one's feelings and thoughts (Nolen-Hoeksema, Wisco, & Lyubomirsky, 2008). Cognitive theory proposes that the ruminative content of thoughts relates to the automatic negative thoughts which are repetitive, persistent, and difficult to control (Beck, Dowd, & Leahy, 2002). There are two aspects of rumination: reflection (purposeful turning inward to engage in cognitive problem-solving to alleviate one's depressive symptoms) and brooding (passive comparison of one's current situation with some unachieved standard (Treynor, Gonzalez, & Nolen-Hoeksema, 2003, p. 256)). Although brooding is considered to be more maladaptive than reflection, a longitudinal study revealed that both types of rumination are positively associated with suicidal ideation (Miranda & Nolen-Hoeksema, 2007).

Rumination is associated with psychological outcomes, and is a risk factor for depression (Michl, McLaughlin, Shepherd, & Nolen-Hoeksema, 2013). People who engage in rumination have longer periods of depression and develop more depressive disorders than those who do not (Nolen-Hoeksema et al., 2008).

As shown in the IMV model, Brooding Rumination is important in that it can increase feelings of entrapment (O'Connor & Kirtley, 2018). O'Connor and Nock (2014) indicated that brooding was more strongly associated with suicidal ideation and attempts than reflection. Brooding also strengthened the relationship between perceived defeat and perceived entrapment. One meta-analytic review (Rogers & Joiner, 2017) consistently revealed that brooding and

reflection rumination were significantly positively associated with suicidal ideation (Hedge's $g = 0.63$ and 0.38). As for suicidal attempts, only brooding demonstrated a significant positive association. Therefore, it is expected that individuals who self-harm will report higher scores on Rumination than those who did not, especially for Brooding in this present study.

1.2.2.2.5 Depression and Anxiety

Depression and anxiety have been reported as risk factors for self-harm engagement (Andover et al., 2005; Hawton et al., 2002; Plener, Schumacher, Munz, & Groschwitz, 2015). Both are also positively associated with hopelessness (Spangenberg et al., 2016). Taylor et al. (2011) indicated that both scales are positively associated with defeat and entrapment, and can lead people to engage in self-harm. Therefore, both Depression and Anxiety were expected to be reported higher in individuals who self-harm than those who did not in the present study.

1.2.3 Protective Factors for Self-harm

1.2.3.1 Mindfulness

Not all constructs predict self-harm engagement; some potentially reduce the chance of it occurring. One such construct is mindfulness. Mindfulness originated in Buddhism (Kabat-Zinn, 1982) from Eastern meditation practices (Baer & Krietemeyer, 2006), which can enhance positive qualities such as awareness, wisdom, compassion, and equanimity (Kabat-Zinn, 2000). In recent decades, mindfulness practice has been widely adapted to many kinds of interventions in medical and mental health setting in both Eastern and Western societies (Baer & Krietemeyer, 2006). It is also reasonable to bring this construct to examine the difference in self-harm between the UK and Thailand.

Mindfulness is defined as "paying attention in a particular way: on purpose, in the present moment, and nonjudgmentally" (Kabat-Zinn, 1994, p. 4) and as "bringing one's complete attention to the present experience on a moment-to-moment basis" (Marlatt & Kristeller, 1999, p. 68) and as "keeping one's consciousness alive to the present reality" (Hanh & Hoa, 1976, p. 9). These views suggest that mindfulness practice is awareness with non-judgmental

acceptance, careful observing without the evaluating as good or bad, true or false, healthy or sick, or important or trivial (Marlatt & Kristeller, 1999).

Mindfulness and psychological wellbeing are significantly associated (Baer & Krietemeyer, 2006). Keng, Smoski, and Robins (2011) also reviewed empirical studies regarding the effects of mindfulness on psychological health, finding mindfulness positively associated with life satisfaction, agreeableness, conscientiousness, vitality, and self-esteem. Studies have indicated a negative association between mindfulness and depression, neuroticism, dissociation, rumination, cognitive reactivity, negative automatic thoughts, experiential avoidance, alexithymia, and difficulties in emotion regulation. Murphy and MacKillop (2012) studied the relationship of impulsivity and mindfulness on alcohol use and misuse. Negative and positive urgency were inversely related to the non-reactivity to inner experience and non-judgment dimensions. Lack of Premeditation was also negatively associated with non-reactivity to inner experience and acting with awareness. Sensation seeking was positively related to the observing facet of mindfulness. Moreover, there was a strong negative association between mindfulness and borderline personality disorder compared to non-patients (Baer, Smith, & Allen, 2004; Nicastro, Jermann, Bondolfi, & McQuillan, 2010). It also found a significant negative association between overall and specific borderline personality traits and subscales, and most of the facets of the FFMQ (Five Facet Mindfulness Questionnaire) (Yu & Clark, 2015).

Although there is little literature directly studying the relationship between mindfulness and self-harm, Lundh et al. (2007) did use the Deliberate Self-Harm Inventory (DSHI); this scale is for self-injury without suicidal intention, to assess self-harm and the Mindful Attention and Awareness Scale (MAAS), and the study found a significant negative association between self-harm and mindfulness. Consistent with this, Yusainy and Lawrence (2014) using the same scales of DSHI and MAAS found the same outcome. The latest study by Caltabiano and Martin (2017), using The Five Facet Mindfulness Questionnaire (FFMQ) indicated that Awareness, Non-Judging, and Non-reactivity were lower in NSSI individuals than in Non-NSSI individuals.

In summary, it is clear that mindfulness and self-injury are negatively correlated, but there has not yet been a study focusing on Mindfulness and self-harm regardless of suicidal intention. Therefore, the present study employs FFMQ in order to specifically understand which dimensions of Mindfulness relate to self-harm. As mentioned above in Caltabiano and Martin (2017)'s study, Awareness, Non-Judging, and Non-reactivity are expected to show higher level in people who self-harm comparing to people who never harm themselves in this present study.

1.2.4 Culture and Self-harm

A number of cross-cultural studies of self-harm have been conducted internationally, Portzky et al. (2008) found that Belgium had a 2.8 times higher self-harm rate than the Netherlands, even though the countries are adjoining. Brunner et al. (2014) examined self-harm in 11 European countries, finding that rates in Estonia, France, Germany, and Israel were highest, while those in Hungary, Ireland, and Italy were lower.

Focusing on distinctly different cultures, such as Western versus Eastern, would allow investigation of the role of culture in self-harm. A systematic review of international literature (Evans, Hawton, Rodham, & Deeks, 2005) found that Asian countries reported lower lifetime prevalence than Western countries (3.0%; CI = 1.0-5.0 and 9.7%; CI = 6.0-13.4). However, the studies in that review include a variety of different methodologies. Focusing on consistent methodology, Hawton, Rodham, Evans, and Weatherall (2002) surveyed self-harm in schools in England and broke down the results by the ethnicity of the students. There were 6,020 students divided into White (4,956 students), Black (169), Asian (671), and Other (157). It was reported that Asian students were less commonly inclined to self-harm than students of other ethnicities. "Asian" was not broken down into regions of Asia, though Asia is a continent with distinct regions and a wide variety of cultures, languages, and economic conditions. However, a minority group may express different behaviour when they are in a different cultural environment. The lack of comparison of self-harm between such distinct different cultures means that the role of culture in self-harm has yet to be fully explained. Cross-cultural comparisons are further addressed in Chapter 3.

Chapter 2: Methodology of Quantitative Studies

This thesis was divided into three separate studies. The first two studies were quantitative studies, which both used the same methodology. The final study used qualitative methods. This chapter will explain the quantitative methods used in Chapter 3 and 4.

2.1 Recruitment of Participants

The recruitment of participants was conducted between February and August 2017, the aim being to recruit participants from the general population. Given the comparative goals of this thesis, the populations were restricted to native UK and Thai nationals. This study recruited participants aged only between 18 and 40 years old.

Even though inclusion criteria regarding ethnicity and age were set, a number of people who did not fulfil the criteria were found in the data. Sixty-three people were not native to the UK, and people who were outside of the specified age range (four people in the UK and nine in Thailand) were subsequently excluded from the data. Five sets of data from the UK cohort were removed as it was found that a single person had completed the survey multiple times.

To ensure the accuracy of the data, participants who chose the same answer options of the Likert scale (four UK and ten Thai participants) through at least one scale, despite reverse items being included to stop response set bias, were removed from the data set.

The final data analysis comprised 165 UK participants (23.1%) and 548 Thai participants (76.9%) (see Figure 4). The majority of participants in both countries were female (61.5% UK vs. 75.3% Thailand). The average age of participants in years varied between the UK (Mean = 24.1, SD = 5.32) and Thailand (Mean = 28.7, SD = 5.89). Most UK participants were students (58.2%), whereas most Thai participants reported an employed status (64.6%); both countries reported "Single" as the most common marital status (79.4% vs. 76.7%) (see table 7 in Chapter 3).

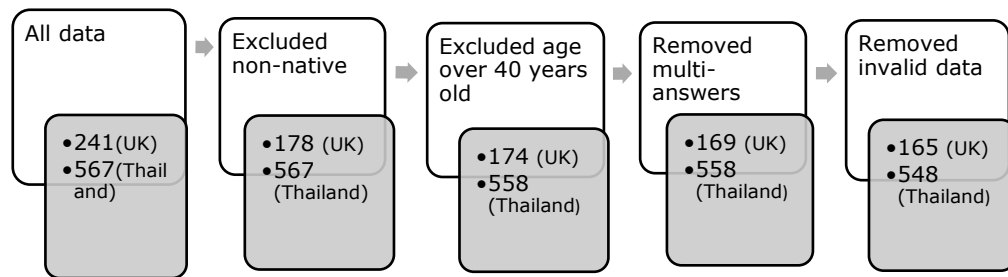


Figure 4 Number of participants for data analysis

2.2 Study Design

The study used an online survey to collect data. As this method does not require a face to face conversation, an online survey is a good tool to rapidly access a wide population at a low cost and in a short time (Wright, 2005). Perceiving security and anonymity, using an online survey allows people to disclose sensitive information and experiences more than a traditional face-to-face survey may (Rhodes, Bowie, Hergenrather, & Health, 2003). Therefore, the data collected could obtain more accurate responses to sensitive questions, such as the specifics of a person's self-harming.

2.3 Procedure

Participants who volunteered to take part in this study completed a questionnaire hosted by the Bristol Online Service (BOS). The recruitment process obtained a wide range of persons via the internet, using websites and social networks such as callforparticipants.com and the Facebook pages of student community groups, and by placing posters on noticeboards of universities in the UK and Thailand. However, in Thailand, there was no website similar to callforparticipants.com, so advertisements were placed on university Facebook pages.

The advertisements and posters outlined the aim of the study, and invited in the participants with the open statement: "How do you cope with distressing and unhappy feelings?" The link to the online questionnaire was provided on the poster.

Prior the start of the questionnaire an information page was included that described the study's purpose; the participants' right to withdraw at any time should they feel uncomfortable; contact details of the researchers, and an anonymity notice (see Appendix 1). Participants who were willing to take part in this study signed the consent form (see Appendix 2). They were asked to set up unique usernames and to provide their email addresses. The purpose of this step was to check identification to ensure that one participant did not complete the survey multiple times. An option of "Finish later" was provided to allow participants to pause and return to carry on completing the survey at a later time.

Participants completed the questionnaire by clicking on a "submit" button. Prior to submission, participants had to agree in the Participant Consent (see Appendix 2) that once 'submit' was clicked at the end of the questionnaire it was not possible to withdraw the data. Only participants who completed the entire questionnaire and pressed "submit" were analysed; any incomplete responses were not included in the data set for analysis. This may therefore have excluded participants, in particular a more vulnerable subset, who were unable to complete the questionnaire in full.

Signposts to seek help were also provided at the end of the survey for participants who felt stressed after completing the survey. Finally, as an incentive there was the option for participants to submit an email address after completion of the survey with a 1 in 5 chance to win a prize; people in the UK received £5 and people in Thailand received 100 baht.

2.4 Instruments

The set of instruments used in the empirical part of this thesis are set out below:

2.4.1 Demographic Data and Psychosocial Information

The demographic data and psychosocial information gathered from the online survey included: age, gender, gender orientation, education level, marital status, employment status, household income, living area (urban or rural), living status (alone or with family or with friends or with partner), exposure to self-harm of others, psychiatric service history, chronic physical illness, alcohol abuse, drug consumption, and illegal activities (see Appendix 3).

There were several issues to consider regarding cultural equivalence:

1. *The household incomes* across both countries was equivalent: based on the quintile groups (20%) of a population's household income per month in each country; the 1st quintile was the poorest group and the 5th quintile was the richest group (National Statistic Office, 2013; Tonkin & Income, 2015). This was represented in the questionnaire by providing a range of five household income choices.
2. *The urban-rural area definitions* in the UK and Thailand did not reach a consensus. However, the classifications used in this study are in line with the classifications widely used by National Statistic Office. In the UK, urban areas were categorised to include conurbations as well as cities and towns, while rural areas were categorised to include small towns in the countryside, villages, hamlets, and isolated dwellings (Office for National Statistics, 2011). In Thailand, urban areas were identified as municipal areas and rural areas as non-municipal areas (Thai National Statistic Office, 2007). The questionnaire provided the above definitions and asked participants to select a category accordingly.

2.4.2 Depression

The brief six-item BDI (BDI-6) (Aalto, Elovainio, Kivimäki, Uutela, & Pirkola, 2012) was used in this study. This was developed from the original version of Beck's Depression Inventory BDI-21. The BDI-6 demonstrated acceptable reliability ($r = 0.83$).

2.4.3 Difficulties in Emotion Regulation

The Brief Version of the Difficulties in Emotion Regulation Scale (DERS-16) (Bjureberg et al., 2015) developed for this study had 16 items rated on a five point Likert scale ("almost never", "sometimes", "about half the time", "most of the time", "almost always"). The DERS-16 consisted of five factors: non-acceptance of negative emotions; inability to engage in goal-directed behaviours when experiencing negative emotions; difficulties controlling impulsive behaviour when experiencing negative emotions; limited access to emotion regulation strategies; and lack of emotional clarity. The Cronbach Alpha of 0.92 for the total score highlighted that the DERS-16 had excellent internal consistency. However, the original DERS-16 did not provide subscale reliability.

2.4.4 Mindfulness

The two empirical studies used the Five Facet Mindfulness Questionnaire-Short Form (FFMQ-SF), a 24-item questionnaire (Bohlmeijer, Peter, Fledderus, Veehof, & Baer, 2011) including Observing, Describing, Acting with awareness, Non-judging of inner experience, and Non-reactivity to inner experience dimensions. All items were scored on the same five-point Likert-type scale, ranging from (1) 'never or rarely true' to (5) 'very often or always true' as above. The FFMQ-SF demonstrated adequate to good internal consistency (Cronbach's alpha = 0.58-0.83).

2.4.5 Personality

This survey used the HEXACO-60 scale of personality (Ashton & Lee, 2009), which has responses on a five-point Likert-type scale and consists of six dimensions (Honesty-Humility, Emotionality, Extraversion, Agreeableness, Conscientiousness, and Openness). These subscales showed acceptable internal consistency and reliability (Cronbach's alpha = 0.73-0.80).

2.4.6 Rumination

The Ruminative Responses Scale (RRS) from the RSQ (Nolen-Hoeksema & Morrow, 1991) applied in this study was a 22-item questionnaire on a four-point Likert scale, with responses ranging from 1 (almost never) to 4 (almost always). There were three subscales: brooding (five items), reflection (five items), and depression (12 items). RRS in the original version demonstrated excellent internal consistency (Cronbach's alpha = 0.89). This survey used the existing Thai version of Thanoi (2009) with Cronbach's alpha of 0.90. However, 12 items of depression were excluded, and only the ten Brooding and Reflection items were used.

2.4.7 Impulsivity

The Short Form of the UPPS-P Impulsive Behaviour Scale (SUPPS-P) (Cyders, Littlefield, Coffey, & Karyadi, 2014) is a 20-item inventory with five subscales (Negative urgency, Lack of perseverance, Lack of premeditation, Sensation seeking, and Positive urgency). The measure is rated on a four-point Likert scale ranging from 1 (strongly agree) to 4 (strongly disagree). This scale demonstrated an acceptable internal consistency (Cronbach's alpha = 0.74-0.88).

2.4.8 Anxiety

The Six-Item Short-Form of the State Scale of Spielberger State-Trait Anxiety Inventory (STAI-SF) (Marteau & Bekker, 1992) uses a four-point Likert-style rating scale. The scale employed in the present study demonstrated acceptable reliability ($r = 0.82$), and had similar validity to the original STAI.

2.4.9 A Self-harm Question

The single item employed to capture self-harm behaviour was "Have you ever deliberately taken an overdose (e.g. of pills or other medication) or tried to harm yourself in some other way (such as cutting yourself)?" Only participants who answered "Yes" were entered into the section of the survey of self-harm characteristics and motives.

2.4.10 Self-harm Methods and Characteristics

A number of alternative self-harm methods regardless of suicidal intention were drawn from the literature and were provided for the participants to select. Participants chose how often they performed self-harm: "never", "once", "more than once" and "many times". For the characteristics of onset age of self-harm (age at first episode of self-harm), recency of self-harm (last episode of self-harm), hospitalisation, and disclosure, participants were asked to provide additional information, but this was indicated to be optional. There was also a section where participants could provide details describing their self-harm (see Appendix 3).

It is also worth noting that some participants answered that they had harmed themselves but declined to provide any self-harm characteristics; as the self-harm question was sensitive these participants were retained in the self-harm group data.

2.4.11 Motives of Self-harm

The motives of self-harm scale was adapted from Rodham et al. (2004), who had previously adapted a scale used by Bancroft, Skrimshire, and Simkin (1976). There were eight original items which the participants could choose beginning with the phrase "I wanted to...". These were: "to show how desperate I was feeling", "to die", "to punish myself", "to frighten someone", "to get my own back on someone", "to get relief from a terrible state of mind", "to find out whether someone really loved me", and "to get some attention".

After reviewing the literature and considering the cross-cultural situation, it seemed that the broad understanding of why people harm themselves would be aided by the addition of further items; for this reason two items were added in the present study: “to be a part of the group” and “to avoid doing something or being in some situation” (Leong, Wu, & Poon, 2014; You, Lin, & Leung, 2013).

2.5 Translation Process

Given the fact this cross-cultural study compared British and Thai participants using the same methodology, it was essential to adapt the instruments from English to Thai, not only in terms of language but also culture. The translation process followed the guidelines of Beaton, Bombardier, Guillemin, and Ferraz (2000).

2.5.1 Forward Translation

The first step of the translation process was forward translation. The original language questionnaires (English) were translated to the target language (Thai). Two translators who had different profiles were chosen. The first translator had a background in clinical psychology, which allowed this translation to be more focused on clinical and measurement perspectives. To ensure balance, the second translator had no clinical background, resulting in less influence from academic and clinical criteria. Therefore, this forward translation version reflected language more commonly used by the general population.

2.5.2 Synthesis of Translations

Synthesis of the translations was the second step. This process aimed to reconcile and resolve any discrepancies between the two forward translations, as well as to ensure compatibility of dialect. The reconciler was a Thai clinical psychologist with both experience in translation of language instruments and familiarity with the subject languages (English and Thai). This reconciler decided on the most appropriate forward translation of each item.

2.5.3 Backward Translation

The forward reconciled version of the questionnaires was then translated back into the original language in order to ensure that the forward version accurately reflected the content of the original version. Previous literature has noted that a single backward translation can benefit measurement (Eremenco, Cella, &

Arnold, 2005). Therefore, in this study only one backward translator, uninvolved in either the forward or the synthesis translations, was selected.

2.5.4 Expert Committee

An Expert Committee Review is a very important element to include when seeking cross-cultural equivalence. The committee for the present study was composed of one psychiatrist (who has expertise in psychological service and academic research), three clinical psychologists (who works mainly in the health profession and who has experience in adapting instruments), and one professor (who teaches psychological assessment and research at university, in the division of clinical psychology within the department of psychiatry and the school of medicine). The role of the committee was to certify that all the versions of the measurement achieved equivalence between the originals and the translated questionnaires in the following areas.

2.5.4.1 Semantic Equivalence

Semantic equivalence refers to each item having the same meaning in both cultures after translation. There may be issues with the vocabulary and grammar between the two languages. For example, in Thai language, there is no verb tense, which sometimes causes translation problems. Further, some words have different meanings: the word most commonly used in Thai for burning as a self-harm method only means severe burning. Adjusting this to "make yourself burn" led to a less severe but more accurate meaning in Thai language.

2.5.4.2 Experiential Equivalence

In order to connect both cultures, the terms selected should refer to the real experiences of the target culture. If the activity in the original item cannot be experienced in the target country, the item should be replaced by an item with equivalent cultural meaning. In this present study, for example, a source item such as "I would enjoy the sensation of skiing very fast down a high mountain slope" would be unsuitable for people residing in Thailand, given its tropical climate. Therefore, this item was replaced by "I would enjoy the feeling of riding a roller coaster dropping from a great height at high speed", which Thai people would be familiar with.

2.5.4.3 Conceptual Equivalence

Conceptual equivalence refers to the theoretical constructs shared between the two versions of the questionnaire, and requires the same meaning to be conveyed in both cultures. For example, in Thai culture, the word “friends” refers to people who are already associated with the person. Therefore, to ensure equivalence in Thai culture for the item “The first thing that I always do in a new place is to make friends”, adding the modifier “new” was required, resulting in the following: “The first thing that I always do in a new place is to make new friends.”

2.5.5 Pilot Study

To test the pre-final version, the researcher produced the questionnaire on Bristol Online Survey to test the system in a pilot study. The purpose of this step was to ensure that the translated version achieved equivalence to the original version in the applied situation.

2.5.5.1 Participants and Procedure of the Pilot Study

The initial process of data collection was conducted; thirty Thai subjects were asked to complete the pre-final version on Bristol Online Survey. Five participants were randomly interviewed about question understandability and the quality of the data collection process. Participants were asked to provide their email addresses and to click on a link to set up unique usernames. Then, the participants had to wait for up to three days for the email containing their own link to complete the online survey.

The participants were asked to time the duration taken to complete the survey, however due to the large number of items in the scales in the survey, some of them applied “finish later” options, which was not as easy to time.

2.5.5.2 Results of the Pilot Study

2.5.5.2.1 Participant Demographics

Thirty participants completed the online survey. There were equal numbers of males and females (15 each). Participants were between 18 and 37 years old, with the average age being 25.57 (SD = 6.14). The majority of participants were single (86.7%) and had a Bachelor’s Degree (60%). Most participants were either employed (46.7%) or students (36.7%) (see table 1).

Table 1 Participants of pilot study

	N (%)
Age	
Mean (SD)	25.57 (6.14)
Range	18-37
Sex	
Male	15 (50%)
Female	15 (50%)
Relationship status	
Single	26 (86.7%)
Married	3 (10%)
Separated	1 (3.3%)
Education Level	
Post-Secondary Education	3 (10%)
Bachelor's Degree	18 (60%)
Master's Degree	9 (30%)
Employment Status	
Self-employed	3 (10%)
Employed	14 (46.7%)
Unemployed	2 (6.7%)
Student	11 (36.7%)

2.5.5.2.2 Reliability of the Pilot Study

Almost all scales achieved a Cronbach's alpha value in the range of 0.61 to 0.89, which indicates acceptable reliability for early stage of research (Streiner, 2003). Cronbach's alphas in all scales of DERS-16, FFMQ-SF, RRS, and STAI-SF were above 0.70, which is considered good reliability. Negative Urgency and Lack of Perseverance did not reach acceptable reliability ($\alpha = 0.58$ and 0.57).

The differences in reliability between the Thai version and the original version were considered. This was measured by comparing Cronbach's alphas between both groups using the R package "Cocron" available at <http://comparingcronbachalphas.org/> (Diedenhofen & Musch, 2016). Most scales of the Thai version showed similar reliability to the original questionnaires; only the UPPS-P and BDI showed significant differences. These were the scales that required the most modification, and several other scales which reported Cronbach's alpha of under 0.70 were also improved (see table 2).

Table 2 Cronbach's alphas and the comparison of alphas between the original questionnaire and the pilot study questionnaire

Inventories	Original	Pilot	Pilot vs. Original	
	α	α	χ^2	P-Value
HEXACO-60				
Honesty–Humility	0.74	0.78	0.30	0.58
Emotionality	0.73	0.65	0.82	0.36
Extraversion	0.73	0.71	0.06	0.81
Agreeableness	0.75	0.61	2.57	0.11
Conscientiousness	0.76	0.64	2.11	0.17
Openness	0.80	0.82	0.12	0.73
UPPS-P				
Negative urgency	0.78	0.58	3.77	0.05
Lack of perseverance	0.79	0.57	4.71	0.03
Lack of premeditation	0.85	0.68	5.31	0.02
Sensation seeking	0.74	0.68	0.35	0.56
Positive urgency	0.85	0.64	7.30	0.01
DEERS-16				
Overall	0.92	0.89	1.04	0.31
Negative urgency	-	0.74	-	-
Lack of perseverance	-	0.75	-	-
Lack of premeditation	-	0.87	-	-
Sensation seeking	-	0.78	-	-
Positive urgency	-	0.82	-	-
FFMQ-SF				
Observe	0.71	0.76	0.51	0.55
Describe	0.83	0.76	1.36	0.24
Awareness	0.81	0.81	0.00	1.00
Non-judging	0.64	0.73	0.79	0.37
Non-reactivity	0.58	0.72	1.52	0.22
RRS				
Overall	0.89	0.81	3.24	0.07
Brooding	0.71	0.74	0.11	0.75
Reflection	0.73	0.72	0.01	0.91
BDI-6	0.83	0.64	7.36	0.01
STAI-SF	0.82	0.84	0.13	0.72

Reject null hypothesis at 95% confidence interval (p -value = 0.05), - not reported

2.5.5.3 Interview for Translation Process

Five participants were randomly selected for interviews following completion of the survey. The purpose of the interview process was to ensure that participants understood the meanings of the items presented in the Thai language questionnaire in the same way as intended from the original English version. Moreover, this step can be beneficial for testing the pilot system process to assess whether the survey is workable and convenient for the participants to complete or not.

Overall the feedback received showed that all participants clearly understood the majority of the questionnaire items in terms of the meaning of the

instruction, item choices, question items and pattern implemented. A few items had to be read twice to fully understand their meaning, and these items were marked for improvement in the next step. Three participants criticised the BDI scale as they felt some items were not arranged in order of severity, which made them slightly confused.

Two participants complained that the large number of items made them a little tired, whereas three participants reported enjoying completing the survey. One participant said the signpost at the end of the survey was very useful.

Four out of five participants pointed out that the stage of waiting for the email before completing the survey discouraged them from having the motivation to complete the survey.

2.5.5.4 Checking the Responses

Participants took 15-35 minutes to complete the questionnaires (Mean = 23.76; SD = 5.12).

Some participants' responses indicated slight misunderstanding. For example, when asked the question "Who do you live with?" with the choices of "to live alone", "to live with someone" and "other", two out of the five participants answered "other" and specified that they lived with family or parent. This suggested that in Thai culture "to live with someone" may be misinterpreted as someone whom they do not know closely. To enhance clarity, this option was amended to: "live with someone such as family, friends, and boy/girlfriends". Another example was that one answer to the self-harm act question of "How long ago was it when you did this for the last time?" was 30 years old. To prevent confusion an example was added to the item: "for example 3 months ago".

In the self-harm act section, four out of thirty reported engaging on self-harm. However, only one participant filled in all of the information on self-harm characteristics. When looking at the pattern of the questionnaire, it showed that there were many columns which did not initially show up on the mobile phone screen. This was solved by adding the sentence: "If completing on a phone, please slide to the right-hand side".

2.5.5.5 Stage of Measurement Modification

The findings of the pilot study highlighted some areas for improvement. The process of waiting for the email was removed so participants who accessed the link could complete the survey immediately. Questions that were insufficiently clear were improved. The scales which differed from the original scales were modified. After all modifications were complete, the survey was launched in both countries.

To ensure the quality and equivalence of measurement of Thai translated version, the following sections investigated psychometric properties of the measures used in studies 1 and 2. Reliabilities, content validity, and structural factors comparing the Thai and English versions are demonstrated below.

2.6 Reliability

Internal consistency was used to assess the reliability of the scales. The criteria of acceptable reliability reported variety. Taber (2017) explored the use of Cronbach's alphas in science education. The scales with Cronbach's alphas higher than 0.70 are widely considered desirable, and Cronbach's alphas above 0.60 have been reported acceptable by several papers. For the earliest stages of the research, Cronbach's alphas of 0.60 are acceptable (Streiner, 2003). Therefore, this value was considered acceptable in the present study.

Data analysis showed that Cronbach's alphas of all scales in the Thai adapted versions were acceptable (Cronbach's alphas = 0.61-0.93) showed in table 3. Cronbach's alphas in most scales were above 0.70, which showed that the study had good reliability. However, the UK version showed scattered reliability (0.47-0.95). Almost all scales of the UK version showed good reliability (Cronbach's alphas above 0.70); the exceptions were Lack of Perseverance and Anxiety (0.47 and 0.56 respectively) indicating relatively low reliability.

Table 3 Cronbach's alphas and the comparison of alphas between the original questionnaire and the Thai version of the questionnaire

	Original	UK α	Thailand α	Thailand vs. Original		Thailand vs UK	
				χ^2	P	χ^2	P
HEXACO-60							
Honesty–Humility	0.74	0.71	0.71	1.53	.215	0.00	1.000
Emotionality	0.73	0.80	0.70	1.43	.232	7.87	.005
Extraversion	0.73	0.85	0.68	3.72	.053	25.51	.001
Agreeableness	0.75	0.73	0.69	5.98	.015	0.96	.326
Conscientiousness	0.76	0.75	0.63	24.30	.001	7.38	.007
Openness	0.80	0.73	0.68	28.66	.001	1.45	.229
UPPS-P							
Negative urgency	0.78	0.75	0.70	4.74	.030	1.22	.270
Lack of perseverance	0.79	0.47	0.63	15.18	.001	5.20	.022 ^b
Lack of premeditation	0.85	0.68	0.77	8.84	.003	4.37	.036 ^b
Sensation seeking	0.74	0.68	0.61	7.98	.005	1.43	.232
Positive urgency	0.85	0.79	0.72	18.26	.001	2.97	.085
DER-16							
Overall	0.92	0.95	0.93	0.66	.418	5.93	.015
Clarity	-	0.94	0.87	-	-	10.68	.001
Goal	-	0.83	0.81	-	-	0.38	.537
Impulsive	-	0.89	0.89	-	-	0.00	1.00
Strategies	-	0.92	0.84	-	-	17.62	.001
Non-acceptance	-	0.90	0.78	-	-	16.70	.001
FFMQ-SF							
Observe	0.71	0.73	0.69	0.30	.587	0.70	.401
Describe	0.83	0.82	0.72	17.69	.001	7.55	.006
Awareness	0.81	0.81	0.76	3.97	.046	2.20	.138
Non-judging	0.64	0.75	0.62	0.22	.642	6.81	.009
Non-reactivity	0.58	0.89	0.74	17.37	.001 ^a	26.15	.001
RRS							
Overall	0.89	0.83	0.83	32.38	.001	0.00	1.000
Brooding	0.71	0.80	0.73	0.66	.415	3.58	.058
Reflection	0.73	0.77	0.76	1.79	.181	.076	.783
BDI-6	0.83	0.89	0.81	2.13	.144	12.11	.001
STAI-SF	0.82	0.56	0.63	33.19	.001	1.39	.237

^a Cronbach's alpha of Thai version was higher than original version.

^b Cronbach's alpha of Thai version was higher than UK participant version.

The reliability of the scales was different between the UK (N = 165) and Thailand (N = 548), based on the same computation from the pilot study (see section 2.5.5.2.2). Cronbach's alphas in several scales found significant differences between the UK and Thailand. Emotionality, Extraversion, Conscientiousness, DER-16, Describe, Non-judging, Non-reactivity and BDI reported higher Cronbach's alphas in the UK than in Thailand. Interestingly, Cronbach's alphas of Lack of perseverance and Lack of premeditation were higher in Thailand than in the UK.

This study also compared Cronbach's alphas between the Thai translated version and the original version. Several scales indicated significant differences: Cronbach's alphas of Agreeableness, Conscientiousness, Openness, all scales of UPPS-P, Describe, Awareness, Overall RRS, and STAT-SF were lower but Non-reactivity was higher in the translated Thai version than in the original English version.

2.7 Content Validity

Content validity was investigated by applying the Content Validity Index (CVI). Five experts were asked to independently rate the content equivalence using a four-point Likert scale for each item (1 = not relevant, 2 = less relevant, 3 = quite relevant, 4 = very relevant). CVI was divided into item-level and scale-level CVI (I-CVI and S-CVI).

In terms of computation, the I-CVI was calculated as follows: the number of experts who rated 3 or 4 in each item divided by the total number of experts. The S-CVI was calculated by averaging I-CVI across items of each scale.

With regard to criteria, I-CVI of 0.78 or higher and S-CVI of 0.90 or higher indicated good content validity (Polit, Beck, Owen, & health, 2007).

In the present study, all items in all scales were rated 3 or 4 by at least four out of five experts; the I-CVI scores were 0.80-1. The scores for S-CVI, Hexaco-60, UPPS-P, DERS-16, FFMQ-SF, BDI-6, and STAI-SF were 0.96, 0.97, 0.99, 0.98, 0.99 and 1 respectively. Taken together, this indicates acceptable content validity.

2.8 Equivalence of Factor Structure

In order to test the equivalence of component interpretation across the UK and Thai instruments, Tucker's congruence coefficient (Tucker, 1951) was used. As a basis for factor analysis, this approach has previously been found to be more appropriate for applications in large multidimensional solutions than in CFA (multi-group confirmatory factor analysis) (Lorenzo-Seva & Ten Berge, 2006). Coefficient values can range from -1.00 to 1.00. The congruence coefficient is calculated as $\sum XY / \sqrt{\sum X^2 \sum Y^2}$ where X is loadings of variables of group 1 and Y is loadings of variables of group 2.

The computation followed the steps suggested by Wuensch (2016). Lorenzo-Seva and Ten Berge (2006) suggested that congruence coefficient values between 0.85 and 0.94 indicate 'fair similarity', whereas values greater than 0.95 indicate equality.

Differences in sample size between two comparison groups affect the value of the congruence index (Guadagnoli & Velicer, 1991). In order to alleviate concerns over the unbalanced sample size (165 in UK vs. 558 in Thailand), the decision was to use the matching data analysis from Chapter 3 with 165 UK and 256 Thai participants.

Table 4 Factor analysis of the UK and Thailand

	The UK			Thailand		
	Factor I	Factor II	Factor III	Factor I	Factor II	Factor III
HEXACO-60 scale						
Honesty-Humility	-.038	-.497	.020	-.298	-.254	-.053
Emotionality	.501	-.439	-.202	.438	-.100	-.434
Extraversion	-.676	.093	.445	-.469	-.099	.367
Agreeableness	-.229	-.201	-.007	-.353	-.224	.243
Conscientiousness	-.098	-.774	.249	-.193	-.699	-.055
Openness	.052	-.241	.602	-.029	-.026	.630
UPPS-P						
Negative urgency	.723	.216	-.050	.595	.282	-.052
Lack of perseverance	-.033	.565	-.126	-.102	.690	-.031
Lack of premeditation	.159	.701	-.082	.115	.739	-.204
Sensation seeking	-.192	.453	.608	.001	.174	.626
Positive urgency	.424	.544	.238	.552	.487	.107
DEERS-16						
Clarity	.783	.028	-.087	.725	-.230	.169
Goal	.474	-.067	.354	.439	-.314	.410
Impulsive	.646	.156	-.149	.721	.213	-.024
Strategies	.787	.006	.137	.736	-.017	-.119
Non-acceptance	.746	.263	.055	.725	.173	-.030
FFMQ-SF						
Observing	.903	.049	.038	.858	.047	-.075
Describing	.780	.085	.087	.731	-.030	-.014
Awareness	-.089	-.166	.662	.135	-.113	.617
Non-judging	-.395	-.224	.264	-.444	-.308	.247
Non-reactivity	-.606	-.332	.173	-.588	-.402	-.206
RRS						
Brooding	-.716	-.057	-.132	-.524	.053	-.358
Reflection	-.565	.286	.217	-.349	-.151	.511
Depression	.765	.097	-.232	.726	.154	-.077
Anxiety	.683	-.088	-.262	.521	.204	-.187

Bold = strongest loading

Principle components analysis was conducted. To produce the extract component that was stringent and valid (Horn, 1965), parallel analysis was performed using an online engine (Patil, Singh, Mishra, & Donovan, 2007) with a varimax rotation.

As shown in table 4, the majority of variables was loaded on Factor I in both countries. The patterns of the loading structures were broadly similar across both countries. Although the strongest loading in each variable of Honesty-Humility, Positive Urgency, and Reflection were different factors, the overall correlation of the factor loading indicated that the same factors correlated with each other in both countries with a high correlation ($r = 0.98, 0.90$, and 0.85), as shown in table 5.

The analysis of this study found that Kaiser-Meyer-Olkin (KMO) was 0.85 for the UK and 0.86 for Thailand, indicating appropriate data for factor analysis (Kaiser, 1974). The principal components analysis with the UK and Thailand matched data suggested retaining three components that explained 50.96% (the UK) and 46.49% (Thailand) of the total variance. Similar patterns were demonstrated on the factors' loadings in both countries. The congruence coefficient of three factor values were 0.98, 0.90, and 0.86 respectively. This strongly supports the view that the components were equal across the UK and Thailand (Berge 2006).

Table 5 Correlation of factors between the UK and Thailand

		Thailand		
		Factor I	Factor II	Factor III
The UK	Factor I	.983**	.275	-.214
	Factor II	-.288	-.898**	.082
	Factor III	-.410*	-.136	.852**

*Correlation is significant at the 0.05 level (2-tailed).

**Correlation is significant at the 0.01 level (2-tailed).

2.9 Data Analysis

Chi-square were performed for self-harm characteristics comparison. Binary Logistic regression (lifetime self-harm) and multinomial logistic regression (subgroups) were used to assess the associations of psychosocial factors.

Comparing the mean of psychological characteristics to self-harm across countries were evaluated by ANOVA.

The predictors of self-harm were evaluated with univariate and multivariate logistic regression models. Performing multivariate logistic regression was considered data multicollinearity (discussed in 2.9.3).

All multiple comparisons in this study used a False Discovery Rate (FDR) correction to avoid Type I error. FDR controls the proportion of false positives of p-value. Using the Benjamini and Hochberg procedure (Benjamini & Hochberg, 1995) is less conservative and gives greater power than other false discovery rate controls, especially when applied to large numbers of hypotheses tested (Brinster, Köttgen, Tayo, Schumacher, & Sekula, 2018). In this present study, FDR correction was performed, to adjust for P-value at 0.05 (see the syntax of FDR correction in Appendix 4).

Table 6 Multicollinearity of variables

	Tolerance	VIF
HEXACO-60 scale		
Honesty-Humility	.772	1.295
Emotionality	.636	1.573
Extraversion	.547	1.829
Agreeableness	.700	1.429
Conscientiousness	.593	1.687
Openness	.727	1.376
UPPS-P		
Negative urgency	.456	2.192
Lack of perseverance	.662	1.510
Lack of premeditation	.565	1.769
Sensation seeking	.695	1.438
Positive urgency	.520	1.924
DEERS-16		
Clarity	.504	1.984
Goal	.398	2.515
Impulsive	.399	2.507
Strategies	.224	4.474
Non-acceptance	.395	2.530
FFMQ-SF		
Observing	.713	1.402
Describing	.652	1.534
Awareness	.561	1.781
Non-judging	.633	1.580
Non-reactivity	.570	1.755
RRS		
Brooding	.429	2.332
Reflection	.622	1.609
Depression	.437	2.290
Anxiety	.635	1.575

2.9.3 Multicollinearity

Multicollinearity could mislead the interpretation of regression results. The p-value of prediction is unstable if it results from an unstable or biased standard error of multicollinearity (Vatcheva, Lee, McCormick, & Rahbar, 2016).

In this study, multicollinearity was assessed by Variance Inflation Factor (VIF). A value of VIF < 2.5 and tolerance < 0.4 are problematic (Allison, Wiley, & Sons, 1999). The results from this study (see table 6) indicate that almost all variables were acceptable, with the exceptions of Goal, Impulsive, Strategy and Non-acceptance in DERS-16, which each indicated a VIF value over 2.5. In Chapter 3, these scales were removed from the multiple logistic regression. The correlations between all variables are provided in Appendix 5.

2.10 Ethical approval

Ethical approval for the studies in Chapter 3 and 4 was granted from the Division of Psychiatry & Applied Psychology's Research Ethics Sub-Committee, University of Nottingham.

2.11 Summary

The Thai versions of the instruments, adapted from the English versions, demonstrated acceptable reliability and validity. The structural components of all instruments that were compared between the English and Thai versions indicated adequate quality, though comparison of Cronbach's alphas for reliability equivalence indicated several scales of Thai versions were different from the English versions. It is possible that living habits in different cultures make some items more or less difficult than other items. The psychometric properties of the instruments could therefore change in different cultures (Beaton et al., 2000). Although there were certain areas where improvement was required, the Cronbach's alpha values for all scales were still acceptable. Therefore, it was concluded that the Thai versions of the instruments can be used to compare with those from the UK to study differences in the psychological characteristics between the UK and Thailand for self-harm and its correlates.

Chapter 3: Differences in Self-harm between the UK and Thailand

3.1 Introduction

Although a large number of studies have focussed on self-harm, the majority of the studies have been conducted in Western countries. The prevalence of self-harm varies across countries. For example, cross-cultural studies in Belgium and the Netherlands found a higher rate of self-harm in Belgium (10.4 %) than in the Netherlands (4.1%) (Portzky et al., 2008). It is possible that the attitude of Belgians towards mental health care is less accepting than that of the Dutch. Belgian people are also more introverted than Dutch people, perhaps leading them to seek help less frequently (Portzky et al., 2008). This indicates the role of culture and disposition in self-harm engagement.

Although self-harm is a major public concern around the world, developing countries face proportionally many more profound problems than wealthier countries: limited educational systems, insufficient food, lower socioeconomic status, and financial difficulties may cause trouble to people everywhere, but these problems are more pronounced in less wealthy countries. Some have found positive associations between greater poverty and suicide (Iemmi et al., 2016). At the same time, some cultural factors are potentially protective against factors that might cause social harms elsewhere. For example, elderly parents still live with and are looked after by their own children in Southeast and South Asia (Yeung, Desai, & Jones, 2018). This reflects a Buddhist value: to express gratitude to one's parents (Winzer & Gray, 2018). Perhaps because of Buddhist values, East Asian countries reported lower prevalence of self-harm (Evans et al., 2005).

Thailand is located at the heart of Southeast Asia, and shares a cultural and historical heritage with other east Asian countries (Embree, 1950). The majority of Thai people are raised to be Buddhist (National Statistical Office, 2010) and are therefore habitually mindful. Mindfulness is now commonly recommended as a therapeutic strategy for psychological problems, so Asian countries may

present a lower incidence of these difficulties than countries which are not raised to be mindful, such as the UK.

In order to comprehensively understand the role of culture, it is necessary to compare the different societies. Understanding differences of self-harm characteristics such as prevalence, method, frequency, onset age, number of methods, motives, and help-seeking are important. More importantly, the cross-cultural comparison of the processes underlying self-harm (i.e. predictive psychosocial and psychological characteristics) has not been done for the UK and Thailand. The interplay between specific culture and potentially generic predictive factors should be examined.

3.2 Objectives

The present thesis aims to understand self-harm in terms of self-harm characteristics (prevalence, motives, onset, method, frequency, help seeking behaviours, hospitalisation and disclosure); and risk factors for self-harm comparing the UK and Thailand.

3.3 Literature Review

To obtain knowledge regarding cross-cultural studies of self-harm behaviours, a review of deliberate self-harm in different countries especially in Southeast Asian and Western countries was conducted. The literature review in this chapter will address cultural characteristic differences and self-harm from a cross-cultural perspective.

3.3.1 Cultural Differences

Thailand is a developing country and has never been a colony; the development of Thailand has therefore not been directly influenced by Western countries (Browell, 2000). As Thailand is located in the heart of Southeast of Asia, Thailand shares cultural and historical heritage with other East Asian countries.

Buddhism is the national religion of Thailand. The majority of the Thai population (93.6%) are raised as Buddhist (National Statistical Office, 2010). The philosophies and ways of life, and characteristics of Thai people are strongly influenced by Buddhism (Disayavanish et al., 2007). Buddhism teaches people

to do good deeds to avoid bad consequences in the future; Buddhists believe that all actions have relevant consequences through “Karma” (Burnard, Naiyapatana, & Lloyd, 2006).

Buddhism also influences family obligations; values such as expressing gratitude to parents are common for Thai people (Winzer & Gray, 2018). In the Thai kinship system, children are taught to respect and be obedient to their parents, and to look after their parents when they become older (Rosenberg, Jullamate, & Azeredo, 2009).

The dimension of individualism to collectivism has been closely studied by those interested in psychological and cultural differences between the East and the West (Cohen, 2009). In line with the collectivism model, Thai child-rearing focuses on obedience, conformity, security, and reliability, whereas independence, exploration, creativity, and self-reliance are emphasised in individualist cultures (Triandis, 2001).

Thailand is classed as a collectivistic culture whilst the UK is classed as an individualistic society (Hofsteds, 1980). Collectivism prioritises achieving the goals of in-groups (family, tribe, nation, etc.). Collectivists are interdependent, whereas individualists tend to be autonomous and independent; they give priority to personal over group goals (Triandis, 2001). In situations where conflict occurs, collectivists are concerned with relationships, whereas individualists are concerned with justice.

In relation to the captured variables in this present study, Thai people usually live with their own family including extended family as mentioned above. Whereas in the UK around 31% of males and 20% of females aged 20-34 years old lived with their parents (Knipe, 2017). Older children reported lower rates, only 4.2% of males and 3.2% of females in late adulthood co-resided with their parents (Evandrou, Falkingham, Gomez-Leon, & Vlachantoni, 2016). British elderly women aged 65-74 and over 75 years old reported living alone 62.0% and 71.8% respectively (Knipe, 2017) . In contrast, 8.7% of Thai elderly people reported living alone and 18.8% lived only with a spouse (Prasatkul, 2015). Although no comparison between the UK and Thailand has been undertaken, Thai people possibly live with parents and extended family more than British people.

Stigmatisation is one of the significant differences between individualism and collectivism. Collectivists have a more stigmatising attitude towards mental health illness (Papadopoulos, Foster, & Caldwell, 2013). This is consistent with Burnard et al. (2006) who found that Thai people perceived receiving mental service as stigmatising. Therefore, Thai people may report less psychiatric service history than British people.

In terms of substance consumption, one previous study found that Thai people reported less alcohol and tobacco consumption than English people (Lazzarino, Yiengprugsawan, Seubsman, Steptoe, & Sleigh, 2014). Alcohol consumption was negatively linked with moral belief and religious participation in Thai culture (Chamrathirong et al., 2010; Wongtongkam, Ward, Day, & Winefield, 2014). Refraining from intoxicants (i.e. alcohol and drugs) is one of the five precepts in Buddhism (this is discussed in section 3.3.2). Therefore, Thai people will report less alcohol abuse and drug consumption than British people.

Local culture shapes the personality of people in their societies, and for this reason the patterns and psychological characteristics of Thai and British nationals may be different. Collectivists are more concerned about social approval than individualists (Eby & Dobbins, 1997). Therefore, traits of being anxious and ruminative towards other people's opinions may appear more in Thai people. Moreover, Thai people may have the trait of controlling themselves in order to foster social norms (Triandis, 2001). Whereas, individualists concern more about content rather than context (ibid); this possibly drives British people to follow rules and be self-disciplined rather than conform to social pressures.

Given the strong background of Buddhism (Chuaprapaisilp, 1997), mindfulness has a more important role in Thai people than British people. There have only been a few studies comparing between the UK and Asian countries; British people reported lower scores on mindfulness than Indonesians and Hong Kong Chinese (Ivtzan et al., 2018; Yusainy, 2013). It is possible that Thai people have higher levels of mindfulness than British people.

Taken together, the psychological characteristics of Thai and British participants are expected to be different in this present study.

3.3.2 The View of Buddhism towards Suicide

Teachings core to Buddhism include the importance of performing good deeds, observing the religious precepts, and achieving merit to improve present lives (Klunklin & Greenwood, 2005). Buddhists receive merit primarily by observing the Five Precepts, which are: abstinence from (1) taking life, (2) taking what is not given, (3) wrong sensuous pleasure, (4) false speech, and (5) intoxicants.

The major point with regard to the present study is that the First Precept of Buddhism is to abstain from taking life, which can be extended to include suicide and harming oneself (Disayavanish et al., 2007).

Based on the desire to be free from suffering (i.e. to live without distress or negative emotions), Buddhists believe that humans cannot stop suffering by dying by suicide. Suicide is the outcome of a human's desire to kill themselves, yet Buddhism teaches that suicide will lead to rebirth into a bad life ("woeful planes of existence") and continued suffering in their next life (Disayavanish et al., 2007). Therefore, suicide is not a way to escape suffering.

The Cry of Pain model of suicidal behaviour consists of three elements (Williams & Pollock, 2000). People perceive that they have been defeated (i.e. by life problems), feel that there is no escape from the defeat, and believe that there is no possibility of rescue. Suicide is seen as a way to escape from suffering. However, it seems that Buddhism can act as a protective factor against this behaviour.

3.3.3 Prevalence of Self-harm

The literature shows significant differences between self-harm in various countries. Focusing on a systematic review of international literature on prevalence of suicidal phenomena in adolescents, Evans et al. (2005) found that lifetime prevalence of suicide attempts in Asian countries (3.0%; CI = 1.0-5.0) were lower than in countries with a predominantly Western population (9.7%; CI = 6.0-13.4). Another systematic review of self-harm hospital presentation revealed that Asian countries reported a lower rate of repetitive self-harm (10%, CI = 7.3-13.6%) than European countries (17.1%, CI = 15.9-18.4) (Carroll et al., 2014).

Considering the same methodology, a systematic literature review of ethnic minority groups in the UK (clinical samples in most studies) revealed that South Asians were less likely to self-harm than Caucasians (Al-Sharifi, Krynicki, & Upthegrove, 2015). For East Asians, a prospective cohort study using self-harm presentation data (1997-2011) from three hospitals in Manchester, UK, indicated that fewer Chinese people than Caucasians presented with self-harm (0.6 vs. 3.2 per 1000 person-years) (Chang et al., 2015). In a non-clinical based study, Hawton et al. (2002) recruited 6,020 15-16 year old students of various ethnicities. The population was divided into White, (4,956 students), Black (169), Asian (671), and 'Other' (157). The study showed that self-harm was less common in the Asian population (6.7% for females and 2.7% for males), than in the White population (11.6% for females and 3.3% for males).

There has been a lack of studies comparing the specific self-harm prevalence between the UK and Thailand. However, comparison studies between three South Asian Countries (Taiwan, the Philippines, and Thailand) have been conducted on Thai adolescents (5.7% in boys and 7.4% in girls) reported a significantly lower prevalence of suicidal attempts compared to Taiwan and Philippine students (16.6% and 10.8% in boys; 28.9% and 10.9% in girls, respectively) (Page et al., 2006).

Focusing on Thailand's neighbouring country Malaysia, a systematic review reported that the prevalent rates of suicide ideation, plans, attempts in the past month were 1.7%, 0.9%, and 0.5% respectively, and the suicide rate was approximately 6-8 per 100,000 per year (Armitage, Panagioti, Rahim, Rowe, & O'Connor, 2015). This is similar to the suicide rate in Thailand (7.9 per 100,000; average from 1998 to 2003) (Lotrakul, 2006). There have been no community-based studies of either suicidal attempts or self-harm recorded in Thailand. Lifetime suicide attempts were reported at 5.1% in the provinces and 5.9% in the cities by a WHO multi-country study of violence against women and suicidal attempts in Thailand (Devries et al., 2011).

The reported UK prevalence of suicide was 11.3% (suicidal attempts) and 16.2% (non-suicidal self-harm) in Scotland (18-34 years old) (O'Connor et al., 2018), and 15.5% in England (13-18 years old) (Morey, Mellon, Dailami, Verne, & Tapp, 2016).

Taken together, it is possible that the prevalence of self-harm in Thailand will be lower than in the UK.

3.3.4 Methods of Self-harm

In hospital-based studies, the most common method of self-harm previously reported was self-poisoning by ingestion of analgesic drugs in England (Geulayov et al., 2016), whereas in Thailand the most common method was self-poisoning by ingestion of pesticides (Paholpak et al., 2012). Community-based studies find that cutting is the most common self-harm method in the UK, consistent with the studies from England and Ireland (Kidger, Heron, Lewis, Evans, & Gunnell, 2012; McMahon et al., 2014). However, punching seems to be the most common method in India (Nath, 2017).

There are few studies exploring the association between the ethnicities and methods of self-harm. However, a literature review reported that different ethnicities reported different methods of self-harm; for example, White males were more likely to report scratching than Black males (Al-Sharifi et al., 2015).

As a result of the cultural differences, self-harm methods may vary between countries. This is because learning from friends, music, movies, and books, etc. may influence the type of self-harm methods (Jarvi, Jackson, Swenson, & Crawford, 2013). Information exposure (i.e. cognitive accessibility and modeling learning) may be based on different social contexts. Given their cultural differences, it is expected that there will be different proportions of the same methods in the UK and Thailand in this present study.

3.3.5 Onset of Self-harm

The age of self-harm onset commonly occurs at puberty (Hawton et al., 2012; Patton et al., 2007). Hawton et al. (2012) reported the onset age of self-harm as around 13-15 years old; pubertal phase scored in students (12-15 years) in Australia and the USA was associated to self-harm rather than chronological age. In line with the studies in the UK, onset age of self-harm was 14.20 (mean) and 13 (mode) (Murray, Macdonald, & Fox, 2008). Another study reported that the mean age of first harm was 14 for young women and 15 for young men (Storey, Hurry, Jowitt, Owens, & House, 2005). Moreover, the onset age of NSSI

(Non-Suicidal Self-Injury) is consistently 13 to 14 (Klonsky & Muehlenkamp, 2007). An event history analysis of pooled data in the Netherlands also reported the age onset of NSSI peaked around 14-15 years old (Gandhi et al., 2018).

Although adolescents in industrial countries such as the UK may enter puberty at earlier ages (Arnett, 2014), than those in developing countries, there is no evidence that the onset age of self-harm in Thailand is older than that in the UK.

“Puberty is a dynamic period of development marked by rapid changes in body size, shape, and composition, all of which are sexually dimorphic” (Rogol, Roemmich, & Clark, 2002), and is universal (Hayward, 2003). Mean age of pubertal onset in girls and boys, in Italy and Thailand, were very similar; girls at 10.4 ± 1.2 , 10.4 ± 1.3 and boys at 12.1 ± 0.9 , 12.2 ± 1.0 years old (Petry, Ong, Hughes, Acerini, & Dunger, 2018; Salerno et al., 1997). The mean menarche age (onset of menstruation) was similarly 12.9 and 12.5 years old in the UK and Thailand (Parent et al., 2003; Petry et al., 2018). These could indicate that puberty starts at the similar age in both the UK and Thailand. As onset of self-harm is at puberty (Hawton et al., 2012), it is therefore possible that the onset of self-harm will be similar between the UK and Thailand at around 13-15 years old.

3.3.6 Help-seeking Behaviours

Self-harm can be presented to family, community, or hospital. Seeking help from professionals seems not to be common for individuals who self-harm. As per the findings of the Child & Adolescent Self-harm in Europe (CASE) study and the school study in England (Hawton et al., 2009; Madge et al., 2008), only around 12.5% of individuals who self-harm presented to the hospital after self-harm acts.

Disclosure of self-harm acts to others is often a first step to receiving support. There were significant differences in disclosure rates between countries; Hungary showed the highest rate (89.1%), followed by England (81.7%), Ireland (80.1%), Australia (77.4%), Norway (70.6%), Belgium (67.0%), and the Netherlands (60.2%) (Madge et al., 2008).

However, a cross-cultural study comparing Austrian and Turkish medical students found reports of suicidal disclosures similar between the two countries (Eskin, Schild, Öncü, Stieger, & Voracek, 2015), despite a previous study showing that the prevalence of suicidal attempts was higher in Turkey than in Austria (Eskin, Voracek, Stieger, & Altinyazar, 2011).

A systematic review indicated that adolescents who self-harm are less likely to seek help because of the fear of confidentiality, others' attitude that the behaviour was "attention seeking", and stigmatization (Rowe et al., 2014).

Although individuals in collectivist societies have a more stigmatising attitude to self-harm (Papadopoulos et al., 2013), there has not been a cross-cultural study on this topic between Western and Eastern countries to indicate if there are significant differences between the UK and Thailand.

3.3.7 Motives for Self-harm

The literature review indicates that the most common motive for self-harm is affect regulation. Although the literature indicates that the studies mostly came from English studies, non-European and Sri Lankan publications were included (Edmondson et al., 2016).

Scoliers et al. (2009) recruited 30,477 school students (14-17 years old) from the Child and Adolescent Self-harm in Europe (CASE) study. Despite living on the same continent and sharing similar cultures, the motives of self-harm varied widely between countries. However, "wanted to get relief from a terrible state of mind" and "wanted to die" classed as "cry of pain"; were the most common reasons in all countries including England.

In Thailand, Prateeptheeranun (2014) found that Thai people who presented to an emergency department in a general hospital reported the reasons of self-harm were interpersonal relationship problems, such as arguing with close people (37.31%) and being blamed by others (22.39%). In Asia, Indian students reported that the most common reasons for NSSI were to feel relaxed (41.8%), and to get control of the situation (41.1%) (Kharsati & Bhola, 2015). In Malaysia, the most commonly reported motive for self-harm was interpersonal relationship problems (Armitage et al., 2015). In Sri Lanka, girls described their emotions and their motives, which included anger,

disappointment, shame, and acute distress; self-harm acts were expressive acts aimed directly towards others and the persons involved denied responsibility for their own acts (Marecek & Senadheera, 2012). This data shows that when women in India and Sri Lanka cannot cope with a situation, suicide or self-harm acts may be seen as a way to escape or take control of the situation, as a means of communication regarding their dissatisfaction, or as a way to punish others (Staples, 2012). As mentioned above, the motives of Asian people seem to be more focused on others relating to their means of coping with the situation regarding interpersonal relationships and communication. Again, this is in line with the model of collectivism, which indicates that collectivists give priority to interpersonal relationships (Triandis, 2001).

Given these differences, it is clearly possible that the motives of self-harm in the UK and in Thailand will be different. Given the Cry of Pain model (see Chapter 1 section 1.2.1.5.4), Thai people are expected to be more likely to report “cry for help” than British people in this present study.

3.3.8 Risk Factors for Self-harm

The literature presents a lack of cross-cultural studies focusing on the self-harm risk factors between the UK and Thailand. Culture plays a role in lifestyle, values, perceptions, and attitudes. This raises the question whether culture influences risk factors or characteristics of people who self-harm. A review of cross-cultural perspectives is therefore presented.

A systematic literature review of risk factors amongst minority ethnic groups in the UK revealed that self-harm acts in South Asian adults tended to be associated with life events rather than with psychiatric illness (Bhui, McKenzie, & Rasul, 2007). Most studies in this review were clinical groups, and the different ethnicities lived in Western societies, so were exposed to Western culture.

Differences can be marked even when countries are adjoining and share many cultural features; comparison of deliberate self-harm between people living in the Netherlands and in Belgium (in their own culture) revealed that the lifetime prevalence of self-harm was 2.8 times higher in Belgian adolescents than in Dutch adolescents. Belgian people seem to have higher scores for anxiety and to be less inclined towards problem-orientated coping and communication of

problems; in addition alcohol and soft drug consumption were more commonly reported in Belgium than in the Netherlands (Portzky et al., 2008).

Focusing more closely on Southeast Asia and a more equivalent developing and tropical nation control group, a study comparing Nicaragua and Cambodia in terms of suicidal expression (planning and attempts) indicated a similar prevalence between the two countries. However, Cambodia reported higher scores on all eight YSR-syndromes (Anxious-Depressed, Somatic Complaints, Social Problems, Thought Problems, Rule Breaking Behaviour, Aggressive Behaviour, Internalising Syndrome, and Externalising Syndrome) but no difference for Withdraw-Depressed. However, Nicaragua showed association between all syndromes and suicidal expression, whereas despite scoring higher on almost all syndromes, Cambodia demonstrated an association only of Withdraw-Depressed in girls and Somatic Complaints in boys (Medina, Jegannathan, Dahlblom, & Kullgren, 2012). However, this study did not test for interactions in the logistic regression.

A cross-cultural study between Hong Kong and the United States also examined the cultural difference for risk factors (depression symptoms, interpersonal relationship, and hopelessness) on suicidal attempts (Stewart et al., 2006), finding no significant interaction of culture and risk factors. Therefore, the risk factors between the UK and Thailand may not be different.

3.4 Hypotheses

Given the foregoing literature review and previous findings, several hypotheses can be made.

3.4.1 Hypothesis 1: Differences in Characteristics of Self-harm between the UK and Thailand

- a. The prevalence of self-harm between the UK and Thailand will be different, with the UK having a higher prevalence of self-harm than Thailand.
- b. The average onset age of self-harm will be 13-15 years old and will not significantly differ between the countries.
- c. The number of participants reporting each self-harm method will be significantly different between the UK and Thailand.

- d. The number of participants reporting each motive of self-harm will be different between the UK and Thailand; Thai people report more “cry for help” motives.

3.4.2 Hypothesis 2: Differences in Risk factors between the UK and Thailand

Risk factors for self-harm in the two countries will be similar.

3.4.3 Hypothesis 3: Psychological Characteristics of Self-harm

These hypotheses were reviewed in Chapter 1.

- a. The personality of individuals with self-harm will be higher on Emotionality and lower on Extraversion than those without.
- b. As for Impulsivity, individuals with self-harm will have significantly higher scores on UPPS; especially for Negative Urgency compared to individuals without self-harm.
- c. Individuals with self-harm will have lower scores than individuals without self-harm on Mindfulness, especially for Non-reactivity to Inner Experience, Non-judging to Inner Experience, and Acting with Awareness.
- d. Individuals with self-harm will report significantly higher scores on Difficulty in Emotion Regulation than individuals with self-harm; especially for Limited Access to Effective Emotion Regulation Strategies.
- e. Individuals with self-harm will have higher scores on Rumination, especially for Brooding, than individuals without self-harm.
- f. Individuals with self-harm will have higher scores for Depression and Anxiety.

3.4.4 Hypothesis 4: Psychological Characteristics of British and Thai people

The psychological characteristics of participants in the UK and in Thailand will be different.

3.5 Method

As addressed in Chapter 2, the final data for analysis comprised 548 Thai participants and 165 British participants. Due to the unequal sample size, problems of unequal variance and type I error were a concern (Rusticus & Lovato, 2014). As shown in table 7, all characteristics of participants in the UK and Thailand were significantly different; these are confounding factors leading

to potential bias. Therefore, propensity score matching was adopted as the tool to minimise the potential bias.

3.5.1 Matching model

The present study matched cases (British and Thai people) by age groups and gender. The propensity score matching utilised the SPSS 22 R plug-in using Ps-matching 3. As the Thai sample size ($N = 548$) was much larger than the UK sample size ($N = 165$), matching the case at 1:2 (one British subject to two Thai subjects) was required to enhance the power of the statistical analysis.

The algorithm chosen to improve the covariate balance was *logistic regression* for estimation, *nearest-neighbour* for matching, and *discard* units outside of common support for *both groups*. Largest sample size without replacement (the cases already matched cannot be rematched again) and 0.2 Caliper (the distance of propensity score between two groups) were also chosen (Austin, 2011).

3.5.2 Participants of this Study

As shown in table 7, after matching, almost all demographic variables were equal across countries, with the exception of education level, which was significantly different between participants in the UK and Thailand. Because of the differences in educational systems within the UK and Thailand, the education level was different even when age and gender were controlled for. However, given that education is not considered as the strong confounding factor for self-harm engagement, the difference is acceptable.

Overall sample characteristics in the UK and Thailand after matching were that groups were mostly 23-30 years old (40.0% vs. 44.1%), female (61.6% vs. 63.9%), single (79.4% vs. 85.8%), students (56.2% vs. 49.2%), had a bachelor's degree (30.9% vs. 67.6%), and equally scattered in every amount of household income.

Table 7 Demographic data of UK and Thailand before and after matching by Pearson chi-square test (matched cases in italics)

	All participants		P	Matching cases		P
	UK (165)	Thailand (548)		UK (165)	Thailand (256)	
Age Group			.001			.190
18-22 years old	79 (47.9%)	101 (18.4%)		79 (47.9%)	101 (39.5%)	
23-30 years old	66 (40.0%)	208 (38.0%)		66 (40.0%)	113 (44.1%)	
31-40 years old	20 (12.1%)	239 (43.6%)		20 (12.1%)	42 (16.4%)	
Gender			.001			.629
Male	63 (38.4%)	135 (24.7%)		63 (38.4%)	92 (36.1%)	
Female	101 (61.6%)	412 (75.3%)		101 (61.6%)	163 (63.9%)	
Gender Orientation			.483			.526
Heterosexual	135 (81.8%)	461 (84.1%)		135 (81.8%)	203 (79.3%)	
Non-heterosexual	30 (18.2%)	87 (15.9%)		30 (18.2%)	53 (20.7%)	
Education level			.001			.001
No schooling completed	1 (0.6%)	0 (0.0%)		1 (0.6%)	0 (0.0%)	
Primary Education	1 (0.6%)	0 (0.0%)		1 (0.6%)	0 (0.0%)	
Secondary Education	8 (4.8%)	3 (0.5%)		8 (4.8%)	2 (0.8%)	
Post-secondary Education	65 (39.4%)	40 (7.3%)		65 (39.4%)	35 (13.7%)	
Vocational Qualification	9 (5.5%)	2 (0.4%)		9 (5.5%)	2 (0.8%)	
Bachelor's Degree	51 (30.9%)	335 (61.1%)		51 (30.9%)	173 (67.6%)	
Master's Degree	24 (14.5%)	153 (27.9%)		24 (14.5%)	43 (16.8%)	
Doctorate Degree	6 (3.6%)	15 (2.7%)		6 (3.6%)	1 (0.4%)	
Marital status			.211			.190
Single	127 (79.4%)	419 (76.7%)		127 (79.4%)	218 (85.8%)	
Married	17 (10.6%)	83 (15.2%)		17 (10.6%)	24 (9.4%)	
Domestic partnership	14 (8.8%)	31 (5.7%)		14 (8.8%)	10 (3.9%)	
Widowed/Divorced/ Separated	2 (1.3%)	13 (2.4%)		2 (1.3%)	2 (0.8%)	
Employment status			.001			.338
Self-employed	7 (4.2%)	54 (9.9%)		7 (4.2%)	19 (7.4%)	
Employed	55 (33.3%)	300 (54.7%)		55 (33.3%)	96 (37.5%)	
Unemployed	6 (3.6%)	23 (4.2%)		6 (3.6%)	11 (4.3%)	
A student	96 (58.2%)	160 (29.2%)		96 (58.2%)	126 (49.2%)	
A homemaker	1 (0.6%)	11 (2.0%)		1 (0.6%)	4 (1.6%)	
Income			.001			.715
5 th quintile	43 (26.1%)	78 (14.2%)		43 (26.1%)	59 (23.0%)	
4 th quintile	30 (18.2%)	70 (12.8%)		30 (18.2%)	38 (14.8%)	
3 rd quintile	24 (14.5%)	99 (18.1%)		24 (14.5%)	41 (16.0%)	
2 nd quintile	36 (21.8%)	138 (25.2%)		36 (21.8%)	57 (22.3%)	
1 st quintile	32 (19.4%)	163 (29.7%)		32 (19.4%)	61 (23.8%)	

3.6 Data Analysis

The data was analysed primarily using chi-square, to assess the differences of self-harm characteristics (i.e. methods, frequency, motivation of self-harm, etc.) between the UK and Thailand. Logistic regression was used to assess the associations of psychosocial factors (gender, gender orientation, marital status, employment status, income, etc.).

Comparing the mean of psychological characteristics (personality, impulsivity, mindfulness, emotion regulation, rumination, depression, and anxiety) to self-harm engagement (self-harm and non-self-harm) across countries were evaluated by t-test and ANOVA. Two-way ANOVA was used to examine self-harm engagement (self-harm and non-self-harm) and country (UK and Thailand) to see how the factors affected observed psychological characteristics.

The predictors of self-harm were evaluated with univariate and multiple logistic regression models. The interaction term between culture and self-harm was included in the multivariate logistic regression.

To estimate sample size, G*power was performed for a logistic regression model. Probability of self-harm when someone was British was set of $P_1 = 0.080$ and when someone was Thai was set of $P_0 = 0.035$ based on reports in previous studies (Morey et al., 2016; Page et al., 2006). The model sought to achieve 0.95 power with alpha of 0.05 and R-square of 0.04; R is covariate association (R was expected to have a small association with culture, 0.20). This suggested 419 participants were required. Whereas a total sample size of 280 was also required for a two-way ANOVA with 0.95 power, an alpha of 0.05, and a medium effect size (0.25). However, with a total sample of 421 for this study, sampling was more than adequate to achieve the power in both analyses.

3.7 Results

3.7.1 Self-harm Characteristics

The self-harm characteristics studied were prevalence, method, frequency, onset age, hospitalisation, and disclosure. The motivations for self-harm are discussed at the end of this section.

3.7.1.1 Prevalence of Self-harm

Table 8 Self-harm prevalence in the UK and Thailand

N (%)		OR (95% CI)	AOR (95% CI)	P-value
UK (165)	Thailand (256)			
62 (36.7%)	43 (16.8%)	2.98 (1.89-4.70)	2.88 (1.66-5.03)	.001

OR = odd ratio

*AOR = Adjusted Odd Ratio; adjusted for age, gender, education level, marital status, employment status, and household income

The lifetime prevalence of self-harm is significantly different between the UK and Thailand. Self-harm was more common in UK (36.7%) than in Thailand (16.8%) (odds ratio 2.98, 95% CI = 1.89 - 4.70) as shown in table 8. In other words, British people had a 2.98-fold risk of lifetime self-harm compared to Thai people.

Although the analysis data was matched, this doesn't mean that matching removed the confounding effect (Pearce, 2016). In order to ascertain whether the self-harm prevalence between the UK and Thailand was precisely different, demographic variables were adjusted.

After adjustment for age, gender, education level, marital status, employment status, and household income, the lifetime prevalence was still significantly different between the UK and Thailand (see table 8).

Table 9 Methods of self-harm

	Methods of self-harm		
	UK (N=62)	Thailand (N=43)	P-value
1. Overdosed	19 (30.6%)	15 (34.9%)	.648
2. Cut yourself	54 (87.1%)	20 (46.5%)	.001 ^a
3. Stuck yourself with pins, needles, etc.	17 (27.4%)	7 (16.3%)	.181
4. Punched or hit yourself	38 (61.3%)	27 (62.8%)	.876
5. Pulled your hair	25 (40.3%)	17 (39.5%)	.935
6. Banged your head, arms or legs	32 (51.6%)	16 (37.2%)	.145
7. Bitten yourself	20 (32.3%)	12 (27.9%)	.634
8. Broken your bones	2 (3.2%)	-	.234
9. Burned yourself (such as cigarette)	19 (30.6%)	-	.001 ^a
10. Carved words or symbols on your skin	19 (30.6%)	4 (9.3%)	.009 ^a
11. Scratched your skin	43 (69.4%)	14 (32.6%)	.001 ^a
12. Prevented wounds from healing	28 (45.2%)	3 (7.0%)	.001 ^a
13. Jumped from height	3 (4.8%)	2 (4.7%)	.965
14. Consumed recreational drug	22 (35.5%)	5 (11.6%)	.006 ^a
15. Swallowed something inedible (substance or objects)	3 (4.8%)	3 (7.0%)	.643
16. Hanged yourself	5 (8.1%)	1 (2.3%)	.213
17. Suffocated yourself	7 (11.3%)	6 (14.0%)	.684
18. Electrocuted yourself (e.g. electric shock)	1 (1.6%)	-	.403
19. Starved yourself	26 (41.9%)	18 (41.9%)	.994
20. Shot yourself	-	-	-
21. Tried to drown yourself	2 (3.2%)	-	.234
22. Drove at high speed to have an accident	-	3 (7.0%)	.035
23. Strangled yourself	5 (8.1%)	1 (2.3 %)	.213

^a Controlled for FDR, p-value was statistically significant

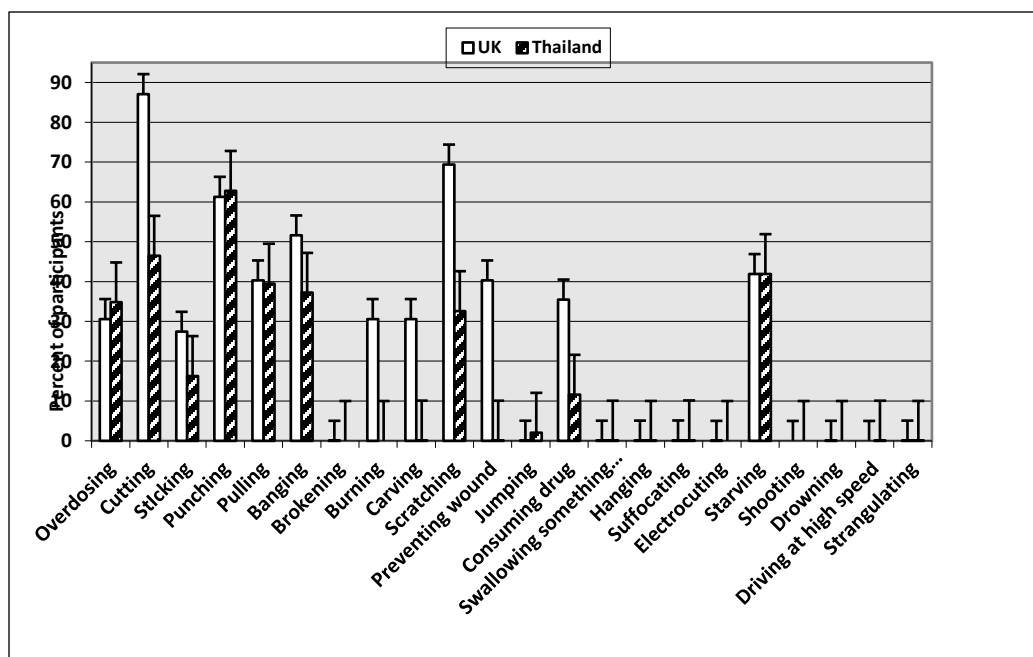


Figure 5 A bar chart of self-harm methods

Table 10 Ranking of methods

Methods (N)	
UK (N=62)	Thailand (N=43)
Cut yourself (54)	Punched or hit yourself (27)
Scratched your skin (43)	Cut yourself (20)
Punched or hit yourself (38)	Starved yourself (18)
Banged your head, arms or legs (32)	Pulled your hair (17)
Prevented wounds from healing (28)	Banged your head, arms or legs (16)
Starved yourself (26)	Overdosed (15)
Pulled your hair (25)	Scratched your skin (14)
Consumed recreational drug (22)	Bitten yourself (12)
Bitten yourself (20)	Stuck yourself with pins, needles, etc. (7)
Overdosed (19)	Suffocated yourself (6)
Burned yourself (such as cigarette) (19)	Consumed recreational drug (5)
Carved words or symbols on your skin (19)	Carved words or symbols on your skin (4)
Stuck yourself with pins, needles, etc. (17)	Prevented wounds from healing (3)
Suffocated yourself (7)	Drove at high speed to have an accident (3)
Strangulated yourself (5)	Swallowed something inedible (substance or objects) (3)
Hanged yourself (5)	Jumped from height (2)
Swallowed something inedible (substance or objects) (3)	Hanged yourself (1)
Jumped from height (3)	Strangulated yourself (1)
Broken your bones (2)	Burned yourself (such as cigarette) (0)
Tried to drown yourself (2)	Broken your bones (0)
Electrocuted yourself (e.g. electric shock) (1)	Tried to drown yourself (0)
Drove at high speed to have an accident (0)	Electrocuted yourself (e.g. electric shock) (0)
Shot yourself (0)	Shot yourself (0)

3.7.1.2 Methods of Self-harm

As shown in tables 10 and 11, cutting was the most common method in the UK (87.1%). The second most common method in the UK was scratching (69.4%), whereas punching was the most common method among Thai people (62.8%), followed by cutting (46.5%).

In terms of comparisons, six methods resulted in significant differences after FDR correction. British people reported higher use of almost all methods than Thai people, namely cutting (87.1% vs. 46.5%, respectively), burning (30.6% vs. 0%), scratching (69.4% vs. 32.6%), preventing wounds from healing (45.2% vs. 7.0%), consuming recreational drugs (35.5% vs. 11.6%), and carving (30.6% and 9.3%).

Table 11 Frequency of self-harm

	The UK			Thailand			P
	Once	More than once	Many time	Once	More than once	Many time	
Cut yourself	9 (16.7%)	9 (16.7%)	36 (66.7%)	10 (50.0%)	6 (30.0%)	4 (20.0%)	.001 ^a
Bitten yourself	-	14 (70.0%)	6 (30.0%)	4 (33.3%)	3 (25%)	5 (41.7%)	.007
Pulled your hair	1 (4.0%)	10 (40.0%)	14 (56.0%)	-	7 (41.2%)	10 (58.8%)	.706
Scratched your skin	2 (4.7%)	17 (39.5%)	24 (55.8%)	-	6 (42.9%)	8 (57.1%)	.711
Prevented wounds from healing	2 (7.1%)	11 (39.3%)	15 (53.6%)	1 (33.3%)	2 (66.7%)	-	.135
Starved yourself	4 (15.4%)	8 (30.8%)	14 (53.8%)	2 (11.1%)	9 (50.0%)	7 (38.9%)	.436
Banged your head, arms or legs	3 (9.4%)	13 (40.6%)	16 (50.0%)	1 (6.3%)	10 (62.5%)	5 (31.3%)	.359
Punched or hit yourself	4 (10.5%)	14 (36.8%)	20 (52.6%)	2 (7.4%)	14 (51.9%)	11 (40.7%)	.482
Consumed recreational drug	2 (9.1%)	11 (50.0%)	9 (40.9%)	1 (20.0%)	1 (20.0%)	3 (60.0%)	.450
Stuck yourself with pins, needles, etc.	2 (11.8%)	8 (47.1%)	7 (41.2%)	2 (28.6%)	5 (71.4%)	-	.118
Burned yourself (such as cigarette)	4 (21.1%)	8 (42.1%)	7 (36.8%)	-	-	-	-
Overdosed	6 (31.6%)	11 (57.9%)	2 (10.5%)	9 (60.0%)	2 (20.0%)	3 (20.0%)	.083
Drove at high speed to have an accident	-	-	-	1 (33.3%)	2 (66.7%)	-	-
Carved words or symbols on your skin	6 (31.6%)	9 (47.4%)	4 (21.1%)	3 (75.0%)	1 (25.0%)	-	.245
Strangulated yourself	1 (20.0%)	3 (60.0%)	1 (20.0%)	1 (100.0%)	-	-	.301
Swallowed something inedible (substance/object)	1 (33.3%)	2 (66.7%)	-	2 (66.7%)	1 (33.3%)	-	.414
Suffocated yourself	6 (85.7%)	1 (14.3%)	-	3 (50.0%)	-	3 (50.0%)	.084
Hanged yourself	4 (80.0%)	1 (20.0%)	-	1 (100.0%)	-	-	.624
Jumped from height	2 (66.7%)	1 (33.3%)	-	2 (100.0%)	-	-	.361
Broken your bones	1 (50.0%)	1 (50.0%)	-	-	-	-	-
Electrocuted yourself (e.g. electric shock)	1 (100.0%)	-	-	-	-	-	-
Shot yourself	-	-	-	-	-	-	-
Tried to drown yourself	2 (100.0%)	-	-	-	-	-	-

^a Controlled for FDR, p-value was statistically significant; P = P-value

3.7.1.3 Frequency of Self-harm

Overall, less dangerous methods were reported more frequently than dangerous methods in both countries.

Almost all methods showed no significant difference in frequencies between the UK and Thailand. Only cutting reported significant differences. The most common frequency of cutting for British people was 'many times' (66.7%), whereas Thai people reported 'many times' only 20% and 'once' the most (50%), as shown in table 11.

3.7.1.4 Single/Multi-method and Number of Methods

The findings in table 12 do not show a significant difference in single/multiple method reports between both countries; most people who self-harm reported multiple methods in both the UK and Thailand (95.2% vs. 83.3%). Looking in more detail at the reports of a single method, only two British participants reported cutting and one reported biting. For Thai participants, five reported cutting, three reported overdosing, and two reported punching as a single method. Notably, single method did not include dangerous methods (i.e. hanging, jumping, swallowing toxic substance). These findings reflect that the more dangerous methods do not occur alone.

However, the number of methods indicated significant differences between the two countries; UK participants reported a higher number of methods (Mean = 6.29, SD = 3.62) than Thai participants (Mean = 4.05, SD = 2.63).

Table 12 Single/multiple methods and number of methods of self-harm

	UK (N=62)	Thailand (N=43)	Sig (2-tailed)
Single	3 (4.8%)	7 (16.7%)	.058
Multiple	59 (95.2%)	35 (83.3%)	
Number of methods ^a	6.29 (3.62)	4.05 (2.63)	.001

One Thai person did not report the method of self-harm

^a continuous variables shown by Mean (SD) and using T-test for mean comparison.

Table 13 Onset of self-harm

	R	% R	Mode	Mean (Min-Max)	SD	Sig (2-tailed)
UK (62)	54	87.1%	13	14.26 (8-38)	4.39	.705
Thailand (43)	31	73.1%	13	14.65 (6-24)	4.73	

R = number of participants who responded

Table 14 Onset of self-harm in each method

	The UK (N=62)				Thailand (N=47)				Sig. (2-tailed)
	Total	R	Mean (Min-Max)	SD	Total	R	Mean (Min-Max)	SD	
Bitten yourself	20	12	13.42 (10-17)	2.71	12	8	13.50 (6-21)	4.69	.960
Stuck yourself with pins, needles, etc.	17	12	14.08 (11-19)	2.40	7	2	14.00 (12-16)	2.83	.964
Pulled your hair	25	17	14.76 (8-21)	3.44	17	12	16.25 (6-25)	6.54	.432
Carved words or symbols on your skin	19	12	15.17 (12-21)	2.25	4	2	17.50 (12-23)	7.78	.346
Starved yourself	26	17	15.24 (12-19)	2.14	18	12	16.85 (12-22)	3.38	.130
Cut yourself	54	47	15.34 (11-27)	3.06	20	14	16.57 (9-22)	3.55	.208
Punched or hit yourself	38	27	15.52 (10-38)	5.70	27	20	17.60 (10-27)	4.75	.180
Prevented wounds from healing	28	17	15.71 (8-23)	3.62	3	1	14.00	-	.653
Scratched your skin	43	31	15.90 (8-38)	5.74	14	11	14.36 (10-21)	3.44	.409
Swallowed something inedible (substance or objects)	3	1	16.00 (16-16)	-	3	2	12.50 (12-13)	0.71	.154
Overdosed	19	14	17.07 (14-27)	3.61	15	12	18.33 (12-27)	4.44	.431
Banged your head, arms or legs	32	21	17.10 (11-38)	5.99	16	11	16.09 (10-27)	5.13	.641
Consumed recreational drug	22	17	17.29 (14-28)	3.33	5	5	17.00 (14-21)	2.55	.853
Hanged yourself	5	4	18.00 (16-20)	1.63	1	1	24.00	-	.046
Suffocated yourself	7	4	20.25 (18-24)	2.63	6	5	14.60 (7-21)	5.13	.087
Strangulated yourself	5	3	21.33 (20-24)	2.31	1	-	-	-	-
Broken your bones	2	1	14.00	-	0	-	-	-	-
Tried to drown yourself	2	1	16.00	-	0	-	-	-	-
Jumped from height	3	1	16.00	-	2	-	-	-	-
Burned yourself (such as cigarette)	19	15	16.27 (13-22)	2.19	0	-	-	-	-
Drove at high speed to have an accident	0	-	-	-	3	2	21.00 (13-29)	11.31	-
Electrocuted yourself (e.g. electric shock)	1	-	-	-	0	-	-	-	-
Shot yourself	0	-	-	-	0	-	-	-	-

R = the number of people who reported the onset.

Total = the total number of people with self-harm acts in each method.

There were no statistical significances after FDR correction.

3.7.1.5 Onset of Self-harm

Overall, average onset age of self-harm was not significantly different in the UK and in Thailand (14.26 vs. 14.65). In the UK, the youngest onset age was eight and the oldest was 38. In Thailand, the youngest was six and oldest was 24, as shown in table 13.

Different self-harm methods had different mean onset ages; no significant differences were found between the two countries after adjustment for FDR (see Table 14). Considering this in more detail, the three onsets ages that occurred latest in the UK (hanging, suffocating, and strangulating) were more dangerous methods than the earlier onset behaviours (sticking, biting, and pulling). Thai people reported hanging, driving at high speed, and overdosing having the oldest age onsets of self-harm. Biting, sticking, and preventing wounds from healing had younger onset ages.

3.7.1.6 Help-seeking

3.7.1.6.1 Hospitalisation

As shown in table 15, the majority of people in both countries reported that they did not go to the hospital after self-harming, irrespective of method. The literature shows that self-poisoning or overdosing were the most common methods presented to hospitals (Arensman et al., 2018; Quinlivan et al., 2017). In the present study there were no reported hospitalisations after swallowing something inedible in either country, and only 50% of British people and 25% of Thai people reported hospitalisation after overdosing.

Although there were no significant differences found for any method between the countries, Thai people were less likely to go to hospital after self-harm. When considering only the methods that people in both countries reported when hospitalised (hanging, overdosing, breaking bones, strangulating, starving, cutting, punching, consuming recreational drugs, banging, scratching, pulling hair), among the Thai participants only three out of 94 reports (3.2%) indicated hospitalisation, whereas among the British participants 29 reports out of 206 reports (14.1%) indicated hospitalisation. Overall, only 9.06% of UK and 2.50% of Thai people reported hospitalisation after self-harm.

Table 15 Hospitalisation after self-harm acts

	The UK (N=62)				Thailand (N=43)				Sig. (2-tailed)
	%R	Total	No	Yes	%R	Total	No	Yes	
1. Hanged yourself	100%	5	2 (40%)	3 (60%)	100%	1	1 (100%)	-	.147
2. Overdosed	94.7%	19	9 (50%)	9 (50%)	80.0%	15	10 (83.3%)	2 (16.7%)	.063
3. Broken your bones	50%	2	1 (50%)	1 (50%)	-	-	-	-	-
4. Strangulated yourself	100%	5	4 (80%)	1 (20%)	100%	1	1 (100%)	-	.659
5. Starved yourself	84.6%	26	18 (81.8%)	4 (18.2%)	66.7%	18	12 (100%)	-	.149
6. Cut yourself	94.4%	54	45 (82.2%)	6 (11.8%)	75.0%	20	15 (100%)	-	.164
7. Punched or hit yourself	84.2%	38	30 (93.8%)	2 (6.3%)	74.1%	27	20 (100%)	-	.254
8. Consumed recreational drug	81.8%	22	17 (94.4%)	1 (5.6%)	80.0%	5	4 (100%)	-	.629
9. Banged your head, arms or legs	81.3%	32	25 (96.2%)	1 (3.8%)	62.5%	16	10 (100%)	-	.529
10. Scratched your skin	79.1%	43	33 (97.1%)	1 (2.9%)	71.4%	14	10 (100%)	-	.583
11. Pulled your hair	88%	25	22 (100%)	-	70.6%	17	11 (91.7%)	1 (11.1%)	.169
12. Swallowed something inedible (substance or objects)	66.7%	3	2 (100%)	-	66.7%	3	2 (100%)	-	-
13. Suffocated yourself	100%	7	7 (100%)	-	66.7%	6	4 (100%)	-	-
14. Tried to drown yourself	100%	2	2 (100%)	-	-	-	-	-	-
15. Jumped from height	66.7%	3	2 (100%)	-	0%	2	-	-	-
16. Drove at high speed to have an accident	-	-	-	-	66.7%	3	2 (100%)	-	-
17. Electrocuted yourself (e.g. electric shock)	100%	1	1 (100%)	-	-	-	-	-	-
18. Burned yourself (such as cigarette)	78.9%	19	15 (100%)	-	-	-	-	-	-
19. Carved words or symbols on your skin	84.2%	19	16 (100%)	-	50.0%	4	2 (100%)	-	-
20. Stuck yourself with pins, needles, etc.	88.2%	17	15 (100%)	-	42.9%	7	3 (100%)	-	-
21. Prevented wounds from healing	85.7%	28	24 (100%)	-	33.3%	3	1 (100%)	-	-
22. Bitten yourself	75%	20	15 (100%)	-	66.7%	12	8 (100%)	-	-

R = the number of people who reported hospitalisation.

Total = the total number of people with self-harm acts in each method.

Table 16 Self-harm disclosure

	The UK (N=62)				Thailand (N=47)				Sig. (2-tailed)
	%R	Total	No	Yes	%R	Total	No	Yes	
1. Consumed recreational drug	81.8%	22	5 (29.4%)	12 (70.6%)	80%	5	1 (25.0%)	3 (75.0%)	.861
2. Cut yourself	94.4%	54	17 (34.0%)	33 (66.0%)	75.0%	20	8 (57.1%)	6 (42.9%)	.117
3. Overdosed	94.7%	19	7 (38.9%)	11 (61.1%)	80.0%	15	6 (50.0%)	6 (50.0%)	.547
4. Hanged yourself	100%	5	2 (40.0%)	3 (60.0%)	100%	1	-	1 (100.0%)	.439
5. Scratched your skin	79.1%	43	18 (54.5%)	15 (45.5%)	71.4%	14	6 (60.0%)	4 (40.0%)	.761
6. Carved words or symbols on your skin	84.2%	19	9 (56.3%)	7 (43.8%)	50.0%	4	1 (50.0%)	1 (50.0%)	.867
7. Stuck yourself with pins, needles, etc.	88.2%	17	13 (86.7%)	2 (13.3%)	42.9%	7	2 (66.7%)	1 (33.3%)	.396
8. Prevented wounds from healing	85.7%	28	22 (91.7%)	2 (8.3%)	33.3%	3	1 (100%)	-	.763
9. Punched or hit yourself	84.2%	38	22 (73.3%)	8 (26.7%)	74.1%	27	9 (47.4%)	10 (52.6%)	.066
10. Pulled your hair	88%	25	13 (65.0%)	7 (35.0%)	70.6%	17	6 (50.0%)	6 (50.0%)	.403
11. Banged your head, arms or legs	81.3%	32	18 (75.0%)	6 (25.0%)	62.5%	16	6 (60.0%)	4 (40.0%)	.382
12. Bitted yourself	75%	20	12 (85.7%)	2 (14.3%)	66.7%	12	6 (75.0%)	2 (25.0%)	.531
13. Starved yourself	84.6%	26	13 (61.9%)	8 (38.1%)	66.7%	18	9 (75.0%)	3 (25.0%)	.443
14. Suffocated yourself	100%	7	4 (66.7%)	2 (33.3%)	66.7%	6	4 (100%)	-	.197
15. Strangled yourself	100%	5	3 (75.0%)	1 (25.0%)	100%	1	1 (100%)	-	
16. Jumped from height	66.7%	3	2 (100%)	-	50%	2	1 (100%)	-	
17. Swallowed something inedible (substance or objects)	66.7%	3	2 (100%)	-	66.7%	3	2 (100%)	-	
18. Electrocuted yourself (e.g. electric shock)	100%	1	-	1 (100%)	-	0	-	-	
19. Broken your bones	50%	2	1 (50.0%)	1 (50.0%)	-	0	-	-	
20. Burned yourself (such as cigarette)	78.9%	19	10 (66.7%)	5 (33.3%)	-	0	-	-	
21. Tried to drown yourself	100%	2	-	1 (100%)	-	0			
22. Drove at high speed to have an accident	-	0			66.7%	3	1 (50.0%)	1 (50.0%)	.576
23. Shot yourself	-	0			-	0			

%R = the percent of people who reported disclosure

Total = the total number of people with self-harm acts in each method

3.7.1.6.2 Self-harm Disclosure

Considering each method's differences, there were no significant differences in all methods of self-harm. More than 50% of people in both countries let other people know they had consumed recreational drugs, or engaged in cutting, overdosing, and hanging. However, there were some methods that people in both countries did not let others know such as Swallowing something inedible, or jumping. Thai people also did not disclose suffocating, preventing wounds from healing, or strangulation (see Table 16).

3.7.1.7 Motives for Self-harm

Table 17 Ranking the number of motives reported

UK (N=62)	Thailand (N=47)
To get relief from a terrible state of mind (54)	To get relief from a terrible state of mind (34)
To punish myself (44)	To punish myself (31)
To show how desperate I was feeling (24)	To show how desperate I was feeling (25)
To die (20)	To avoid doing something or being in some situation (22)
To get some attention (13)	To die (21)
To avoid doing something or being in some situation (12)	To get some attention (20)
To frighten someone (5)	To find out whether someone really loved me (18)
To get my own back on someone (3)	To get my own back on someone (14)
To find out whether someone really loved me (3)	To frighten someone (11)
To be a part of the group (1)	To be a part of the group (7)

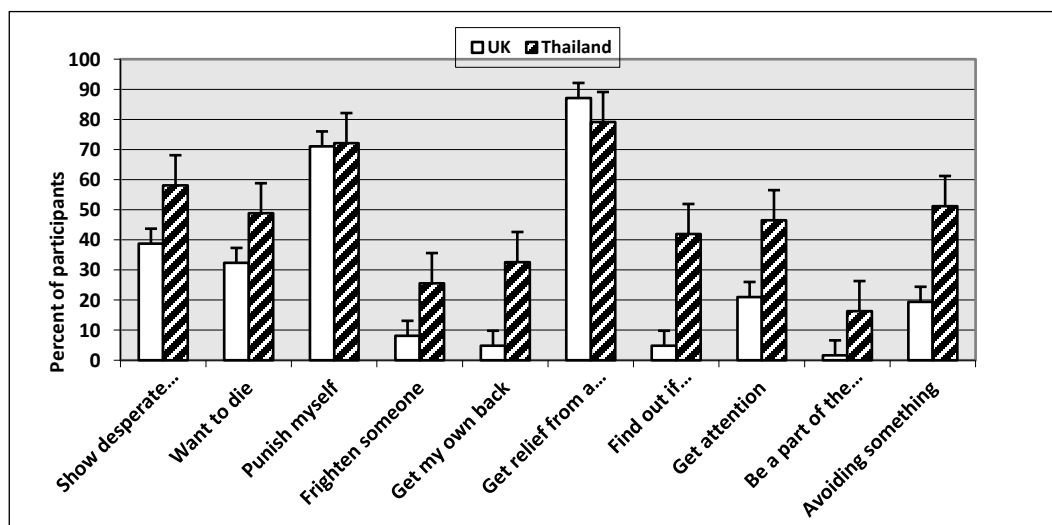


Figure 6 A bar chart showing motives of self-harm

Table 18 Motives for self-harm

	The UK (N=62)		Thailand (N=43)		OR	95% CI	Sig
	Cry of pain	Cry for help	Cry of pain	Cry for help			
1. I wanted to show how desperate I was feeling		24 (38.7%)		25 (58.1%)	2.20	.99-4.86	.051
2. I wanted to die	20 (32.3%)		21 (48.8%)		2.01	.90-4.46	.089
3. I wanted to punish myself	44 (71.0%)		31 (72.1%)		1.06	.45-2.51	.900
4. I wanted to frighten someone		5 (8.1%)		11 (25.6%)	3.92	1.25-12.28	.019
5. I wanted to get my own back on someone		3 (4.8%)		14 (32.6%)	9.50	2.53-35.68	.001
6. I wanted to get relief from a terrible state of mind	54 (87.1%)		34 (79.1%)		.56	.20-1.59	.276
7. I wanted to find out whether someone really loved me		3 (4.8%)		18 (41.9%)	14.16	3.83-52.41	.001
8. I wanted to get some attention		13 (21.0%)		20 (46.5%)	3.28	1.39-7.72	.007
9. I wanted to be a part of the group		1 (1.6%)		7 (16.3%)	11.86	1.40-100.35	.023
10. I wanted to avoid doing something or being in some situation		12 (19.4%)		22 (51.2%)	4.36	1.831-10.405	.001

All significant P-value were statistically significant after FDR correction.

The most common reason why people harmed themselves was “wanted to get relief from a terrible state of mind” in both the UK and Thailand (87.1% vs. 79.1%) followed by “wanted to punish myself” (71% vs. 72.1%), as shown in Figure 6.

People in the UK and in Thailand reported significant differences in “wanted to frighten someone”, “wanted to get back at someone”, “wanted to find out whether someone really loved me”, “wanted to get attention”, “wanted to be a part of the group”, and “wanted to avoid doing something or being in some situation”. Thai people reported a higher percent of “cry for help” motives than British people (see table 18).

The most major difference between the two countries was “wanted to find out whether someone really loved me”, reported by 41.9% of Thai people but merely 4.8% of British people. The second strongest difference was “wanted to be a part of the group”; 16.3% of Thai and 1.6% of British people reported this, followed by 32.6% of Thai people and 4.8% of British people who reported “wanted to get my own back on someone”.

Considering the single and multiple motives, most British and Thai people reported multiple motives (85.2% and 95.3%); only nine British people (14.8%) and two Thai people (4.7%) reported single motives of self-harm. Regarding the number of motives (2-3, 4-6, and 7-10 motives) reported, of people who reported multiple motives, most Thai people reported 7-10 motives (46.3%). Most British people (67.3%) reported 2-3 motives.

Of the nine British people who reported a single motive, five people reported “wanted to get relief from a terrible state of mind”, two people reported “wanted to die”, one person reported “wanted to show how desperate I was feeling”, and another one reported “wanted to punish myself”. One British person did not choose any of these motives but described that the person wanted to turn the emotional pain to physical pain as the person felt it was easier to deal with. As for two Thai people, one person reported “wanted to die” and “wanted to punish myself”. This indicated that the motive for self-harm for almost all people in both countries who reported a single motive was a “cry of pain”.

3.7.2 Risk Factors for Self-harm

3.7.2.1 Psychosocial Factors

Table 19 Chi-square of risk factors for self-harm

	UK (N=165)			Thailand (N=256)		
	Non-SH	Self-harm	P	Non-SH	Self-harm	P
Age						
18-22 years old	49(47.6%)	30(48.4%)	.968	80(37.6%)	21(48.8%)	.340
23-30 years old	41(39.8%)	25(40.3%)		98(46.0%)	15(34.9%)	
31-40 years old	13(12.6%)	7(11.3%)		35(16.4%)	7(16.3%)	
Gender			.001 ^a			.017 ^a
Male	53(51.5%)	10(16.1%)		82(38.5%)	10(23.3%)	
Female	50(48.5%)	51(82.3%)		131(61.5%)	32(74.4%)	
Other	0(0.0%)	1(1.6%)		0(0.0%)	1(2.3%)	
Gender Orientation			.005 ^a			.003 ^a
Heterosexual	91(88.3%)	44(71.0%)		176(82.6%)	27(62.8%)	
Non-heterosexual	12(11.7%)	18(29.0%)		37(17.4%)	16(37.2%)	
Education level			.529			.230
No schooling completed	1(1.0%)	0(0.0%)		1(0.3%)	0(0.0%)	
Primary Education	0(0.0%)	1(1.6%)		0(0.0%)	1(1.0%)	
Secondary Education	5(4.9%)	3(4.8%)		7(2.2%)	3(2.9%)	
Post-secondary Education	38(36.9%)	27(43.5%)		66(20.9%)	34(32.4%)	
Vocational Qualification	6(5.8%)	3(4.8%)		8(2.5%)	3(2.9%)	
Bachelor's Degree	37(35.9%)	14(22.6%)		180(57.0%)	44(41.9%)	
Master's Degree	13(12.6%)	11(17.7%)		51(16.1%)	16(15.2%)	
Professional/doctorate Degree	3(2.9%)	3(4.8%)		3(0.9%)	4(3.8%)	
Marital status			.349			.007 ^a
Single	83 (81.4%)	44(75.9%)		180(85.3%)	38(88.4%)	
Married	12(11.8%)	5(8.6%)		21(10.0%)	3(7.0%)	
Domestic partnership	6(5.9%)	8(13.8%)		10(4.7%)	0(0.0%)	
Widowed/ Divorced/ Separated	1(1.0%)	1(1.7%)		0(0.0%)	2(4.7%)	
Employment status			.167			.002 ^a
Self-employed	7(6.8%)	0(0.0%)		17(8.0%)	2(4.7%)	
Employed	35(34.0%)	20(32.3%)		85(39.9%)	11(25.6%)	
Unemployed	3(2.9%)	3(4.8%)		5(2.3%)	6(14.0%)	
Student	58(56.3%)	38(61.3%)		104(48.8%)	22(51.2%)	
homemaker	0(0.0%)	1(1.6%)		2(0.9%)	2(4.7%)	
Occupation			.009 ^a			.700
Professional	10(24.4%)	7(36.8%)		32(32.0%)	2(15.4%)	
Managerial and technical	22(53.7%)	4(21.1%)		25(25.0%)	3(23.1%)	
Skilled manual/non-manual	8(19.5%)	3(15.8%)		39(39.0%)	8(61.5%)	
Partly-skilled	0(0.0%)	2(10.5%)		1(1.0%)	0(0.0%)	
Unskilled	0(0.0%)	3(15.8%)		2(2.0%)	0(0.0%)	
Others	1(2.4%)	0(0.0%)		1(1.0%)	0(0.0%)	

Non-SH = non-self-harm; P = P-value

^a Controlled for FDR, p-value was statistically significant

Table 19 Chi-square of risk factors for self-harm (continued)

	UK (N=165)			Thailand (N=256)		
	Non-SH	Self-harm	P	Non-SH	Self-harm	P
Income			.026 ^a			.570
5 th quintile (lowest)	25 (24.3%)	18 (29.0%)		47 (22.1%)	12 (27.9%)	
4 th quintile	16 (15.5%)	14 (22.6%)		33 (15.5%)	5 (11.6%)	
3 rd quintile	17 (16.5%)	7 (11.3%)		32 (15.0%)	9 (20.9%)	
2 nd quintile	18 (17.5%)	18 (29.0%)		47 (22.1%)	10 (23.3%)	
1 st quintile	27 (26.2%)	5 (8.1%)		54 (25.4%)	7 (16.3%)	
Living status			.380			.491
Living alone	26 (25.2%)	11 (17.7%)		49 (23.0%)	12 (27.9%)	
Living with others	76 (73.8%)	51 (82.3%)		164 (77.0%)	31 (72.1%)	
Other	1 (1.0%)	-				
Living area			.305			.740
Urban	74 (71.8%)	49 (79.0%)		172 (80.8%)	34 (79.1%)	
Rural	29 (28.2%)	13 (21.0%)		39 (18.3%)	8 (18.6%)	
Other				2 (0.9%)	1 (2.3%)	
Psychiatric service history			.001 ^a			.001 ^a
No history	77 (74.8%)	11 (17.7%)		196 (92.0%)	32 (74.4%)	
With psychiatric history	26 (25.2%)	51 (82.3%)		17 (8.0%)	11 (25.6%)	
No history but consider themselves			.019 ^a			.033
Should not receive services	69 (89.6%)	7 (63.6%)		146 (74.5%)	18 (56.3%)	
Should receive services	8 (10.4%)	4 (36.4%)		50 (25.5%)	14 (43.8%)	
Chronic physical illness			.003 ^a			.026
No	99 (96.1%)	51 (82.3%)		183 (85.9%)	31 (72.1%)	
Yes	4 (3.9%)	11 (17.7%)		30 (14.1%)	12 (27.9%)	
Alcohol Abuse			.758			.253
No	22 (21.4%)	12 (19.4%)		129 (60.6%)	22 (51.2%)	
Yes	81 (78.6%)	50 (80.6%)		84 (39.4%)	21 (48.8%)	
Drug Consumption			.005 ^a			.010 ^a
No	78 (75.7%)	34 (54.8%)		196 (92.0%)	34 (79.1%)	
Yes	25 (24.3%)	28 (45.2%)		17 (8.0%)	9 (20.9%)	
Illegal Activities			.988			.722
Never	96 (93.2%)	58 (93.5%)		197 (92.5%)	40 (93.0%)	
Cautioned	5 (4.9%)	3 (4.8%)		13 (6.1%)	3 (7.0%)	
Arrested/Convicted	2 (1.9%)	1 (1.6%)		3 (1.4%)	-	
Knowing someone who self-harm			.005 ^a			.026
No	31 (30.4%)	7 (11.3%)		114 (53.5%)	15 (34.9%)	
Yes	71 (69.6%)	55 (88.7%)		99 (46.5%)	28 (65.1%)	

Non-SH = non-self-harm; P = P-value

^a Controlled for FDR, p-value was statistically significant

Table 20 Univariate logistic regression of risk factors for self-harm in the UK and Thailand

	UK		Thailand	
	P-value	OR (95% C.I.)	P-value	OR (95% C.I.)
Age	.721	.99 (.93-1.05)	.452	.98 (.92-1.04)
Gender^b	.001	5.41(2.48-11.80)	.074	2.00 (.94-4.29)
Male				
Female				
Gender Orientation	.006	3.10 (1.37-7.00)	.004	2.82 (1.38-5.75)
Heterosexual				
Non-heterosexual (Homosexual, Bisexual etc.)				
Education level	.224		.800	
Post-secondary Education, vocational qualification and lower				
Bachelor's Degree	.184	.614 (.30-1.26)	.796	.89 (.36-2.21)
Master's Degree and Professional/doctorate Degree	.567	1.28 (.55-3.02)	.520	.68 (.21-2.23)
Marital status	.725		.879	
Single				
Married	.473	.67 (.22-2.00)	.612	.72 (.21-2.54)
Widowed, Divorced, Separated	.716	1.61 (.10-26.21)	-	-
Employment status	.525		.004	
Employed				
Unemployed	.389	2.10 (.39-11.34)	.001	9.42 (2.52-35.24)
Student	.352	1.38 (.70-2.70)	.178	1.66 (.79-3.47)
Income	.038		.580	
5 th quintile (lowest)				
4 th quintile	.684	1.22 (.48-3.11)	.367	.59 (.19-1.85)
3 rd quintile	.305	.57 (.20-1.67)	.846	1.10 (.42-2.92)
2 nd quintile	.470	1.39 (.57-3.39)	.701	.83 (.33-2.12)
1 st quintile	.019	.26 (.08-.80)	.189	.51 (.19-1.40)
Living status (living alone and with others)	.252	1.59 (.72-3.49)	.492	.77 (.37-1.62)
Living area (Urban and rural)	.306	.68 (.32-1.43)	.932	1.04 (0.45-2.42)
Psychiatric service history	.001	13.73 (6.24- 30.22)	.001	3.96 (1.70-9.23)
No history but consider themselves	.029	4.92 (1.18-0.60)	.036	2.27 (1.05-4.90)
Should not receive services				
Should receive services				
Chronic Physical illness	.006	5.34 (1.62-7.60)	.029	2.36 (1.09-5.10)
Alcohol Abuse	.758	1.13 (.52-2.49)	.255	1.47 (.76-2.83)
Drug Consumption	.006	2.57 (1.31-5.04)	.014	3.05 (1.26-7.40)
Illegal Activities	.932	.95 (.27-3.37)	.903	.92 (.26-3.32)
Exposure to self-harm of others	.007	3.43 (1.41-8.38)	.028	2.15 (1.09-4.25)

First catalogs are the reference, OR = odd ratio, Covariates were combined with the catalogs to remove 0 from the catalog, continuous age was entered into this model; Marital status: domestic partnership was merged with single; Employment status: six homemakers classed as missing data.

- = could not be examined due to empty cell

^b=2 missing data

As shown in table 20, age, education level, living status, living area, alcohol abuse and illegal activities were not significantly associated with self-harm engagement in either the UK or Thailand.

Gender, gender orientation, psychiatric service history, and drug consumption were associated with self-harm in both the UK and Thailand. Females had a higher risk of self-harm than males. British females were 5.4 times more likely to report self-harm than British males, whereas Thai females were 2.0 times more likely than Thai males. Non-heterosexuals were 3.1 and 2.8 times more likely (UK and Thailand, respectively) to engage in self-harm compared to heterosexual persons. Individuals who had a psychiatric history had a higher risk of self-harm than those who did not; UK (odd ratio = 13.73) was higher than Thailand (odd ratio = 3.96). People who reported drug consumption had a higher risk of self-harm than people who did not in both the UK and Thailand (odd ratio = 2.57 vs. 3.05).

Employment status was associated with self-harm only in Thailand; unemployed Thai people were 9.4 times more likely to engage in self-harm than employed people. Although employment status was not significantly associated with self-harm in the UK, people who were in partly-skilled and unskilled occupations reported significantly higher self-harm than those who were not (Chi-square test). As shown in table 19, income was significantly associated with self-harm only in the UK; people who had the highest income (1st quintile) were 74% less likely to engage in self-harm than people who had the lowest income (5th quintile). Marital status was not significantly different in the UK. However, in Thailand it was significantly different (Chi-square test); in this study all Thai people who were widowed, divorced or separated had harmed themselves.

Three variables for Thai culture dropped significance when adjusted P-value by FDR correction. Psychiatric service needs consideration, chronic physical illness, and exposure to self-harm in others were significantly associated with self-harm only in the UK (odd ratio = 4.92, 5.3, 3.43).

Table 21 Differences of psychological characteristics between people who self-harm and people who do not in both countries

	Mean (SD)		t-value	Sig	UK Mean (SD)		t-value	Sig	Thailand Mean (SD)		t-value	Sig
	UK	Thailand			Non-SH	Self-harm			Non-SH	Self-harm		
HEXACO-60 scale												
Honesty–Humility	3.46 (.61)	3.51 (.58)	-.94	.349	3.43 (.60)	3.50 (.63)	-.76	.449	3.52 (.59)	3.45 (.56)	.79	.429
Emotionality	3.30 (.73)	3.44 (.57)	-2.18	.030	3.15 (.74)	3.55 (.66)	-3.55	.001 ^a	3.40 (.55)	3.64 (.55)	-2.56	.011 ^a
Extraversion	3.01 (.80)	3.11 (.55)	-1.62	.107	3.24 (.71)	2.62 (.79)	5.27	.001 ^a	3.17 (.54)	2.86 (.54)	3.44	.001 ^a
Agreeableness	3.15 (.61)	3.26 (.58)	-1.77	.078	3.17 (.56)	3.13 (.69)	.41	.685	3.30 (.55)	3.08 (.72)	2.26	.025 ^a
Conscientiousness	3.59 (.60)	3.29 (.48)	5.56	.001 ^a	3.54 (.60)	3.66 (.61)	-1.26	.211	3.29 (.48)	3.28 (.48)	.33	.739
Openness	3.44 (.65)	3.34 (.55)	1.57	.117	3.35 (.65)	3.59 (.63)	-2.32	.022 ^a	3.32 (.53)	3.47 (.63)	-1.68	.094
UPPS-P												
Negative urgency	2.45 (.72)	2.46 (.67)	-.06	.954	2.27 (.68)	2.75 (.68)	-4.34	.001 ^a	2.38 (.66)	2.86 (.63)	-4.50	.001 ^a
Lack of perseverance	1.89 (.46)	1.78 (.45)	2.46	.014 ^a	1.94 (.45)	1.81 (.45)	1.83	.069	1.78 (.46)	1.81 (.39)	-.40	.690
Lack of premeditation	1.97 (.52)	1.92 (.48)	1.19	.234	1.94 (.49)	2.02 (.56)	-.96	.341	1.89 (.48)	2.02 (.50)	-1.62	.107
Sensation seeking	2.52 (.73)	2.61 (.66)	-1.24	.217	2.59 (.66)	2.40 (.82)	1.68	.095	2.62 (.66)	2.53 (.67)	.77	.440
Positive urgency	1.97 (.70)	2.11 (.66)	-1.95	.052	1.98 (.71)	1.98 (.68)	.02	.983	2.06 (.66)	2.33 (.65)	-2.45	.015 ^a
Total	2.16 (.38)	2.17 (.34)	-.28	.778	2.15 (.38)	2.19 (.37)	-.74	.461	2.15 (.35)	2.31 (.29)	-2.91	.004 ^a
DERS-16												
Clarity	2.54 (1.30)	2.50 (1.01)	.37	.715	2.28 (1.17)	2.98 (1.38)	-3.47	.001 ^a	2.39 (.97)	3.01 (1.09)	-3.73	.001 ^a
Goal	3.24 (1.11)	3.03 (1.02)	1.97	.049	3.03 (1.08)	3.59 (1.07)	-3.22	.002 ^a	2.96 (.99)	3.40 (1.06)	-2.61	.010 ^a
Impulsive	2.16 (1.15)	2.58 (1.08)	-3.78	.001 ^a	1.96 (1.11)	2.50 (1.15)	-2.98	.003 ^a	2.50 (1.06)	2.99 (1.11)	-2.77	.006 ^a
Strategies	2.77 (1.18)	2.50 (1.03)	2.45	.015 ^a	2.37 (1.04)	3.43 (1.11)	-6.24	.001 ^a	2.37 (.96)	3.12 (1.15)	-4.51	.001 ^a
Non-acceptance	2.95 (1.34)	2.78 (1.10)	1.42	.155	2.59 (1.26)	3.54 (1.27)	-4.66	.001 ^a	2.69 (1.09)	3.20 (1.02)	-2.82	.005 ^a
Total	2.75 (1.02)	2.67 (1.02)	.86	.389	2.45 (.91)	3.25 (1.00)	-5.31	.001 ^a	2.57 (.84)	3.15 (.93)	-4.07	.001 ^a
FFMQ-SF												
Observing	3.27 (.88)	3.25 (.83)	.27	.789	3.24 (.88)	3.33 (.89)	-.61	.545	3.21 (.82)	3.44 (.83)	-1.63	.105
Describing	3.17 (.91)	3.31 (.91)	-1.73	.084	3.27 (.85)	3.00 (.98)	1.90	.059	3.35 (.73)	3.10 (.83)	2.04	.043
Awareness	3.21 (.86)	3.63 (.77)	-5.24	.001 ^a	3.37 (.85)	2.94 (.83)	3.17	.002 ^a	3.67 (.75)	3.47 (.87)	1.53	.128
Non-judging	3.00 (.86)	2.77 (.66)	3.15	.002 ^a	3.19 (.82)	2.70 (.85)	3.69	.001 ^a	2.81 (.65)	2.57 (.67)	2.17	.031 ^a
Non-reactivity	2.77 (.80)	3.03 (.71)	-3.54	.001 ^a	2.99 (.76)	2.39 (.72)	5.05	.001 ^a	3.12 (.70)	2.60 (.61)	4.48	.001 ^a
Total	3.08 (.54)	3.20 (.41)	-2.60	.010 ^a	3.21 (.50)	2.85 (.53)	4.40	.001 ^a	3.23 (.40)	3.02 (.42)	3.19	.002 ^a
RRS												
Brooding	2.37 (.78)	2.60 (.64)	-3.35	.001 ^a	2.25 (.76)	2.56 (.78)	-2.53	.012 ^a	2.53 (.61)	2.97 (.68)	-4.25	.001 ^a
Reflection	2.38 (.74)	2.46 (.69)	-1.06	.289	2.31 (.75)	2.50 (.71)	-1.57	.119	2.40 (.69)	2.73 (.61)	-2.87	.004 ^a
Total	2.38 (.65)	2.53 (.59)	-2.52	.012 ^a	2.28 (.65)	2.53 (.63)	-2.41	.017 ^a	2.47 (.57)	2.85 (.59)	-4.02	.001 ^a
Depression												
	1.98 (.92)	1.67 (.63)	4.08	.001 ^a	1.69 (.72)	2.45 (1.02)	-5.59	.001 ^a	1.57 (.54)	2.16 (.80)	-6.00	.001 ^a
Anxiety												
	2.42 (.56)	2.44 (.51)	-.46	.644	2.25 (.50)	2.71 (.55)	-5.52	.001 ^a	2.42 (.50)	2.58 (.54)	-1.89	.060

^a Controlled for FDR, p-value was statistically significant

Table 22 Two-way ANOVA results from self-harm and psychological characteristics

	Self-harm x Culture								Self-harm				Culture				
	F-test	P	h _p ²	UK		Thailand		F-test	P	h _p ²	Mean score		F-test	P	h _p ²	Mean score	
				Non-SH	SH	Non-SH	SH				Non-SH	SH				UK	Thailand
HEXACO-60																	
Honesty–Humility	1.21	.271	.003	3.43	3.50	3.52	3.45	.00	.985	.001	3.48	3.47	.09	.765	.001	3.46	3.49
Emotionality	1.29	.257	.003	3.15	3.55	3.40	3.64	19.88	.001 ^a	.046	3.27	3.60	5.42	.020	.013	3.35	3.52
Extraversion	4.68	.031	.011	3.24	2.62	3.17	2.86	41.65	.001 ^a	.091	3.21	2.74	1.23	.268	.003	2.93	3.01
Agreeableness	1.70	.194	.004	3.17	3.13	3.30	3.08	3.55	.060	.008	3.23	3.10	.29	.590	.001	3.15	3.19
Conscientiousness	1.44	.230	.003	3.54	3.66	3.29	3.27	.59	.444	.001	3.42	3.46	26.78	.001 ^a	.060	3.60	3.28
Openness	.38	.537	.001	3.35	3.59	3.32	3.47	8.35	.004 ^a	.020	3.33	3.53	1.10	.296	.003	3.47	3.40
UPPS-P																	
Negative urgency	.00	.952	.001	2.27	2.75	2.38	2.86	39.46	.001 ^a	.086	2.33	2.81	1.92	.167	.005	2.51	2.62
Lack of perseverance	2.45	.118	.006	1.94	1.81	1.78	1.81	.98	.322	.002	1.86	1.81	2.59	.108	.006	1.88	1.79
Lack of premeditation	.19	.664	.001	1.94	2.02	1.89	2.02	3.32	.069	.008	1.92	2.02	.20	.653	.001	1.98	1.96
Sensation seeking	.47	.494	.001	2.59	2.40	2.62	2.53	3.11	.079	.007	2.61	2.47	1.03	.311	.002	2.50	2.58
Positive urgency	3.01	.084	.007	1.98	1.98	2.06	2.33	2.90	.089	.007	2.02	2.15	7.99	.005 ^a	.019	1.98	2.20
DERS-16																	
Clarity	.10	.749	.001	2.28	2.98	2.39	3.01	26.59	.001 ^a	.060	2.34	2.99	.36	.548	.001	2.63	2.70
Goal	.25	.619	.001	3.03	3.59	2.96	3.40	17.25	.001 ^a	.040	2.99	3.49	1.20	.274	.003	3.31	3.18
Impulsive	.03	.856	.001	1.96	2.50	2.50	2.99	16.68	.001 ^a	.038	2.23	2.75	16.63	.001 ^a	.038	2.23	2.75
Strategies	1.84	.176	.004	2.37	3.43	2.37	3.12	58.80	.001 ^a	.124	2.37	3.28	1.63	.203	.004	2.90	2.75
Non-acceptance	2.65	.105	.006	2.59	3.54	2.69	3.20	29.53	.001 ^a	.066	2.64	3.37	.78	.377	.002	3.07	2.95
FFMQ-SF																	
Observing	.49	.486	.001	3.24	3.33	3.21	3.44	2.48	.116	.006	3.23	3.38	.17	.679	.001	3.28	3.32
Describing	.01	.913	.001	3.27	3.00	3.35	3.10	7.94	.005 ^a	.019	3.31	3.05	.93	.335	.002	3.13	3.23
Awareness	1.57	.211	.004	3.37	2.94	3.67	3.47	11.39	.001 ^a	.027	3.52	3.21	19.73	.001 ^a	.045	3.16	3.57
Non-judging	2.28	.132	.005	3.19	2.70	2.81	2.57	18.70	.001 ^a	.043	3.00	2.63	8.89	.003 ^a	.021	2.94	2.69
Non-reactivity	.31	.575	.001	2.99	2.39	3.12	2.60	46.14	.001 ^a	.100	3.06	2.50	4.20	.041	.010	2.69	2.86
RRS																	
Brooding	.66	.416	.002	2.25	2.56	2.53	2.97	22.68	.001 ^a	.052	2.39	2.76	18.61	.001 ^a	.043	2.41	2.75
Reflection	.74	.390	.002	2.31	2.50	2.40	2.73	9.87	.002 ^a	.023	2.36	2.62	3.88	.050	.009	2.41	2.57
Depression	1.08	.299	.003	1.69	2.45	1.57	2.16	69.19	.001 ^a	.142	1.63	2.31	6.46	.011 ^a	.015	2.07	1.87
Anxiety	6.41	.012 ^a	.015	2.25	2.71	2.42	2.58	27.37	.001 ^a	.062	2.33	2.64	.12	.730	.001	2.48	2.50

Non-SH = non-self-harm, SH = self-harm; P = P-value; ^a Controlled for FDR, p-value was statistically significant; h_p² : .01 = small, .06= medium, .14 = large

3.7.2.2 Psychological Characteristic Differences in Self-harm

3.7.2.3 Effect of Self-harm and Culture on Psychological Characteristics

The two way ANOVA was mainly used to explain the effects of self-harm and culture on psychological characteristics. Focusing on self-harm, people who self-harmed reported significantly higher scores on Emotionality, Openness, Negative urgency, all domains of Difficulties in Emotion Regulation, and all domains of Rumination, Depression and Anxiety. Significantly lower scores were found for Extraversion, Describing Mindfulness, Awareness Mindfulness, Non-judging Mindfulness, and Non-reactivity Mindfulness. Most significantly different domains showed small effect sizes except Depression (with large effect size: $h_p^2 = .142$), Strategies DER, Non-reactivity Mindfulness, Extraversion, Negative urgency, Non-acceptance DER, and Clarity DER with medium effect size ($h_p^2 = .124, .100, .091, .086, .066, \text{ and } .060$ respectively).

As for cultural effects, Thai people had significantly higher scores for Awareness Mindfulness, Brooding Rumination, Impulsive DER, Positive urgency, and reported lower scores on Conscientiousness, Non-judging Mindfulness, and Depression (see table 22). Almost all domains had a small effect size with the exception of Conscientiousness, which had a medium effect size.

There was no significant interaction effect between self-harm engagement and culture in psychological characteristics other than Anxiety. It showed that the difference in the means of Anxiety between people who self-harm in the UK was larger than in Thailand as shown in figure 7. However, the effect size of the interaction was small (.015). Therefore this interaction is not a major concern.

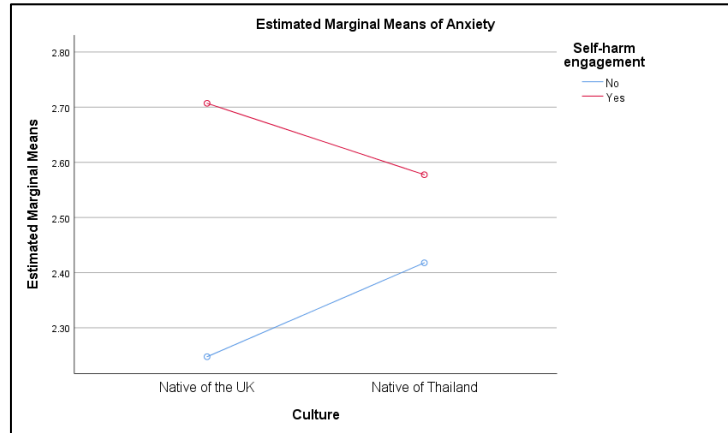


Figure 7 Graph of interaction on Anxiety

3.7.2.4 The Risk Factors for Self-harm within the two cultures

In this study, univariate logistic regression analyses were initially performed to examine the different effects of risk factors on self-harm. As shown in table 23 and 25, the strongest association with self-harm was Psychiatric History (odd ratio = 9.15), followed by unemployment (odd ratio = 4.91). Drug consumption, exposure to self-harm, female gender, being British, non-heterosexuality, chronic physical illness, alcohol abuse, being a student, and income showed significantly positive associations with self-harm. For psychological characteristics, the negative association was of Extraversion, Agreeableness, almost all scales on Mindfulness (except Observing); and all scales on DER (Difficulties in Emotion Regulation), Emotionality, Openness, Negative Urgency, Rumination, Depression, and Anxiety showed positive association.

Table 23 Univariate logistic regression exploring the risk factors for self-harm in both countries

	B	P-value	OR	95% CI
HEXACO-60 scale				
Honesty–Humility	-.04	.845	.96	.66-1.40
Emotionality	.71	.001 ^a	2.03	1.41-2.96
Extraversion	-1.16	.001 ^a	.31	.22-.46
Agreeableness	-.41	.030 ^a	.66	.46-.96
Conscientiousness	.42	.044	1.52	1.01-2.28
Openness	.64	.002 ^a	1.89	1.27-2.81
UPPS-P				
Negative urgency	1.04	.001 ^a	2.83	1.97-4.07
Lack of perseverance	-.11	.656	.90	.55-1.46
Lack of premeditation	.46	.043	1.58	1.01-2.47
Sensation seeking	-.33	.044	.72	.52-.99
Positive urgency	.19	.261	1.20	.87-1.67
DERS-16				
Clarity	.87	.001 ^a	1.62	1.33-1.97
Goal	.50	.001 ^a	1.64	1.31-2.06
Impulsive	.29	.003 ^a	1.34	1.10-1.63
Strategies	.82	.001 ^a	2.27	1.81-2.85
Non-acceptance	.54	.001 ^a	1.72	1.4-12.10
FFMQ-SF				
Observing	.21	.117	1.24	.95-1.61
Describing	-.43	.002 ^a	.65	.49-.85
Awareness	-.60	.001 ^a	.55	.42-.72
Non-judging	-.53	.001 ^a	.59	.43-.80
Non-reactivity	-1.21	.001 ^a	.30	.21-.43
RRS				
Brooding	.61	.001 ^a	1.83	1.32-2.55
Reflection	.44	.006 ^a	1.56	1.13-2.14
Depression	1.19	.001 ^a	3.28	2.40-4.48
Anxiety	1.10	.001 ^a	3.00	1.91-4.72

a Controlled for FDR, p-value was statistically significant

Table 24 Univariate logistic regression exploring the risk factors for self-harm

	B	P-value	OR	95% CI
Culture (Thailand and UK)	1.09	.001 ^a	2.98	1.89-4.70
Age	-.03	.213	.97	.93-1.02
Gender ^b	1.13	.001 ^a	3.10	1.81-5.29
Gender Orientation	.96	.001 ^a	2.61	1.57-4.34
Marital status		.148		
Single				
Married	-.25	.543	.78	.35-1.75
Domestic partnership	.47	.295	1.60	.66-3.88
Widowed, Divorced, Separated	2.26	.051	9.62	.99-93.76
Education level		.078		
Secondary Education and lower				
Post-secondary and Vocational	-.68	.634	.51	.03-8.33
Qualification				
Bachelor's Degree	-.98	.532	.38	.02-8.10
Master's Degree	-1.41	.323	.24	.02-3.99
Professional/ doctorate Degree	-1.16	.422	.31	.02-5.31
Employment status		.004 ^a		
Employed				
Unemployed	1.59	.002 ^a	4.91	1.76-13.68
A student	.48	.050	1.62	1.00-2.61
A homemaker	1.88	.044	6.55	1.05-40.75
Income		.052		
5 th quintile (lowest)				
4 th quintile	-.07	.836	.93	.47-1.84
3 rd quintile	-.24	.499	.78	.39-1.59
2 nd quintile	.03	.915	1.03	.56-1.91
1 st quintile	-1.03	.006 ^a	.36	.17-.75
Living status (living alone and with others)	.11	.690	1.11	.66-1.89
Living area (urban and rural)	-.09	.752	.92	.53-1.59
Psychiatric service history	2.21	.001 ^a	9.15	5.53-15.16
Physical illness	.84	.005 ^a	2.33	1.30-4.17
Alcohol Abuse	.65	.006 ^a	1.91	1.20-3.04
Drug Consumption	1.27	.001 ^a	3.55	2.12-5.94
Illegal Activities	-.09	.833	.91	.38-2.19
Exposure to self-harm of others	1.17	.001 ^a	3.22	1.91-5.41

^a Controlled for FDR, p-value was statistically significant; ^b missing data = 2

In order to investigate the risk factors within the two cultures, logistic regression was performed by controlling culture, age, and gender. As shown in table 25, the strongest association with self-harm was psychiatric service history (odd ratio = 7.91), followed by unemployed status (odd ratio = 4.50), drug consumption, female gender, being British, chronic physical illness, non-heterosexuality, and exposure to self-harm respectively. As for psychological characteristics, the findings from ANOVA is reported above.

Table 25 Logistic regression exploring the risk factors for self-harm controlling for culture, age, gender

	B	P-value	OR	95% CI
Culture (Thailand and UK)	1.19	.001 ^a	3.30	2.05-5.32
Age	.01	.822	1.01	.96-1.05
Gender ^b	1.24	.001 ^a	3.46	1.96-6.10
Gender Orientation	.84	.001 ^a	2.31	1.44-3.70
Marital status				
Single		.306		
Married	-.05	.912	.95	.37-2.45
Domestic partnership	.12	.821	1.12	.41-3.05
Widowed, Divorced, Separated	2.24	.061	9.38	.90-97.89
Education level				
Secondary Education and lower		.937		
Post-secondary and Vocational	-.26	.714	.77	.20-3.06
Qualification				
Bachelor's Degree	-.20	.833	.82	.12-5.41
Master's Degree	-.49	.487	.61	.15-2.45
Professional/ doctorate Degree	-.41	.590	.67	.15-2.92
Employment status				
Employed		.022		
Unemployed	1.50	.008 ^a	4.50	1.47-13.71
A student	.19	.600	1.21	.60-2.45
A homemaker	1.70	.078	5.50	.83-36.49
Income				
5 th quintile (lowest)		.249		
4 th quintile	.02	.962	1.02	.49-2.12
3 rd quintile	-.09	.816	.91	.42-2.00
2 nd quintile	.09	.802	1.10	.55-2.19
1 st quintile	-.77	.057	.46	.21-1.02
Living status	-.07	.815	.93	.53-1.66
Living area	-.28	.347	.76	.42-1.36
Psychiatric service history	2.07	.001 ^a	7.91	4.44-14.11
Physical chronic illness	1.13	.001 ^a	3.10	1.61-6.00
Alcohol Abuse	.40	.141	1.49	.88-2.55
Drug Consumption	1.48	.001 ^a	4.40	2.31-8.36
Illegal Activities	.10	.793	1.10	.53-2.28
Exposure to self-harm of others	.84	.003 ^a	2.31	1.32-4.04

^a Controlled for FDR, p-value was statistically significant; ^b missing data = 2

In order to comprehensively explain the risk factors for the two countries, the present study relies on a multivariate logistic regression model. The degree of freedom when the model has too many variables can cause model overfitting if the sample size is not large enough (Babyak, 2004). Multicollinearity can lead to misinterpretation. To avoid these problems, the degrees of freedom were reduced by combining the score of categorical covariates, eliminating both the variables which have fewer associations, and the variables that had multicollinearity (Goal, Impulsive, Strategy, and Non-acceptance in Difficulties in Emotion Regulation Scales) from the model (as discussed in Chapter 2). The model included the interaction terms for the culture and variables.

Multivariate logistic regression was controlled for culture, age, and gender. It was also observed that Extraversion and Negative Urgency remained significant

until Depression was entered. This reflected that personality and impulsivity can be mediated by depression. Brooding was no longer significant after Non-reactivity was entered; Mindfulness mediated Brooding Rumination. Moreover, before Depression was entered, Psychiatric service history showed the strongest association. When Openness and Non-Reactivity Mindfulness variables were entered, drug consumption became gradually stronger. Until Depression was entered, drug consumption showed the strongest association.

Table 26 Final model of risk factors in the UK and Thailand

Risk factors	B	P-value	OR	95% CI
Step 1				
Culture	-.25	.498	.78	.37-1.61
Step 2				
Age	-.01	.862	.99	.92-1.08
Gender ^b	1.47	.001 ^a	4.33	1.99-9.40
Gender Orientation	1.09	.003 ^a	2.97	1.44-6.11
Employment status		.044		
Employed				
Unemployed	1.60	.033	4.96	1.14-21.61
A student	-.16	.718	.85	.35-2.06
A homemaker	2.11	.096	8.25	.69-98.90
Chronic physical illness	1.03	.019 ^a	2.79	1.18-6.58
Psychiatric service history	1.32	.001 ^a	3.74	1.84-7.62
Drug Consumption	1.63	.001 ^a	5.10	2.23-11.68
Step 3				
Openness	.60	.037	1.81	1.04-3.17
Step 4				
Non-reactivity	-.62	.011 ^a	.54	.33-.87
Step 5				
Depression	1.20	.001 ^a	3.32	2.13-5.15

^a Controlled for FDR, p-value was statistically significant; ^b missing data = 2

In the final model (see table 26), predictors of self-harm engagement were drug consumption (odd ratio = 5.10, 95% CI = 2.23-11.68), female gender (odd ratio = 4.33, 95% CI = 1.99 -9.40), psychiatric service history (odd ratio = 3.74, 95% CI = 1.84-7.62), depression (odd ratio = 3.32, 95% CI = 2.13-5.15), non-heterosexuality (odd ratio = 2.97, 95% CI = 1.44-6.11), Non-reactivity Mindfulness (odd ratio = 0.54, 95% CI = 0.33-0.87) and chronic physical illness (odd ratio = 2.79, 95% CI = 1.18-6.58). After entering the interaction term of culture and variables, there was no significance on all interaction terms. This indicated that the risk factors between both cultures did not show significant differences.

3.7.3 Characteristics of British and Thai People

This section explores the different characteristics of British and Thai people.

3.7.3.1 Personal Habits

To address the differences between countries, personal habit differences are firstly reported to give a basic picture of participants' characters in the UK and Thailand. As shown in Table 27, there was no significant difference between the two groups in living area, living status, or illegal activities. The percent of people who live alone or live with someone were not significantly different between the UK and Thailand; people commonly live with someone in both societies (77.4% and 76.2% respectively).

Some subcategories regarding people who lived with others were significantly different; 33.3% of British people and 48.8% of Thai people reported living with parents. The percent of people who reported living with other relatives in the UK (1.2%) was lower than in Thailand (8.6%). However, living with friends, partner/husband, and siblings was not significantly different between British and Thai people.

The percent of British people who reported exposure to self-harm (76.8%) was significantly higher than Thai people (49.6%), and the percent of British people reporting psychiatric service history (46.7%) was significantly higher than Thai people (10.9%). However, those who reported no psychiatric service history but considered themselves in need of services in Thailand (28.1%) was significantly higher than in the UK (13.6%). Reports of alcohol abuse were significantly higher in the UK (79.4%) than in Thailand (41.0%). The percent of Thai people who reported drug consumption more than a year ago and in the last month were only 4.7% and 3.1%, whereas British people were 11.5% and 17%. Thai females reported a lower rate of alcohol abuse (35.6% vs. 50%) and drug consumption (3.7% vs. 20.7%) than males; the UK showed no gender differences.

Table 27 Different personal habit characteristics of people in the UK and Thailand

	UK (N=165)	Thailand (N=256)	P-value	OR	95% CI
Area Living^b			.094	1.50	.68-3.31
Urban area	123 (74.5%)	206 (81.4%)			
Rural area	42 (25.5%)	47 (18.6%)			
Living status^c			.765	1.07	.49-2.35
Live alone	37 (22.6%)	61 (23.8%)			
Live with someone	127 (77.4%)	195 (76.2%)			
Live with someone					
With friend	36 (21.8%)	39 (15.2%)	.086	1.55	.94-2.57
With partner/husband	39 (23.6%)	48 (18.8%)	.227	1.34	.83-2.16
With parents	55 (33.3%)	125 (48.8%)	.002 ^a	.52	.35-.79
With siblings	42 (25.5%)	72 (28.1%)	.547	.87	.56-1.36
With other relatives (i.e. Grandparents, aunt etc.)	2 (1.2%)	22 (8.6%)	.006 ^a	.13	.03-.56
Psychiatric service history			.001 ^a	7.13	3.09-16.43
No history	88 (53.3%)	228 (89.1%)			
With psychiatric history	77 (46.7%)	28 (10.9%)			
No history but consider themselves as needed			.008 ^a	.41	.13-1.25
Should not receive service	76 (86.4%)	164 (71.9%)			
Should receive service	12 (13.6%)	64 (28.1%)			
Chronic physical illness			.035	.51	.18-1.46
No	150 (90.9%)	214 (83.6%)			
Yes	15 (9.1%)	42 (16.4%)			
Alcohol Abuse			.001 ^a	5.54	2.59-11.84
No	34 (20.6%)	151 (59.0%)			
Yes	131 (79.4%)	105 (41.0%)			
Drug Consumption			.001 ^a		
Never	112 (67.9%)	230 (89.8%)			
More than 10 year ago	6 (3.6%)	6 (2.3%)	.222	2.05	.30-14.25
More than a year ago	19 (11.5%)	12 (4.7%)	.002 ^a	3.25	.91-11.59
In last month	28 (17.0%)	8 (3.1%)	.001 ^a	7.19	1.82-28.36
Illegal Activities			.726		
Never	154 (93.3%)	237 (92.6%)			
Cautioned	8 (4.8%)	16 (6.3%)	.556	.77	.18-3.33
Arrested/Convicted	3 (1.8%)	3 (1.2%)	.600	1.54	.10-23.09
Exposure to self-harm^a			.001 ^a	3.37	1.62-7.02
No	38 (23.2%)	129 (50.4%)			
Yes	126 (76.8%)	127 (49.6%)			

Code: Thailand = 0, UK = 1; ^a Controlled for FDR, p-value was statistically significant
^b missing data = 3; ^c missing data = 1

3.7.3.2 Differences in Psychological Characteristics between the UK and Thai participants

With regard to psychological characteristics (see table 22), Thai participants showed lower Conscientiousness and lower Depression and lower Non-judging Mindfulness than British participants. Moreover, Thai participants also reported Higher Awareness Mindfulness, Positive Urgency, Higher Impulsive DER, and Higher Brooding Rumination on two-way ANOVA.

In multivariate regression (see table 28), Conscientiousness had the highest association with culture. Lower Brooding Rumination, Impulsive DER, and lower Anxiety were reported in British participants than Thai participants. Higher

Depression, Higher Lack of Perseverance, and lower Awareness Mindfulness were reported in British participants. Moreover, British participants were more likely to report psychiatric service history, alcohol abuse, drug consumption, and exposure to self-harm than Thai participants. However, Thai participants were more likely to report living with parents and chronic physical illness.

Table 28 Multivariate logistic regression of cultural differences

	B	P-value	OR	95% CI
Step 1				
Age	-.11	.010 ^a	.90	.83-.98
Gender ^b	-.60	.204	.55	.22-1.38
Step 2				
Chronic physical illness	-1.79	.009 ^a	.17	.04-.64
Psychiatric History	2.26	.001 ^a	9.58	3.12-29.37
Alcohol Abuse	1.78	.001 ^a	5.96	2.36-15.01
Drug consumptions	1.64	.003 ^a	5.14	1.73-15.30
Living with parents	-1.27	.004 ^a	.28	.12-.67
Exposure to self-harm	1.48	.002 ^a	4.37	1.74-10.99
Step 3				
Conscientiousness	2.89	.001 ^a	18.04	6.54-49.72
Step 4				
Lack of Perseverance	1.82	.001 ^a	6.17	2.24-17.01
Step 5				
Impulsive	-.69	.005 ^a	.50	.31-.81
Step 6				
Awareness	-1.75	.001 ^a	.18	.09-.36
Non-Judging	.69	.049	1.99	1.00-3.95
Step 7				
Brooding	-1.67	.001 ^a	.19	.08-.44
Step 5				
Depression	1.48	.001 ^a	4.41	2.05-9.51
Anxiety	-1.16	.022 ^a	.31	.12-.85

Code: Thailand = 0, UK = 1; ^a Controlled for FDR, p-value was statistically significant; ^b missing data = 2

3.8 Discussion

In order to answer the question whether or not culture affects self-harm engagement, this chapter examined self-harm differences between the UK and Thailand.

First, the differences in self-harm characteristics (prevalence, methods, frequency, number of methods, onset, hospitalisation, disclosure, and motivations) between UK and Thailand were addressed. Second, the risk factors comparing the UK and Thailand were discussed.

As the online survey was undertaken, the numbers of participants in the two countries were different. The total number of participants in Thailand was 548 in comparison to only 165 participants in the UK. As online surveys are less common in developing countries (Thailand) than in developed countries (UK), perhaps Thai people believed that taking part in the study was more important. Another possible explanation is collectivism (Thailand) which gives importance to in-group values (Johnson, O'Rourke, Burris, & Owens, 2002). Thai people may be more likely to cooperate and help by taking part in the study. People are more likely to help an in-group member than out-group members in all cultures, but collectivism and individualism will have different probabilities of this outcome. One study (Petrova, Cialdini, & Sills, 2007) has indicated that individualism generated a lower rate of the response in the first invitation than collectivism but once people commit to taking part in a study, they were more likely to respond than people from a collectivist society. For these reasons, it is possible that the number of participants in the UK and Thailand was influenced by cultural differences.

3.8.1 Self-harm Characteristics

3.8.1.1 Prevalence of Self-harm

As expected, the lifetime prevalence of self-harm between the UK and Thailand was significantly different. The lifetime prevalence in the UK was higher than in Thailand (UK 36.7% vs. Thailand 16.8%; odds ratio = 2.98, 95% CI = 1.89-4.70), which was consistent with the literature. In addition it was found that the prevalence of suicidal phenomena among Asian adolescents was lower than for White people (Evans et al., 2005).

Considering the proportion of the behavioural prevalence, the prevalence of the previous studies was 11.3% (suicidal attempts) and 16.2% (Non-suicidal self-harm) in Scotland (18-34 years old) (O'Connor et al., 2018) and was 15.5% in England (age 13-18 years old) (Morey et al., 2016). In this current study, the prevalence of self-harm was higher (36.7%). A possible reason may be because of the difference in the recruitment process; previous studies recruited from research organisations and schools whereas the present study adopted the advertising statement: "How do you cope with distressing and unhappy feelings?" This may have drawn the attention of people who were interested in coping with the distress to take part in the online survey. This could explain why the rate of self-harm was higher than the rate found in other studies.

3.8.1.2 Methods of Self-harm

Cutting was most common form of self-harm in the UK. This has been supported by community-based studies that also find cutting to be the most common method in the UK (Kidger et al., 2012; Liu, Chen, Liu, Wang, & Jia, 2017; McMahon et al., 2014). However in Thailand, punching was the most common method of self-harm, which was in line with the findings in India (Nath, 2017).

British people reported higher rates on the self-harm methods relating to skin injury and recreational drug consumption: cutting (87.1% vs. 46.5%), burning (30.6% vs. 0%), scratching (69.4% vs. 32.6%), preventing wounds from healing (45.2% vs. 7.0%), carving (30.6% vs. 9.3%), and recreational drugs (35.5% vs. 11.6%).

These findings demonstrate that the countries shared some similarities regarding self-harm methods. However, the differences also indicate possible cultural effects. In the literature review, it was suggested that social learning plays a role in individuals' self-harm characteristics, for example learning from friends, the internet, music, movies, books, celebrities, and fictional characters (Jarvi et al., 2013). This may explain why British and Thai people approach self-harm methods differently. Skin injury and consuming recreational drugs were less common in Thailand.

3.8.1.3 Frequency of Self-harm

There were some common frequencies of self-harm in the UK and Thailand. "Many times" was the most reported frequency for less severe injury methods (sticking, punching, pulling hair, banging, and scratching) in both countries.

In general, people in the UK reported higher frequency than people in Thailand in almost all methods. This is in line with the literature, which has found that Asian people reported lower rates of repetitive self-harm than Europeans (Carroll et al., 2014). Considering the significant differences between the two countries, people in the UK reported significantly higher frequency of self-harm than Thai people for only cutting (many times vs. once).

3.8.1.4 Single/Multiple and Number of Methods

Most people who self-harmed employed multiple methods rather than a single method in both the UK and Thailand (95.2% vs. 83.3%). The findings are consistent with Klonsky and Glenn (2009) study, which recruited college students as participants and found that 82.3% of participants used multiple methods. It is important that when clinicians assess people who self-harm, they should consider the multiple methods that patients may employ in order to understand the context of the self-harm characteristics. Although there was no significant difference of single/multiple methods, British people reported a higher number of self-harm methods than Thai participants.

3.8.1.5 Onset of Self-harm

Knowing the onset age can also improve the understanding of self-harm behaviour. The findings here show that the mean onset of self-harm in the UK and Thailand was not significantly different (14.26 vs. 14.65). The age when people first harm themselves was 13 (mode) in both countries. Hawton et al. (2012) summarised that 13 or 14 was the most likely onset age of self-harm. This suggests that puberty plays an important role in precipitating self-harm (Hawton et al., 2012; Patton et al., 2007); puberty is a transition point with biological, psychological, and social changes and can also be related to depression (Ge, Conger, & Elder Jr, 2001); social pressures and role requirements make adolescence difficult.

Different self-harm methods had different onset ages. In the UK, more dangerous methods clearly presented at older onset ages than less dangerous

methods. For Thai people, the limitation of lower number of people who self-harm introduced some scatter into the data regarding onset age of each method. However, Thai onset tendency is relatively similar to the UK, that is older people performed more dangerous methods. This signals that some people who self-harm might employ less dangerous methods before continuing with more dangerous methods. The findings showed that more than 80% of people in both countries who self-harm used multiple methods. Although, this requires a replicated study to confirm, it raises an awareness of less dangerous methods, which may be behavioural try-outs that lead to more dangerous methods. Thus, early intervention may reduce the chance of more severe consequences.

3.8.1.6 Help-seeking behaviour

Self-harm can be presented at the hospital or in the community. In both countries people were unlikely to report hospitalisation. Despite overdose being the most common method reported in the hospital (Arensman et al., 2018; Quinlivan et al., 2017), only 50% of British and 25% of Thai people reported that they went to hospital after overdosing. Surprisingly, there were no reports of hospitalisation after swallowing something inedible. Many participants who overdosed did not report hospitalisation, from which it can be easily concluded that the amount of drugs they consumed might not cause severe damage to health. However, when considering the self-harm acts described by participants in the questionnaires, some reported that they overdosed with over 20 tablets of paracetamol, some consumed 1500-3000 mg, others a packet of paracetamol, or eight paracetamol and ibuprofen tablets, which were in fact substantial amounts, and should have resulted in hospitalisation. One can evidently argue paracetamol overdoses cause serious damage to the body.

No significant differences were found in the rate of people who reported hospitalisation for each method between the two countries, but overall British people were more likely to report hospitalisation than Thai people (9.06% and 2.50%). When considering only the methods for which at least one person in both countries reported hospitalisation (hanging, overdosing, breaking bones, strangulating, starving, cutting, punching, consuming recreational drugs, banging, scratching, pulling hair), British people (14.1%) reported more hospitalisation than Thai people (3.2%).

Disclosing self-harm acts is the first step toward receiving help. Although the numbers of disclosures in both countries were higher than the numbers of hospitalisations, people still did not let other people know about most self-harm acts. Only Consuming recreational drugs, Cutting, Overdosing, and Hanging reported more disclosures than other methods in both countries, where 60-70% reported in UK compared to 40-75% in Thailand. Considering overall disclosures, Thai people were more likely to disclose their acts than British people (40.67% and 24.57%).

As mentioned above, people who self-harm are unlikely to let others know about their acts (Madge et al., 2008), and it seems that this prevents them from receiving help and support. One systematic review indicates that adolescents who self-harm are less likely to seek help because of the desire for confidentiality, others' view that self-harm is simply a form of attention seeking, and stigmatization (Rowe et al., 2014). There is still the concern that people in both countries tend not to seek help in the hospital. As collectivists, people who self-harm are more likely to face stigmatising attitudes from others (Papadopoulos et al., 2013); Thai people were less likely to seek help at the hospital. In addition, giving importance to interpersonal relationships, Thai people seem to be more open to their friends and family about their acts than British people. Even when disclosing the acts, people in both countries reported similarly that they are less likely to seek help regarding many acts. This is in line with (Eskin et al., 2015), who found that Austrian and Turkish medical students reported suicidal disclosures equally.

3.8.1.7 Motives for Self-harm

The most common reason of self-harm in the two countries was similar: "wanted to get relief from a terrible state of mind", which is consistent with Rasmussen, Hawton, Philpott-Morgan, and O'connor (2016) study. This finding was also supported by a systematic review (Edmondson et al., 2016) observing that the most common reason for self-harm is affect regulation. Most of the studies included in the review came from English publications, and some non-European countries, for example Sri Lanka, were included. Indian university students who self-harm likewise reported "getting relief from a terrible state of mind" as the most common reason, followed by reducing unpleasant feelings, and self-punishment (Kleindienst et al., 2008). Scoliers et al. (2009) also found

that adolescents (14-17 years old) from Australia, Belgium, England, Hungary, Ireland, the Netherlands, and Norway reported the most common reason for self-harm was to get relief from a terrible state of mind; this shows that the main motivations for self-harm oneself are universally consistent.

Across cultures, people who self-harm share the same universal reason of self-harm, "to get relief from a terrible state of mind" in the UK and Thailand (87.1% and 79.1%); this motive is classed as a "cry of pain". Williams and Williams (2002) proposed the Cry of Pain model of suicidality; individuals feel trapped in the defeat of stressful life problems and perceive no hope of rescue or escape. The findings of the present study support this model across the two cultures. However, these findings also showed the impact of culture on the communitive reasons. This is also in line with Scoliers et al. (2009) study, which found the motives for self-harm vary across different countries. As expected, Thai people reported more reasons expressing a "cry for help" than British people. The largest difference was "wanted to find out whether someone really loved me" followed by "wanted to be a part of the group", "wanted to get my own back on someone", and "wanted to avoid doing something or being in some situation". This demonstrates that the motivations of Thai people to harm themselves are more likely to be a way to communicate indirectly with others, and to express anger, which is related to interpersonal skills in relationships.

This finding is in line with the study of Asian motives in India, Sri Lanka, and Malaysia, which also noted that self-harm motives were related to interpersonal relationships and communication, to escape or take control of the situation (Armitage et al., 2015; Marecek & Senadheera, 2012; Staples, 2012). Collectivists, who prioritise achieving interpersonal goals (Triandis, 2001), consider their own life satisfaction to be based on social norms (Suh, Diener, Oishi, & Triandis, 1998) and their primary concern is with interpersonal relationships (Triandis, 2001). They are also less likely to express their emotion in-group (Matsumoto, Yoo, & Fontaine, 2008). It is possible that Thai people are less likely to communicate their emotions or desires directly if they consider these to be opposite to the social norms. Therefore, it seems that self-harm acts serve as a way to communicate indirectly with others. This can, at the same time, be a way to disclose their self-harm act to others.

3.8.2 Risk Factors for Self-harm

3.8.2.1 Psychosocial Factors

This cross-cultural study has revealed the risk factors for self-harm, comparing the UK and Thailand, found similarities including gender, gender orientation, psychiatric history, psychiatric need consideration, and drug consumption. On the other hand, education level, living status, living area, alcohol abuse, and illegal activities were not found to have significant relationships to self-harm.

3.8.2.1.1 Gender

Females have consistently reported a higher prevalence of self-harm than males (Swannell, Martin, Page, Hasking, & St John, 2014). Plener et al. (2015) systematically reviewed longitudinal research and also found female gender correlated with self-harm. In this current study, female gender showed a significantly higher prevalence of self-harm than male gender in both countries, and British females had a higher risk than Thai females (odd ratio = 5.41 vs. 2.00).

3.8.2.1.2 Gender Orientation

Non-heterosexuals face a lot of challenges (Pachankis & Goldfried, 2013). The present study reveals that being non-heterosexual was the risk factor for self-harm (odd ratio = 3.10 in the UK and 2.82 in Thailand). This is in line with the meta-review of Batejan, Jarvi, and Swenson (2015); odd ratio = 3.00 (95% 2.46-3.66).

3.8.2.1.3 Psychiatric Service History

Considering psychiatric history, the rate of self-harm in both countries was higher in people with a psychiatric service history than in those without. This agrees with the literature. Cooper et al. (2005) note that adolescents with psychiatric history were more likely to died by suicide, while Skegg (2005) concluded that psychiatric illness and care are risk factors for self-harm and subsequent repetitive self-harm and suicide. In the present study, people from the UK with a psychiatric history had a higher risk of self-harm than Thai people with a psychiatric history (odd ratio = 13.73 vs. 3.96). However, British people who had no psychiatric history but who considered themselves in need of psychiatric services reported significantly higher risk of self-harm than those who did not consider themselves in need of such services (odd ratio = 4.92).

There was no significant difference found in Thai people after adjusted FDR correction. It remains unclear how consideration of psychiatric service need relates to mental health problems in Thai culture.

3.8.2.1.4 Chronic Physical Illness

Chronic physical illness was a risk factor in the UK, as people suffering chronic physical illness had lower quality of life and more mental health problems. Cooper et al. (2005) indicated that physical problems were a predictor of subsequent suicide. In the present study, British people with chronic physical illness had a higher risk of self-harm than Thai people with chronic physical illness (odd ratio = 5.34 vs. 2.36), while the association of Thai people did not reach the level of significance when controlled for FDR correction. It is possible that in Thai culture, people who have physical illness have family and social support. Thai people believe that family members should provide care when one has an illness (Meecharoen, Sirapo-ngam, Monkong, Oratai, & Northouse, 2013; Warapornmongkholkul, Howteerakul, Suwannapong, & Soparattanapaisarn, 2018).

3.8.2.1.5 Exposure to Self-harm

Exposure to self-harm of family or friends was associated with self-harm as the modeling function (Hawton et al., 2012); similarly the present study's findings highlight the links between exposure to the self-harm of others and engagement in self-harm. This was consistent with the literature review in the UK (Hawton & James, 2005). In the present study, the UK reported a higher risk than Thailand (odd ratio = 3.43 vs. 2.15). However, the association of Thailand did not reach the level of significance after adjustment of P-values by FDR correction.

3.8.2.1.6 Drug Consumption

The present study found that British and Thai people who reported using recreational drugs had a higher risk of self-harm (odd ratio = 2.57 vs. 3.05). The result was consistent with Hawton et al. (2002), which indicated that adolescents in the community who used drugs reported higher self-harm engagement than those who did not.

3.8.2.1.7 Education Level

Education level was not significantly associated with self-harm in either country. Larkin et al. (2014) conducted a systematic review based on hospital data and likewise found that most studies discovered no significant influence of education level on repetitive self-harm.

3.8.2.1.8 Living Area

Living area (urban versus rural) and self-harm were not associated in the present study; this contrasts with previous literature. Harriss and Hawton (2011) investigated patients (1,647 males and 2,407 females) in a general hospital in the city of Oxford and found that people from urban areas had a significantly higher prevalence of self-harm than those from rural areas. Considering community based studies, Davaasambu et al. (2017)'s study investigated 5,393 adolescents in schools in Mongolia and found that adolescents who lived in urban areas reported a significantly higher number of suicidal attempts (11.8% vs. 8.6%) than adolescents who lived in rural areas. One possible reason why the present findings contradict previous studies is that previous studies collected data in hospital and schools whereas this study identified the area by participants' response in the survey, resulting in less precise area identification.

3.8.2.1.9 Living Status

Although previous studies found living alone a risk factor for repetitive self-harm (Haw & Hawton, 2011), the present study found no association between living alone and self-harm engagement in either the UK or Thailand. Previous studies collected data from clinical populations; this shows that patients who live alone and present in the hospital have a higher risk of repetitive self-harm. Living alone represents social isolation and provides an easy way for accessing the means of suicide after self-harm acts. Therefore, it is crucial for the clinical group who presented in the hospital.

Steeg et al. (2016) elaborated that living alone and presenting to hospital in the emergency unit, when combined with having hopeless feelings, may increase the risk of suicide over living alone without hopelessness. This implies that feelings of hopelessness play an important role in suicide. It might be the case that patients who present in the hospital have good family support after their

self-harm acts are discovered. The family may come and stay with the patients, and assist with monitoring and inhibiting repetition of self-harm. In this current study, living alone may have different contexts; some might live alone but still have family support or friends whom they can talk to. However, the present study did not focus extensively on community factors, so communal influences on self-harm require further investigation.

3.8.2.1.10 Alcohol Abuse

Alcohol misuse is generally reported as a risk factor for self-harm. Previous research collecting data between 2000 and 2009 from the Multicentre Study in England indicated that 58.4% of patients who self-harm had alcohol involvement in the actual acts of self-harm and 31.6% were alcohol misusers (Ness et al., 2015). "Predicting suicide following self-harm: A systematic review of risk factors and risk scales" (Chan et al., 2016) found marginally significant association between alcohol misuse and completed suicide following self-harm. However, those studies were based on hospital data based on clinician assessment, and lacked control groups (Chan et al., 2016).

For participants in the community, Patton et al. (2007) found an association between frequencies of alcohol use (none, weekly, at least weekly) and self-harm among college adolescents (12-15 year old). This is supported by the study of Rossow (2007), which conducted a school survey in Australia, Belgium, England, Hungary, Ireland, the Netherlands, and Norway (N = 30,532). The study examined alcohol consumption by reference to the number of drinks in a typical week and the number of drinks in the past year, and classified people into 3 categories: light, medium, and heavy drinkers. The study found significant positive associations between self-harm and a heavier alcohol consumption pattern.

These studies are all contradictory to the present study, which found no association between alcohol misuse and self-harm engagement. The possible explanation is that the previous studies used different measurements. This current study used only a single item (Have you ever been really drunk by drinking too much alcohol?), which might have had lower power to indicate heavy consumption of alcohol, and frequency of drinking.

3.8.2.1.11 Illegal Activities

Prevalence of self-harm is reported to be higher in prison than in the general population (Hawton, Linsell, Adeniji, Sariaslan, & Fazel, 2014). Ammerman, Steinberg, and McCloskey (2018) studied suicidality and risk-taking behaviours (risky sexual behaviours, substance use (tobacco, alcohol, and illicit drugs), delinquency, and violent behaviours), and concluded that only illicit drug use had a strong association with suicidal behaviour. Delinquent behaviour was not associated with suicidality, in line with the current study, which found that illegal activities had no association with self-harm either in the UK or in Thailand.

3.8.2.1.12 Socioeconomic Status

Marital status and employment status were associated with self-harm only in Thailand. Thai people who were divorced, widowed, or separated were more likely to engage in self-harm. It has been shown that Thai people who were separated, divorced, or widowed had less happiness and lower psychological well-being than those who were not (Yiengprugsawan et al., 2010; Yiengprugsawan, Seubsman, Sleight, & Team, 2012). Thai people who were unemployed were more likely to engage in self-harm. Unemployment was a predictor of suicidal ideation in Thailand (Albataineh, 2017). Although in the UK unemployment was not a predictor, people in lower class occupations were more likely to engage in self-harm. People who reported a higher household income in the UK were less likely to engage in self-harm. Mars et al. (2014) found people earning higher incomes were less likely to self-harm, especially self-harm with suicidal intention. Lower classes were more likely to self-harm with suicidal intention in the UK. Kipping, Smith, Heron, Hickman, and Campbell (2014) examined the relationship between adolescents' multiple risk behaviours including self-harm and parental socioeconomic status in the UK cohort. The results indicated that social class and income are associated with self-harm.

As mentioned, social status plays a role in self-harm engagement in both countries but in different ways. Income and lower social class were important in the UK. Marital (divorced, separated, or widowed) and unemployed status were important for Thai culture, as collectivism and kinship system influence Thai people to prioritise family goals and the needs of others over their own needs. As an example of Thai family relationships, the main reason why Thai formal marriage was important was to give social credit to the woman's family

(Williams & Guest, 2005), and divorce is socially unacceptable (Yeung et al., 2018). People also have a higher expectation to look after their own parents when they are older in Thai society (Caffrey, 1992; Kejkornkaew, Sirapo-ngam, Monkong, Junda, & Wallhagen, 2016). Further studies have shown that many older parents still live with their own children in Asia (McHale, Dinh, & Rao, 2014; Yeung et al., 2018). Looking after parents may cause Thai people stress when they are unemployed. As the UK is individualistic, the equity principle is important (Triandis, 2001). This may link with the present study's findings regarding income and social class associations in the UK.

3.8.2.2 Psychological Characteristics

3.8.2.2.1 Personality and Self-harm

In this study, people who self-harmed had significantly higher scores on Emotionality and Openness and a lower score on Extraversion ($h_p^2 = .046, .020, .091$).

The significant negative association of Extraversion (expressiveness, social boldness, sociability, liveliness) with self-harm shows a medium effect size, but it is even crucial as the effect size is larger than the effect of other dimensions. The influence of introversion on self-harm was supported by a systematic review study (Brezo et al., 2006). Moreover, Su et al. (2018) investigated the personality profile of suicidality among patients diagnosed with mood disorders and control groups by the interview method to categorise the group of attempted suicides. Su et al. (2018) demonstrated that the personality profile of low Extraversion and high Neuroticism indicated the highest risk of suicide.

Higher scores on Emotionality (fearfulness, anxiety, dependence, sentimentality, neuroticism) in people who self-harm was anticipated in the present study, and findings were generally consistent with those of previous studies (Brown, 2009; Goldstein, Flett, Wekerle, & Wall, 2009; MacLaren & Best, 2010). High Emotionality has been related to mental health problems (Lahey, 2009).

High Openness (Aesthetic appreciation, Inquisitiveness, Creativity, and Unconventionality) was not clearly expected, however it was supported by Brown (2009) and Goldstein et al. (2009) indicating that high Openness is related to non-suicidal self-injury. It is possible that people who are open to new

experiences may learn new things by experimenting with self-harm engagement. However, some studies have indicated that people with suicidal ideation reported lower scores on Openness (Eades, Segal, & Coolidge, 2018). Openness may influence the type of self-harm; this will be investigated in the next chapter.

3.8.2.2.2 Impulsivity and Self-harm

In this study, only Negative urgency found positive association with self-harm engagement with a medium size effect (.086). Negative Urgency is defined as the tendency to abandon goal-directed behaviours; such people act rashly and urgently in response to negative effects. This in line with systematic literature review; Negative Urgency showed the most consistent association with lifetime self-injury (Lockwood, Daley, Townsend, & Sayal, 2017). Impulsivity plays a crucial role in the enactment phase of self-harm (O'Connor & Kirtley, 2018). People with impulsivity could act rashly when facing negative emotions, leading them to self-harm if they have access to the means. Restricting access to the means of self-harm is therefore necessary to repetitive self-harm prevention.

3.8.2.2.3 Difficulties in Emotion Regulation and Self-harm

It has been previously reported that affect regulation is the most common reason why people harm themselves (Edmondson et al., 2016). This was again supported in the present study. Difficulty in emotion regulation has a significant positive association with self-harm in all domains. In other words, people who have the difficulties in emotion regulation are more likely to self-harm. However, the strongest relationship is with limited access to emotion regulation skill (i.e. strategies in solving personal problems), as it is the only domain which had a medium size effect (.124). This is consistent with Perez et al. (2012) which demonstrated that all factors were significantly associated with NSSI but only Strategies remained significant on a multivariate logistic regression analysis after controlling for sex and psychopathology. Unsurprisingly, people tend to experience the arousal of negative emotions before self-harming occurs. Laye-Gindhu and Schonert-Reichl (2005) found that people who self-harm are more likely to have difficulty regulating their emotions, especially not being confident that they have adequate strategies to deal with their emotions so that they can feel better later. Therefore, it is important to train patients who self-harm in

emotional management skills in order to help them cope confidently with negative emotions.

3.8.2.2.4 Mindfulness and Self-harm

To clarify the association between mindfulness and self-harm, this study employed the Five Facet Mindfulness Questionnaire-Short Form (FFMQ-SF) which consists of five facets (Observing, Describing, Awareness, Non-judging, and Non-reactivity). As expected, only Awareness, Non-judging, and Non-reactivity had negative association with self-harm. In other words, people with lifetime prevalence of self-harm had significantly lower scores on these three facets. The strongest association with self-harm was Non-reactivity to inner experience, which had an effect size of 0.100 (medium size effect). There has been a lack of research on the relationship between self-harm, regardless of suicidal intention, and mindfulness. The study closest to the present study was by Caltabiano and Martin (2017), which indicated that Awareness, Non-Judging, and Non-reactivity were lower in NSSI than Non-NSSI. Other studies supporting the role of Mindfulness in self-harm were Lundh et al. (2007) and Yusainy and Lawrence (2014), which examine Mindfulness using the 15-item Mindful Attention Awareness Scale (MAAS); these studies indicate that adolescents who self-harm have lower mindfulness than those who do not.

The facets of mindfulness have an important role in psychological and mental characteristics. Baer et al. (2006) demonstrate that Awareness, Non-Judging, and Non-reactivity are incremental predictors of psychological symptoms. Bränström, Duncan, and Moskowitz (2011) indicated that Awareness and Non-reactivity show strong associations with both positive states of mind (measuring positive emotional and cognitive experiences) and perceived health, while they show negative associations with depression and anxiety. This study has also shown that higher Non-reactivity was significantly reported by people who regularly meditate. Therefore, it is possible that meditation could serve as a protective factor against self-harm.

3.8.2.2.5 Rumination and Self-harm

As expected, both Brooding and Reflection had a positive association with self-harm engagement. Brooding rumination showed a marginally larger effect size than Reflection Rumination (.052 vs. .023). A systematic review has supported that rumination has an association with suicidal ideas and behaviour despite

methodology differences (Morrison & O'Connor, 2008). Repetitive thinking about personal distressing thoughts and emotion (brooding) shows links to suicidality (O'Connor & Nock, 2014). Although reflective rumination (contemplation of the reasons for a particular feeling, thought, behaviour, problem or solution) seems to be more adaptive than Brooding, Reflective rumination is still associated with self-harm. Therefore, it is important to train people who self-harm how not to repeat their own thoughts, for example by using the technique of distraction (Polanco-Roman, Jurska, Quiñones, & Miranda, 2015).

3.8.2.2.6 Depression, Anxiety and Self-harm

As expected, depression and anxiety have a significant positive association with self-harm. It has been reported that people who self-harm show higher rates of depression and anxiety (Hawton et al., 2002). Depression, anxiety and self-harm may be predicted by acute life stress (O'Connor, Rasmussen, & Hawton, 2010). People who have acute life stress have a higher chance to be depressed, anxious, and possibly to harm themselves.

3.8.3 Model of Self-harm Prediction for the UK and Thailand

In order to examine whether or not the risk factors in the UK and Thailand are similar, a multivariate logistic regression model was used. The results indicated that the risk factors in the two countries were not significantly different, and also showed that the interaction terms (culture and risk factors showing differential effects) were not significantly different. This indicates an important finding that the risk factors for self-harm were similar across different cultures, at least in the UK and Thailand.

After controlling for culture and demographic data, only female, being non-heterosexual, having psychiatric history, chronic physical illness, drug consumption, Non-Reactivity Mindfulness, and Depression were associated with self-harm.

The final model showed that drug consumption had the strongest association with self-harm. In the model, depression mediated the risk of Introversion and Negative Urgency. Depression plays a significant role amongst other psychological characteristics. Therefore, clinicians should pay attention

primarily to treating the depression, and should see managing disposition as a longer-term goal.

This study also indicated that Non-Reactivity Mindfulness scale mediated brooding rumination, and that Non-reactivity Mindfulness also served as a protective factor. Practicing how not to react to one's inner experience may therefore be a crucial way to decrease the risk of repetitive self-harm. Depression and Non-reactivity did not change when entering other factors, which reflected the independent risks of Depression and Non-Reactivity on self-harm. Despite being less important in the univariate model, drug consumption became increasingly important after control for depression. This raises the clinical significance of drug use in patients, and clinicians should actively screen for and help patients with co-morbid difficulties of drugs and self-harm. Crucially, people who self-harm often have stressful life problems such as chronic physical illness and mental health problems. It is therefore necessary to help patients to cope with their problems.

3.8.4 Characteristics of British and Thai People

After matching, the balance of the characteristics in the two groups (UK and Thailand) was determined. There were 165 British people and 256 Thai people who could be closely matched. The characteristics of people in both countries will be described below.

3.8.4.1 Psychosocial Factors

Due to the age of recruitment (18-40 years old), most people who took part in this study were studying and starting their career (only 12.1% of British and 16.4% of Thai participants were over 30 years old). Most participants in both countries lived in urban areas and commonly lived with someone (77.4% vs. 76.2%). Thai people lived with parents and other relatives (i.e. grandparents, aunt etc.) more than British people (48.8% vs. 33.3%, 8.6% vs. 1.2%).

Despite modernisation, which has led the family pattern to change to nuclear families in Thailand, the number of extended families (family living with grandparents or uncles or aunts) in the past ten years has also increased (Yeung et al., 2018). One of the possible explanations is the link to the kinship system in Thai culture. The younger generation values, respects, and honours the older

generation, especially their family members. Thais are taught to look after older people (Rosenberg et al., 2009), and Thailand is classified as a collectivist culture. Hofsteds (1980) states that the culture values group beliefs, which give priority to the group or relationship, instead of individual beliefs. The culture influences the way Thai people live; children live with parents in order to give back when they are older. By comparison, British people at age 50 (6,245 people) were less likely to live with their own parents; only 4.2% of sons and 3.2% of daughters live with their parents. However, people from the UK provide support for their parents via methods such as transportation, shopping, gardening, etc. (Evandrou et al., 2016).

British people reported more risky behaviours, namely alcohol abuse and drug use. Lazzarino et al. (2014) examined the differences between England and Thailand; Thai people reported lower alcohol and tobacco consumption than English people, especially Thai women. This was in accordance with the previous literature, which generally found that Thai females report lower levels of alcohol consumption and drug use than Thai males (Assanangkornchai, Sam-Angsri, Rerngpongpan, & Lertnakorn, 2010; Pawa & Areesantichai, 2017, 2017). In the present study, Thai females reported lower rates of alcohol abuse and drug consumption than Thai males, but in the UK there were no gender differences. This was possibly affected by gender-based cultural influences on alcohol and drug consumption in Thai and British cultures.

Regarding traditional Thai views of women and alcohol, in Thailand the ideal woman is a virtuous woman (*Kulasatrii*) who is proficient and sophisticated in household duties (Klunklin & Greenwood, 2005). Although the perception of Thai women's role in the modern world is more open and different from in the past (Thaweesit, 2004), drinking alcohol remains less acceptable for women than for men in Thai society (Rungreangkulkij, Kotnara, & Chirawatkul, 2012). In light of Buddhism, Thai people who have a high level of moral belief and participation in religious activities are less likely to consume alcohol (Chamratrithirong et al., 2010; Wongtongkam et al., 2014). Buddhists teach one to perform good deeds, observe religious precepts, and achieve merit to improve present lives (Klunklin & Greenwood, 2005). Refraining from intoxicants is advised as they cause a careless frame of mind (this includes alcohol and drug consumption); this is one of the five precepts (Terwiel, 1972).

People in the UK reported higher exposure to the self-harm in others than people in Thailand, which is likely to be an outcome of the fact that the UK had a higher prevalence of self-harm than Thailand.

Thai people reported a significantly lower psychiatric service history than people in the UK. It could be viewed that Thai people have fewer psychiatric problems, however more Thai people reported that they think they need psychiatric services, suggesting there is more of an issue of why Thai people do not seek help. Burnard et al. (2006) found that Thai people perceived receiving mental service as stigmatising, whereas British people, individualists in an more developed country, are less likely to perceive stigma than people in developing countries (Alonso et al., 2008). Further, as Thailand is a lower income country, Thai people reported significantly higher chronic physical illness than British people.

In summary, given the collectivist nature of Thai society, Thai people seem to be heavily influenced by the kinship system and Buddhism. Thai family patterns are different; Thai culture involves more family members. Thais also engage in fewer risky behaviours (alcohol and drug consumption). However, Thai people may have more stigmatisation to mental health.

3.8.4.2 Psychological Characteristics

Culture plays an important role in personality traits. British and Thai people indicated different characteristics. Thai people reported significantly lower Conscientiousness, higher scores on acting with Awareness, lower scores on Non-Judging, higher Positive Urgency, higher Impulsive DER, and higher Brooding Rumination, and lower depression than British nationals.

There is a lack of direct psychological characteristic cultural comparison research considering the UK and Thailand. However, it was shown by one study (Shaw, Ellis, Kendrick, Ziegler, & Wiseman, 2016), which collected data by online surveys in the UK similar to the present study, that the mean scores of personality dimensions of British people are similar to the findings of the present study. Conscientiousness (mean = 3.56) was the highest dimension, showing that British people have higher organisation, diligence, perfectionism, and prudence. In terms of Mindfulness, Thai people reported a significantly higher score on acting with Awareness, and higher scores on Non-Judging than British

people. The result was in line with a Western and Eastern comparison study on mindfulness between Thai (monks and college students) and American college students using Kentucky Inventory of Mindfulness Skills. Thai monks and Thai college students consistently reported higher scores on Acting with awareness and lower scores on Accepting without Judgment than American college students (Christopher, Christopher, & Charoensuk, 2009). Although this study also found that Thais (monks and students) had lower scores on Observing, and Thai monks had a lower score on Describing than American students, which was not found in the present study.

As discussed above, Thai people were more in control of themselves (high Awareness Mindfulness) including ruminating. However, when Thai people encounter strong emotions, it seems difficult for them to control their behaviour, whereas British people were highly conscientious, and also showed higher rates of depression.

3.8.4.3 Summary of Characteristics

When it came to the model of multivariate logistic regression controlled for age and gender integrating all these findings, the following characteristics were significantly distinguished between the two cultures in decreasing order: Conscientiousness (strongest), psychiatric service history, chronic physical illness, Lack of Perseverance, alcohol abuse, Awareness Mindfulness, Brooding Rumination, drug consumption, Depression, exposure to self-harm, living with parents, Anxiety, Non-Judging Mindfulness, and Impulsive DER (weakest).

Taken together, these findings clearly show that culture plays an important role in personality expression. As for individualism in developed countries, British people (individualists) have higher self-regulation and self-discipline (Conscientiousness), whereas Thai people (collectivists) seem to be more diplomatic in some behaviours because they pay attention more to the context than content, making them less strict regarding rules (Triandis, 2001). For instance, lying tends to be acceptable for collectivists if it allows them to save face or help the group, whereas individualists seem to favour achieving justice over maintaining a relationship (Triandis, 2001). Given that Thais are Buddhists and collectivists, Thai people have higher Mindfulness, especially acting with

awareness, in line with lower engagement of alcohol abuse and drug consumption.

The kinship system places great importance on Thais' families, and Thai people live with their parents more commonly than British people. The tight society, due to collectivism, is highly interdependent and there is a sense of high surveillance; people clearly know what the appropriate behaviours for their society are (Triandis, 2001). It is possible, on the other hand, that collectivists seem to have more repetitive thinking towards other people's opinions (Higher Brooding rumination and Anxiety). Although it was expected that collectivists should themselves be more regulated towards others or society (High Awareness and low Lack of Perseverance). When it comes to situations that arouse emotions, Thai people seem to find it slightly more difficult to control themselves than British people do (Higher Impulsivity). However, Thai people reported less Depression; this is in line with the fact that collectivists report more social supports, whilst individualists report more loneliness (Triandis, Bontempo, Villareal, Asai, & Lucca, 1988).

Notably, several characteristics of British people were shown as potential risk factors for self-harm, namely Depression, drug consumption, exposure to self-harm, and psychiatric service history. This may link with self-harm engagement in the UK. Whereas several risk factors were also shown in Thai samples' characteristics (Anxiety, Brooding Rumination, Impulsive DER and Chronic physical illness). However, Thai people reported that higher Awareness Mindfulness served as a protective factor against self-harm in the present study. In addition, Thai people are also influenced by kinship, family, and social factors, as mentioned above.

3.9 Conclusion

This chapter has examined the differences between self-harm engagement in the UK and Thailand.

Cultural differences play an important role in the prevalence of self-harm; Western countries, like the UK, reported higher rates of self-harm than Southeast Asian countries, like Thailand. Culture affects the methods of self-harm. Cutting was the most common method in the UK, whereas punching was

the most popular in Thailand. Skin injury and drug consumption methods were not as common in Thailand as in the UK.

Onset age of self-harm is universally related to the onset of puberty in both countries. It was observed that different methods of self-harm had different onsets, with dangerous methods seeming to occur at an older age than less dangerous methods. The findings also show that the majority of people who self-harm engaged in multiple self-harm methods. This highlights that clinicians or other people who see someone harm themselves by a less dangerous method should pay close attention to them and give them earlier treatment.

Both cultures share the same risk factors for self-harm. Drug consumption, female gender, psychiatric service history, Depression, non-heterosexual orientation, chronic physical illness, and Non-Reactivity account for the risk association with self-harm in both countries. Clinicians should consider the influence of drug consumption as a significant risk factor. Psychiatric history and life event problems, such as physical illness, should also be taken into account to understand the risk of self-harm. The model also addressed the high importance of depression, which should be given priority for earlier treatment. Non-Reactivity to inner experience served as a protective factor against self-harm; this implies that training patients not to react to their emotions and thoughts may reduce the risk of repetitive self-harm.

As priority is given to achieving the goals of the group, Thai people were primarily influenced by the kinship system and Buddhism. It is possible that the low prevalence of self-harm engagement may be a result of the protective factors in Thai culture of social support, the kinship system, and Buddhism. However, the present study did not directly explore social support, kinship, or Buddhist influences. Further investigations are therefore required.

Despite the cultural differences between the UK and Thailand, both countries shared the most common motive of self-harm: get relief from a terrible state of mind (a cry of pain). This indicated that self-harm acts are a way to cope with distressing emotions. However, Thais reported more "cries for help", which indicates the need for treatments regarding communication and interpersonal skills. Thai people had more difficulties communicating directly with others in accordance with the collectivistic culture, because people are supposed to

consider others rather than their own personal feelings or desires, whereas self-harm acts of British people were mainly for their own intrapersonal reasons.

One area of concern is that people in both countries were not very likely to seek hospital-based help even if they self-harmed using dangerous methods. Moreover, Thai people reported fewer psychiatric service histories despite considering that they needed such psychiatric services, which possibly reflected stigmatization within Thai culture. Again, disclosing to others rarely happened in either country.

3.9.1 Clinical Implications

Understanding cultural differences helps clinicians to assess the repetitive risk of self-harm more effectively for a non-Western society. In treating Thai patients, clinicians need to be aware of how family, society, and relationships influence people's emotions, thoughts, and behaviours, and clinical assessment should evaluate not only whether patients have adverse life problems but also what the problems mean to them. For example, an unemployed status may be meaningful regarding their families; the unemployed Thai patients may feel suffering as they cannot financially support their parents as they are expected to do in Thai culture. This would allow clinicians to provide more specific and holistic treatment to a particular patient. This chapter findings also indicated that some risk factors for self-harm are shared for both countries. Therefore, the key skill training or intervention delivered to patients should be similar to protocol in Western societies (this is explored more in Chapter 4). One important suggestion from this study's findings is that the school and community should take serious action to prevent self-harm in adolescents (i.e. early detection), and provide them with early treatment to prevent more serious outcomes in the future. Another major point is that it is necessary for Thai people to enhance their communication skills, and of course help seeking should be promoted in both societies.

3.9.2 Strengths, Limitations, and Future Research

This study examined the differences in two distinct cultures on self-harm context. Using the same methodology allowed a comparison of the two countries without the bias of different methods, groups, and time periods. Due to the

different number of participants and different demographics in the two study populations, the analysis employed a matching model to balance the biases of the differences. However, the matching case itself selectively excluded particular groups, such as people of 31-40 years old in the Thai cohort. The data may not be the representation of the population.

Within limitations, the findings of the present study point out the cultural influences on self-harm in a community-based study. Future studies could replicate this on clinical samples to investigate the role of culture in different populations. Moreover, further studies should investigate how cultural influences on self-harm by asking why people who have suicidal ideas decide not to harm themselves, or what can make people who self-harm discontinue self-harm in both societies.

Chapter 4: Psychosocial Factors and Psychological Characteristics that Differentiate Subgroups of Self-harm

4.1 Introduction

Despite the large number of studies on risk factors for self-harm, the literature evidences a marked lack of investigation of the subgroups of self harm. Therefore, an essential next step is to identify and gain empirical understanding of the characteristics that discriminate between these populations. Previous chapters in the present study have investigated the risk factors for lifetime self-harm. Previous literature has, for the most part, examined lifetime history of self-harm; it is essential to address the research gap by adequately discriminating between people with past self-harm and those with recent self-harm. However, some studies indicated that mental health problems such as depression and anxiety, including hostility and emotion regulation, are significantly higher in the recent self-harm group than in a past self-harm group (Andrews, Martin, Hasking, & Page, 2013; Brown, Williams, & Collins, 2007).

Frequency of self-harm is also of interest; there are differences between people who show chronic self-harm behaviour and people who only occasionally perform self-harm. The repetitive subgroup is more strongly associated with mental disorders, psychological problems, and impulsivity than the occasional group (Brunner et al., 2007; Dir, Karyadi, & Cyders, 2013; Lüdtke et al., 2018).

The various motivations for self-harm constitute another crucial subgroup; people with the motivation to die demonstrate different psychological characteristics from those without. Patients with suicidal intentions have more psychological problems, especially depression and mental disorders, than those without (Bjureberg et al., 2018; Grøholt, Ekeberg, & Haldorsen, 2000). Both clinical and general samples show strong associations between suicidal intent and life problems such as divorce, unemployment, and poor education (Mars et al., 2014; Wei et al., 2018) whereas patients without the motivation to die have significantly more externalising behaviours (Grøholt et al., 2000).

Understanding the differences between these subgroups, will enable clinicians to identify important factors to assess, and to provide more appropriate treatment to patients. The present study also addresses the relationships between culture and the psychosocial factors and psychological characteristics of subgroups of self-harm. Until the present study, there has been no study exploring culture in relation to subgroups of self-harm. Regarding subgroups of recency and frequency, there have only been studies on NSSI (non-suicidal self-injury). The present study examines the differences in psychological factors and psychological characteristics (e.g. personality, impulsivity, difficulties in emotion regulation, mindfulness, rumination, depression, and anxiety) of self-harm subgroups (i.e. recency, frequency, and motivation) in the wider self-harm perspective, regardless of suicidal intention and focusing specifically on cross-cultural comparison of the UK and Thailand.

4.2 Objectives

To examine the differences in psychosocial factors and psychological characteristics between the following subgroups of self-harm comparing the UK and Thailand:

1. Past versus recent self-harm
2. Repetitive versus occasional self-harm
3. Motivation to die versus other motivations

4.3 Literature Review

4.3.1 Recency of Self-harm

A previous study that compared recent and past self-harm (within one year versus more than one year ago) using the DSHI on 223 students in the USA found that hostility, guilt and sadness were significantly higher in persons who engaged in recent deliberate self-harm (Brown et al., 2007). A separate study recruited 1,973 students in Australia and examined psychological distress, cognitive reappraisal, emotion suppression, non-productive coping, problem-solving coping, family support, friend support, other support, and self-esteem.

The findings indicated that lower cognitive reappraisal and higher emotional suppression were significantly and positively associated with recent and continuing NSSI, compared to NSSI that had ceased more than one year previously (Andrews et al., 2013). Another study recruited high school (N = 9,985) and college students (N = 7,801) in the USA. In both samples, the following factors were found to be associated with recent self-harm: younger age, greater depressive symptoms, higher hopelessness, male gender, and victimisation by verbal or physical assault. Among college students, being non-white, involvement in dating violence, negative perceptions of one's weight, and same-sex sexual experience distinguished the subgroups (Taliaferro & Muehlenkamp, 2015).

In conclusion, the previous literature examining NSSI clearly indicates that people who currently harm themselves experience more negative life experiences and have more psychological problems, namely depression, hopelessness, hostility, emotional suppression, and low cognitive reappraisal. However, some psychological characteristics were not significantly different, such as psychological distress, coping, and self-esteem; this indicates the possibility that there are some psychological characteristics that people can maintain despite largely historic self-harm.

There is a lack of research examining self-harm regardless of suicidal intention. However, non-suicidal self-harm shares many risk factors (mental health problems, substance misuse, etc.) with suicidal self-harm; these associations are less strong for non-suicidal self-harm (Mars et al., 2014). It is possible that NSSI features are similar to self-harm, regardless of suicidal intention.

4.3.2 Frequency of Self-harm

One important distinction in self-harm is the frequency of the behaviour. Several studies have compared occasional to repetitive self-harm. Brunner et al. (2007) examined the differences between occasional and repetitive self-harm groups (1 to 3 times per year versus more than 3 times per year) comprising ninth-grade students in Germany (N = 5,759). This study focused on self-injury without suicidal intent. The findings showed that psychological problems (withdrawal; somatic complaints; anxiety and depression; social, cognitive, and

attention problems; and delinquent behaviour) were found to be associated with both occasional and repetitive self-harm, but were more strongly associated with repetitive self-harm. Interestingly, social factors such as school type, poor academic achievement, and family health problems were associated only with occasional self-harm. Lüdtke et al. (2017) divided occasional self-harm (1 to 3 times a year) and repetitive self-harm (more than 3 times a year) individuals to investigate differences in subgroups (N = 447). Univariate analysis found that female gender, higher age, antisocial behaviour, higher levels of novelty-seeking behaviour, harm avoidance, and self-transcendence and lower level of persistence and self-directedness were associated with repetitive self-harm. Considered together, only higher levels of antisocial behaviour and lower level of self-directedness predicted repetitive NSSI in a multivariate regression.

Another study examined the association between impulsivity-related traits and self-harm (assessed by the DSHI) in 734 undergraduate students. The result of a structural equation model found that self-harm frequency and variety were particularly associated with the impulsivity facet of Negative Urgency (Dir et al., 2013).

In conclusion, psychological problems (such as depression and anxiety), behaviour problems (delinquent and antisocial behaviours) and psychological characteristics (negative urgency and low self-directedness) were more associated with repetitive than with occasional self-harm. Some social factors (such as low levels of education) were significantly correlated to occasional self-harm.

The present study focuses on self-harm regardless of suicidal intent. Although it includes some persons engaging in self-harm with suicidal intent, self-harm with and without suicidal intent have some overlapping features. Therefore, the repetitive self-harm group in the present study may be similar to that seen in the literature review.

4.3.3 Motivation to Die

The gravest self-harm group are those who wish to die. People who self-harm with the motivation to die have more mental health problems and more severity of psychological characteristics. Grøholt et al. (2000) examined 57 patients (13-

19 years old) at hospital wards in Norway who had an intent to die and compared them to 34 patients without this intent. More internalising problems (including depression and anxiety) were found in those with suicidal intent. Those without this intent showed more externalising behaviour. In another case control (N = 25,161) and longitudinal study (N = 6,120) of a Swedish regional register (Bjureberg et al., 2018), patients engaging in non-suicidal self-harm and patients showing suicidality (suicidal ideation, prior treatment, and behaviour) had higher odds ratios of mental disorder (such as depressive disorders, than controls (OR = 4.3 [95% CI, 3.7-5.0] and 12.6 [95% CI, 11.1-14.1]). Wei et al. (2018) compared Chinese patients who self-harm expressing suicidal ideation (N = 166) to patients without suicidal ideation (N = 73) and found that patients with suicidal ideation were likely to be older, more depressed, female, divorced, unemployed, having religious beliefs, having suicidal attempt history and psychiatric diagnosis, having an intention to reduce physical pain and/or having lower scores on quality of life. In a non-clinical UK population, Mars et al. (2014) investigated the differences between self-harm with and without suicidal intent in a birth cohort study (N = 4,799). The findings consistently indicated that mental health problems and substance misuse were more strongly associated with those with suicidal intent than those without.

In summary, self-harm with suicidal intent shows a stronger association with mental health problems than does non-suicidal self-harm. Psychological characteristics (e.g. internalising, depression, anxiety, and poor quality of life) are more likely to be reported in the suicidal group; the non-suicidal group is associated with externalising behaviours.

Given this literature review and despite individual studies capturing different characteristics, it is clear that characteristic psychological features significantly impact or perhaps determine the differences between the subgroups. Even though some characteristics of different subgroups show shared similarities, the present line of investigation can be seen as both relevant and essential in terms of understanding of subgroup differences; this may lead to devising and delivering more effective treatment for people who self-harm.

4.3.4 Culture and Subgroups of Self-harm

As mentioned above, the literature contains no cross-cultural studies comparing interactions between culture and subgroups of self-harm. However, subgroup studies conducted in various countries (UK, Sweden, Norway, and China) do show broad similarities across cultures; most prominently, self-harm with suicidal intent is associated with more adverse psychological problems than self-harm without suicidal intent (Bjureberg et al., 2018; Grøholt et al., 2000; Mars et al., 2014; Wei et al., 2018). It therefore seems possible that people in the UK and Thailand have similar self-harm subgroup characteristics. Moreover, any differences that arise from the present study would be instructive and the investigation would be valuable.

4.4 Method

All processes of design, procedure, and measurements are described in Chapter 2.

4.4.1 Matching Model

The present study matched cases by culture, age group, and gender. The propensity score matching utilised the SPSS 22 R plug-in using Ps-matching 3.

As the proportions of people who self-harm were different in the UK and Thailand, to avoid an uneven number of people in each country, matching the case with 1:1 was performed.

The algorithm chosen to improve the covariate balance was *logistic regression* for estimation, *nearest-neighbour* for matching, and to *discard* units outside of common support for *both groups*. This study employed the largest sample size without replacement (the cases already matched cannot be rematched again) (Austin, 2011) and without calipers ('caliper' indicates the maximum distance of each unit). Although setting caliper is considered to be recommended, when the covariates are not continuous variables, caliper width has a much smaller impact on the performance of estimation (Austin, 2011). Nearest-neighbour matching within a specified caliper can result in the exclusion of some treated subjects; this could be "bias due to incomplete matching" (Austin, 2014). Therefore, in

order to include all participants who self-harm in the model, matching in the present study was performed without calipers.

4.4.2 Participants of this Study

After matching, the data comprised 141 individuals who self-harm and 141 matched individuals who did not self-harm.

There were no significant differences of culture, age group, or gender between self-harm and non-self-harm group. Individuals who self-harm totalled 62 in the UK and 79 in Thailand. Individuals who reported self-harm the most were found to be in the youngest age group for both countries. Females in both the UK and Thailand (84.2% vs. 82.3%) reported self-harm more than males (15.8% vs. 17.7%) (see table 29).

Table 29 Matching data

	Self-harm (141)	Non-self-harm (141)	P-value
Culture			.905
UK (62)	62 (44.0%)	63 (44.7%)	
Thai (79)	79 (56.0%)	78 (55.3%)	
Age Group			.693
18-22 years old	51 (36.2%)	58 (41.1%)	
23-30 years old	55 (39.0%)	51 (36.2%)	
31-40 years old	35 (24.8%)	32 (22.7%)	
Gender			.670 ^a
Male	22 (15.8%)	25 (17.7%)	
Female	117 (84.2%)	116 (82.3%)	

^a missing data =2

4.4.3 Definition of Subgroups of Self-harm

The subgroup definitions in the present study are as follows:

Recency: "Recent self-harm" is defined as people who self-harmed within the last year and "Past self-harm" is defined as people who self-harmed more than one year ago.

Frequency: "Repetitive self-harm" is defined as people who reported the frequency of self-harm as "many times" in at least one self-harm method;

“occasional self-harm” was defined as those who reported “once or more than once” the maximum for any self-harm method.

Motivation to die: “Motivation to die” is defined as people who reported the motivation of their previous self-harm as “I wanted to die”. “Other motivations” refers to those who did not report the motivation to die.

4.5 Data Analysis

Descriptive data was performed by chi-square. Multinomial logistic regression was performed with the cultural interactions with subgroups on psychosocial factors. Multinomial logistic regression was also used to analyse the associations of psychosocial factors between all self-harm subgroups by controlling for culture, age, and gender. A two-way ANOVA was analysed for psychological characteristics and Tukey’s HSD for pairwise comparison. Cohen’s *d* was computed for effect size between the subgroups. All multiple comparisons used a False Discovery Rate (FDR) correction for P-value at 0.05.

In addition, in multinomial logistic regression, covariates were combined with the catalogs to reduce the amount of empty cells and cells with very small numbers.

4.6 Results

Differences in psychosocial factors and psychological characteristics between the subgroups of self-harm comparing the UK and Thailand are shown in the following sections.

Table 30 Self-harm characteristics of subgroups of self-harm

	Recency		OR	Frequency		OR	Motivation to		OR
	Past (39)	Recent (75)	(95% C.I.)	Occasional (52)	Repetitive (87)	(95% C.I.)	Others (83)	Die (58)	(95% C.I.)
Onset			.97			.77*			.1.01
	15.56 (5.23) ^a	14.69 (4.30) ^a	(.89-1.04)	18.12 (5.84) ^a	13.52 (3.38) ^a	(.68-.87)	15.04 (5.09) ^a	15.35 (4.73) ^a	(.92-1.12)
Number of methods			1.71*			1.72*			1.15*
	2.49 (1.78) ^a	5.85 (3.36) ^a	(1.35-2.16)	2.63 (1.79) ^a	6.16 (3.32) ^a	(1.31-2.23)	4.24 (3.24) ^a	5.70 (3.26) ^a	(.99-1.32)
Recency			-			5.18*			2.68*
Past	-	-		22 (59.5%)	17 (22.1%)	(1.70-15.80)	29 (42.6%)	10 (21.7%)	(.88-8.18)
Recent	-	-		15 (40.5%)	60 (77.9%)		39 (57.4%)	36 (78.3%)	
Frequency			5.18*			-			2.30*
Occasional	22 (56.4%)	15 (20.0%)	(2.22-12.10)	-	-		37 (45.1%)	15 (26.3%)	(.88-6.03)
Repetitive	17 (43.6%)	60 (80.0%)		-	-		45 (54.9%)	42 (73.7%)	
Motivation to die			2.68*			2.30*			-
			(1.15-6.26)			(.88-6.03)			
No	29 (74.4%)	39 (52.0%)		37 (71.2%)	45 (51.7%)		-	-	
Yes	10 (25.6%)	36 (48.0%)		15 (28.8%)	42 (48.3%)		-	-	

^a mean (SD); * P-value = .05

4.6.1 Recency

Table 31 Personal information of recency subgroups

	Non-SH (141)		Past (39)		Recent (75)		P-value
	N	(%)	N	(%)	N	(%)	
Culture							.022
UK	63	44.7%	12	30.8%	43	57.3%	
Thailand	78	55.3%	27	69.2%	32	42.7%	
Age							.095
18-22 years old	58	41.1%	9	23.1%	33	44.0%	
23-30 years old	51	36.2%	17	43.6%	31	41.3%	
31-40 years old	32	22.7%	13	33.3%	11	14.7%	
Gender							.671
Male	25	17.7%	9	23.1%	12	16.4%	
Female	116	82.3%	30	76.9%	61	83.6%	
Gender Orientation							.003 ^a
Heterosexual	122	86.5%	31	79.5%	50	66.7%	
Non-heterosexual	19	13.5%	8	20.5%	25	33.3%	
Education level							.095
Higher than Bachelor's Degree	35	24.8%	9	23.1%	12	16.0%	
Bachelor's Degree	71	50.4%	25	64.1%	37	49.3%	
Lower than Bachelor's Degree	35	24.8%	5	12.8%	26	34.7%	
Marital status							.007 ^a
Single	125	88.7%	27	69.2%	68	90.7%	
Married	15	10.6%	9	23.1%	5	6.7%	
Widowed, Divorced, Separated	1	0.7%	3	7.7%	2	2.8%	
Employment status							.001 ^a
Employed	66	47.1%	23	63.9%	22	30.1%	
Unemployed	3	2.1%	1	2.8%	10	13.7%	
Student	71	50.7%	12	33.3%	41	56.2%	
Income							.001 ^a
1 st quintile	41	29.1%	7	17.9%	12	16.0%	
2 nd - 4 th quintile	71	50.4%	30	76.9%	36	48.0%	
5th quintile (lowest)	29	20.6%	2	5.1%	27	36.0%	
Living status							.757
Alone	33	23.6%	7	17.9%	17	22.7%	
Others	107	76.4%	32	82.1%	58	77.3%	
Living area							.218
Urban	104	74.8%	30	78.9%	63	85.1%	
Rural	35	25.2%	8	21.1%	11	14.9%	
Psychiatric service history	22	15.6%	12	30.8%	52	69.3%	.001 ^a
Chronic physical illness	13	9.2%	5	12.8%	16	21.3%	.044
Alcohol Abuse	79	56.0%	29	74.4%	49	65.3%	.083
Drug Consumption	17	12.1%	13	33.3%	24	32.0%	.001 ^a
Illegal Activities	11	7.8%	6	15.4%	5	6.7%	.253
Exposure to self-harm of others	86	61.0%	24	61.5%	58	77.3%	.045

^a Controlled for FDR, p-value was statistically significant

^b missing data = 2; ^c missing data = 5; ^d missing data = 1; ^e missing data = 4

Marital status: domestic partnership was merged with single; Income: 2nd, 3rd, 4th quintiles were merged together; Employment status: six homemakers classed as missing data.

Table 32 Association between personal information and recency subgroups

	Recent vs .Past				Recent vs .Non-SH				Past vs .Non-SH				Recency X Culture
	B	P-value	OR	95 %C.I.	B	P-value	OR	95 %C.I.	B	P-value	OR	95 %C.I.	
Culture	-.81	.067	.44	.19-1.06	-.44	.150	.64	.35-1.17	.37	.363	1.45	.65-3.23	
Age	-.09	.020	.92	.85-.99	-.02	.428	.98	.93-1.03	.06	.050	1.07	1.00-1.14	.181
Gender	.44	.388	1.55	.57-4.21	-.11	.787	.90	.42-1.93	.33	.455	1.40	.58-3.35	.914
Gender Orientation	.37	.451	1.45	.55-3.79	1.04	.004 ^a	2.82	1.40-5.70	.67	.165	1.95	.76-5.01	.964
Education level													.200
Higher than Bachelor's Degree													
Bachelor's Degree	.05	.935	1.05	.35-3.14	.61	.159	1.84	.79-4.28	.56	.237	1.75	.69-4.45	
Lower than Bachelor's Degree	.33	.685	1.39	.28-6.91	.62	.250	1.85	.65-5.30	.29	.704	1.33	.31-5.79	
Marital status													
Single, never married													.189
Married	-.84	.227	.43	.11-1.69	-.15	.799	.86	.27-2.77	.68	.216	1.98	.67-5.85	
Widowed, Divorced, Separated	-.73	.467	.48	.07-3.46	1.63	.197	5.12	.43-61.26	2.37	.050	10.65	.99-13.53	
Employment status													.044
Employed													
Unemployed	2.16	.054	8.68	.96-78.07	2.28	.002 ^a	9.75	2.35-40.42	.12	.923	1.12	.12-11.79	
Student	.50	.430	1.64	.48-5.64	.15	.747	1.16	.48-2.83	-.35	.530	.71	.24-2.10	
Income													.085
1 st quintile													
2 nd - 4 th quintile	-.55	.322	.58	.20-1.71	.48	.223	1.61	.75-3.47	1.02	.031	2.78	1.10-7.04	
5th quintile (lowest)	1.41	.121	4.11	.69-4.48	.94	.037	2.56	1.06-6.19	-.47	.587	.62	.11-3.43	
Living status (alone/others)	.44	.407	1.55	.55-4.35	-.03	.926	.97	.48-1.94	-.47	.325	.63	.25-1.60	.581
Living area (urban/Rural)	-.63	.244	.53	.19-1.54	-.75	.054	.47	.22-1.01	-.13	.782	.88	.36-2.15	.395
Psychiatric service history	1.58	.001 ^a	4.85	1.85-12.70	2.84	.001 ^a	17.07	7.76-37.55	1.26	.008	3.52	1.39-8.94	.538
Chronic physical illness	.85	.145	2.34	.75-7.35	1.09	.010 ^a	1.28	.42-3.90	.24	.670	2.98	1.30-6.84	.401
Alcohol Abuse	-.88	.065	.41	.16-1.06	.25	.438	1.29	.68-2.42	1.13	.009	3.11	1.33-7.23	.700
Drug Consumption		.712	.84	.32-2.17	1.29	.001 ^a	3.62	1.68-7.78	1.47	.002 ^a	4.33	1.69-1.05	.220
Illegal Activities	-.51	.448	.60	.16-2.23	.01	.980	1.01	.33-3.15	.52	.351	1.69	.56-5.04	.132
Exposure to self-harm of others	.58	.203	1.79	.73-4.40	.74	.035	2.09	1.06-4.14	.15	.695	1.17	.54-2.51	.380

Multinomial logistic regression was controlled for culture, age, and gender; first groups listed were the reference.

^a Controlled for FDR, p-value was statistically significant; There was no significant difference for interaction (Recency Group X Culture)

Table 33 Psychological characteristics of the recency subgroups

	Non-SH		Past SH		Recent SH		Recency X Culture			Recency Group			Significant comparison	
	Mean	SD	Mean	SD	Mean	SD	F-test	P	h _p ²	F-test	P	h _p ²	(d)	
HEXACO-60														
Honesty-Humility	3.51	.59	3.58	.50	3.49	.70	.01	.989	.000	.35	.709	.003		
Emotionality	3.36	.60	3.40	.63	3.62	.56	3.27	.040	.026	4.69	.010 ^a	.036	R>N (.44)	
Extraversion	3.27	.60	3.01	.76	2.63	.65	3.11	.046	.024	22.82	.001 ^a	.155	R<N (1.02)	R<P (.55)
Agreeableness	3.21	.50	3.25	.61	3.06	.69	3.05	.049	.024	2.42	.091	.019		
Conscientiousness	3.48	.53	3.42	.50	3.54	.62	.60	.552	.005	.04	.961	.000		
Openness	3.30	.56	3.48	.63	3.59	.64	.74	.479	.006	5.92	.003 ^a	.045	R>N (.49)	
UPPS-P														
Negative urgency	2.30	.69	2.37	.59	2.84	.63	.90	.406	.007	17.08	.001 ^a	.121	R>N (.81)	R>P (.76)
Lack of perseverance	1.81	.43	1.90	.52	1.75	.42	.93	.394	.007	1.10	.336	.009		
Lack of premeditation	1.88	.45	2.04	.51	1.93	.53	.36	.700	.003	1.32	.269	.010		
Sensation seeking	2.52	.65	2.54	.71	2.51	.79	2.01	.136	.016	.13	.878	.001		
Positive urgency	1.89	.65	2.06	.68	2.09	.69	.60	.550	.005	3.10	.047	.024		
DERS-16														
Clarity	2.23	1.00	2.56	1.24	2.90	1.25	1.24	.291	.010	8.18	.001 ^a	.062	R>N (.61)	
Goal	2.94	1.02	2.78	1.02	3.74	1.02	2.52	.082	.020	18.21	.001 ^a	.128	R>N (.78)	R>P (.94)
Impulsive	2.04	1.04	2.33	1.20	2.84	1.11	1.23	.295	.010	16.36	.001 ^a	.116	R>N (.75)	R>P (.45)
Strategies	2.22	.97	2.43	1.12	3.46	1.02	3.30	.038	.026	35.06	.001 ^a	.220	R>N (1.26)	R>P (.98)
Non-acceptance	2.50	1.22	2.68	1.24	3.50	1.08	5.26	.006	.040	16.19	.001 ^a	.115	R>N (.85)	R>P (.72)
FFMQ-SF														
Observing	3.22	.82	3.32	1.01	3.45	.91	.43	.653	.003	1.47	.233	.012		
Describing	3.34	.85	3.42	.93	3.10	.95	1.99	.139	.016	1.90	.152	.015		
Awareness	3.64	.83	3.76	.74	3.09	.93	1.38	.253	.011	9.91	.001 ^a	.074	R<N (.63)	R<P (.77)
Non-judging	3.03	.77	2.87	.84	2.65	.76	5.02	.007	.039	6.46	.002 ^a	.049	R<N (.50)	
Non-reactivity	3.05	.76	2.93	.83	2.37	.67	1.95	.145	.015	18.62	.001 ^a	.130	R<N (.93)	R<P (.77)
RRS														
Brooding	2.32	.72	2.55	.81	2.88	.69	3.06	.048	.024	18.75	.001 ^a	.131	R>N (.79)	R>P (.45)
Reflection	2.32	.75	2.57	.74	2.70	.63	1.56	.213	.012	7.50	.001 ^a	.057	R>N (.53)	
Depression	1.52	.55	1.87	.81	2.45	.87	4.45	.013	.035	40.48	.001 ^a	.245	R>N (1.38)	R>P (.68) P>N (.57)
Anxiety	2.29	.52	2.44	.49	2.66	.55	2.62	.075	.021	11.05	.001 ^a	.082	R>N (.70)	

Non-SH = non-self-harm (N); Past SH = past self-harm (P); Recent SH = recent self-harm (R); P = P-value; Tukey's HSD test for comparison; Cohen's d: .2 = small, .5 medium, .8 large.

^a Controlled for FDR, p-value was statistically significant; There was no significant difference for interaction term (Recency Group X Culture)

4.6.1.1 Descriptions of Self-harm Characteristics

The study consisted of 141 total participants, of which 114 (80.9%) provided an answer to the last episode of self-harm (recency self-harm). The 114 participants consisted of 55 British people and 59 Thai people. British people were more likely to report recent self-harm (78.2%) than Thai people (54.2%). Past self-harm was reported by 21.8% of British people and 45.8% of Thai people.

In terms of self-harm characteristics, people with recent self-harm were significantly more likely to report using a higher number of self-harm methods, engaging in repetitive self-harm, or having more motivation to die than people with past self-harm (odd ratio = 1.71, 5.18, and 2.68 respectively). There was no significant difference in the onset age of self-harm (see table 30).

4.6.1.2 Psychosocial Factors

4.6.1.2.1 Cultural Interactions

To examine the influence of culture, interactions between subgroups and culture (recent and past, recent and non-self-harm, past and non-self-harm) on psychosocial factors were analysed. After controlling for FDR correction, there was no significant difference between all subgroups on psychosocial factors.

4.6.1.2.2 Distinction between Recent Self-harm and Past Self-harm

As seen in table 32, the only factor that showed a significant difference after controlling for FDR correction was psychiatric service history. People who had received psychiatric services were also more likely to report recent self-harm.

4.6.1.2.3 Association of Recent Self-harm and Past Self-harm

In terms of recent self-harm associations, characteristics were significantly different between people who had recently self-harmed and people who had never self-harmed. These characteristics included drug consumption, being non-heterosexual, unemployed, having psychiatric service history, and having chronic physical illness.

As for past self-harm associations, only drug consumption was significantly different between the self-harm and non-self-harm groups (see table 32).

4.6.1.3 Psychological Characteristics

4.6.1.3.1 Cultural Interactions

After controlling for FDR correction, there were no significant interactions between culture and the recency group on psychological characteristics as shown in table 33.

4.6.1.3.2 Distinction between Recent Self-harm and Past Self-harm

4.6.1.3.2.1 Personality

Only Extraversion indicated the difference between recent self-harm and past self-harm with a medium size effect ($d = 0.55$). Participants who reported recent self-harm were more likely to be more introverted than those reporting only past self-harm (see table 33).

4.6.1.3.2.2 Impulsivity

Only Negative Urgency was significantly different and showed a medium effect size ($d = 0.76$). People who reported recent self-harm were more likely to report a higher score on the subscale.

4.6.1.3.2.3 Difficulties in Emotion Regulation

Strategies, Goal, Non-acceptance, and Impulsive distinguished significantly between people who reported recent and past self-harm ($d = 0.98, 0.94, 0.72, 0.45$ respectively). People who reported recent self-harm were more likely to have higher scores on these scales.

4.6.1.3.2.4 Mindfulness

Awareness (acting with awareness) and Non-reactivity (to inner experience) distinguished significantly between people who reported recent self-harm and past self-harm, showing a medium effect size ($d = 0.77, 0.77$). People with past self-harm were more likely to have higher scores on these scales.

4.6.1.3.2.5 Rumination

Only Brooding rumination showed a significant difference between people with recent and past self-harm behaviour, showing a small effect size ($d = 0.45$). People who reported recent self-harm were more likely to have higher scores on Brooding rumination.

4.6.1.3.2.6 Depression and Anxiety

Only Depression found a significant difference with medium effect size ($d = 0.45$). People who reported recent self-harm were more likely to have a higher score on Depression.

In summary, Strategies DER (limited access to adaptive emotion regulation skills), and Goal DER (difficulty with goal-directed behaviour in the context of emotional distress) showed large effect sizes ($d = 0.98, 0.94$). Awareness Mindfulness, Non-reactivity Mindfulness, Negative Urgency, Non-acceptance DER, and Depression showed medium effect sizes ($d = 0.77, 0.77, 0.76, 0.72, 0.68$). However, Brooding Rumination and Impulsive DER showed small effect sizes ($d = 0.45, 0.45$).

4.6.1.3.3 Differences of Recent Self-harm and Past Self-harm compared to Non-self-harm

The significant differences between recent self-harm and non-self-harm were Depression as the largest effect size followed by Strategies DER, Extraversion, Non-reactivity Mindfulness, Non-acceptance DER, Negative Urgency, Brooding Rumination, Goal DER, Impulsive DER, Anxiety, Awareness Mindfulness, Clarity DER, Reflection Rumination, Non-judging Mindfulness, Openness, and Emotionality ($d = 1.38, 1.26, 1.02, 0.93, 0.85, 0.81, 0.79, 0.78, 0.75, 0.70, 0.63, 0.61, 0.53, 0.50, 0.49, 0.44$, respectively) (see table 33).

All these differences were also significant in Chapter 3 findings (differences between lifetime self-harm and non-self-harm), with the exception of Describing, which did not show significant difference in the findings of this chapter.

Regarding past self-harm and non-self-harm, only Depression showed a significant difference between people with a past self-harm history and people who had never self-harmed; the effect size was medium ($d = 0.57$).

Table 34 Personal information of the frequency subgroups

	Non-SH (141)		Occasional (52)		Repetitive (87)		P- value
	N	(%)	N	(%)	N	(%)	
Culture							.001 ^a
UK	63	44.7%	10	19.2%	52	59.8%	
Thailand	78	55.3%	42	80.8%	35	40.2%	
Age							.060
18-22 years old	58	41.1%	14	26.9%	37	42.5%	
23-30 years old	51	36.2%	18	34.6%	35	40.2%	
31-40 years old	32	22.7%	20	38.5%	15	17.2%	
Gender^b							.868
Male	25	17.7%	9	17.6%	13	15.1%	
Female	116	82.3%	42	82.4%	73	84.9%	
Gender Orientation							.014 ^a
Heterosexual	122	86.5%	39	75.0%	62	71.3%	
Non-heterosexual	19	13.5%	13	25.0%	25	28.7%	
Education level							.467
Lower than Bachelor's	35	24.8%	10	19.2%	27	31.0%	
Degree							
Bachelor's Degree	71	50.4%	31	59.6%	44	50.6%	
Higher than Bachelor's	35	24.8%	11	21.2%	16	18.4%	
Marital status^c							.008 ^a
Single	125	88.7%	37	71.2%	77	88.5%	
Married	15	10.7%	12	23.1%	6	7.2%	
Widowed, Divorced, Separated	1	0.7%	3	5.8%	4	4.8%	
Employment status							.007 ^a
Employed	66	47.1%	30	61.2%	31	36.5%	
Unemployed	3	2.1%	3	6.1%	9	10.6%	
Student	71	50.7%	16	32.7%	45	52.9%	
Income							.270
1 st quintile	41	29.1%	9	17.3%	13	14.9%	
2 nd - 4 th quintile	71	50.4%	35	67.3%	51	58.6%	
5th quintile (lowest)	29	20.6%	8	15.4%	23	26.4%	
Living status^d							.767
Alone	33	23.6%	12	23.1%	17	19.5%	
Others	107	76.4%	40	76.9%	70	80.5%	
Living are^e							.110
Urban	104	74.8%	45	88.2%	70	81.4%	
Rural	35	25.2%	6	11.8%	16	18.6%	
Psychiatric service history	22	15.6%	19	36.5%	55	63.2%	.001 ^a
Chronic physical illness	13	9.2%	7	13.5%	22	25.3%	.004 ^a
Alcohol Abuse	79	56.0%	29	55.8%	60	69.0%	.121
Drug Consumption	17	12.1%	10	19.2%	31	35.6%	.001 ^a
Illegal Activities	11	7.8%	4	7.7%	8	9.2%	.922
Exposure to self-harm of others	86	61.0%	36	69.2%	67	77.0%	.041

^a Controlled for FDR, p-value was statistically significant^b missing data = 2; ^c missing data = 5; ^d missing data = 1; ^e missing data = 4Marital status: domestic partnership was merged with single; income: 2nd, 3rd, 4th quintiles were merged together; employment status: six homemaker classed as missing data.

Table 35 Association between personal information and frequency subgroups

	Occasional vs .Repetitive				Occasional vs .Non-SH				Repetitive vs .Non-SH				Frequency X Culture
	B	P-value	OR	95 %C.I.	B	P-value	OR	95 %C.I.	B	P-value	OR	95 %C.I.	
Culture	-1.64	.001 ^a	.19	.08-.46	1.03	.011	2.811	1.26-6.25	-.60	.040	.55	.32-.97	
Age	-.04	.201	.96	.90-1.02	.04	.137	1.044	.99-1.11	.00	.946	1.00	.95-1.05	.369
Gender^b	.29	.559	1.34	.51-3.54	-.06	.890	.941	.40-2.23	.23	.543	1.26	.60-2.63	.539
Gender Orientation	.14	.744	1.15	.49-2.69	.76	.073	2.147	.93-4.95	.91	.010 ^a	2.47	1.25-4.91	.826
Education level													.157
Higher than Bachelor's Degree													
Bachelor's Degree	.02	.973	1.02	.37-2.78	.55	.221	1.736	.72-4.20	.57	.147	1.77	.82-3.82	
Lower than Bachelor's Degree	-.75	.320	.47	.11-2.06	1.26	.071	3.531	.90-13.88	.52	.306	1.67	.62-4.48	
Marital status^c													.399
Single													
Married	-1.08	.082	.34	.10-1.15	.80	.113	2.215	.830-5.92	-.29	.606	.75	.25-2.23	
Widowed, Divorced, Separated	-.03	.972	.97	.18-5.25	2.08	.082	8.010	.77-83.86	2.05	.075	7.77	.81-74.47	
Employment status													.342
Employed													
Unemployed	1.00	.189	2.72	.61-12.17	.84	.336	2.309	.42-12.71	1.84	.011 ^a	6.29	1.52-25.91	
Student	.45	.441	1.56	.50-4.88	-.39	.452	.674	.24-1.88	.05	.901	1.06	.46-2.44	
Income													.701
1 st quintile													
2 nd -4 th quintile	-.27	.594	.76	.28-2.06	1.00	.022	2.722	1.16-6.40	.73	.049	2.08	1.00-4.31	
5 th quintile (lowest)	.02	.977	1.02	.27-3.82	.72	.243	2.055	.61-6.87	.74	.099	2.10	.87-5.05	
Living status^d	-.14	.767	.87	.36-2.14	-.10	.804	.905	.41-1.99	-.24	.503	.79	.40-1.57	.934
Living area^e	.27	.612	1.31	.46-3.77	-.76	.467	.467	.18-1.22	-.49	.614	.61	.31-1.21	.932
Psychiatric service history	.57	.176	1.77	.78-4.02	1.86	.001 ^a	6.430	2.67-15.49	2.43	.001 ^a	11.35	5.53-23.28	.338
Chronic physical illness	1.05	.038	2.86	1.06-7.69	.28	.587	1.319	.49-3.58	1.33	.001 ^a	3.77	1.73-8.22	.873
Alcohol Abuse	.09	.815	1.10	.50-2.40	.34	.339	1.403	.70-2.81	.43	.166	1.54	.84-2.84	.835
Drug Consumption	.69	.161	2.00	.76-5.27	.79	.115	2.205	.83-5.89	1.48	.001 ^a	4.41	2.12-9.20	.985
Illegal Activities	.57	.395	1.77	.47-6.65	-.24	.705	.789	.23-2.69	.34	.510	1.40	.52-3.79	.552
Exposure to self-harm of others	.07	.876	1.07	.47-2.45	.61	.099	1.837	.89-3.79	.67	.040	1.96	1.03-3.74	.531

Multinomial logistic regression was controlled for culture, age, and gender; first groups listed were reference.

a Controlled for FDR, p-value was statistically significant; There was no significant difference for interaction (Frequency Group X Culture)

Table 36 Psychological characteristics of frequency subgroups

	Non-SH		Occasional		Repetitive		Frequency X Culture			Frequency Group			Significant comparison (d)	
	Mean	SD	Mean	SD	Mean	SD	F-test	P	h _p ²	F-test	P	h _p ²		
HEXACO-60														
Honesty-Humility	3.51	.59	3.58	.56	3.44	.64	.10	.902	.001	1.18	.310	.009		
Emotionality	3.36	.60	3.40	.55	3.69	.61	1.97	.141	.014	10.21	.001 ^a	.069	RP>N (.55)	RP>OC(.49)
Extraversion	3.27	.60	3.04	.51	2.60	.74	.76	.468	.006	28.80	.001 ^a	.174	RP<N (1.02)	RP<OC (.66)
Agreeableness	3.21	.50	3.35	.61	2.96	.66	2.94	.055	.021	9.92	.001 ^a	.068	RP<N (.44)	RP<OC(.61)
Conscientiousness	3.48	.53	3.42	.46	3.49	.62	.35	.709	.003	.47	.623	.003		
Openness	3.30	.56	3.50	.63	3.52	.65	.97	.380	.007	3.29	.039	.023	RP>N (.37)	
UPPS-P														
Negative urgency	2.30	.69	2.56	.61	2.84	.63	.09	.919	.001	18.08	.001 ^a	.117	RP>N (.81)	OC>N (.39)
Lack of perseverance	1.85	.43	1.98	.43	1.78	.45	.24	.785	.002	1.08	.341	.008		
Lack of premeditation	1.88	.45	2.04	.44	2.00	.57	.22	.804	.002	2.05	.131	.015		
Sensation seeking	2.52	.66	2.67	.68	2.39	.79	.49	.615	.004	2.22	.110	.016		
Positive urgency	1.89	.65	2.19	.58	2.12	.70	.25	.782	.002	5.35	.005 ^a	.038	RP>N (.34)	OC>N (.48)
DERS-16														
Clarity	2.23	1.00	2.63	1.06	3.03	1.32	.72	.490	.005	14.56	.001 ^a	.096	RP>N (.71)	
Goal	2.91	1.02	2.92	1.05	3.66	1.05	.75	.473	.005	13.29	.001 ^a	.088	RP>N (.73)	RP>OC (.71)
Impulsive	2.04	1.04	2.54	1.08	2.87	1.17	.06	.940	.000	20.43	.001 ^a	.130	RP>N (.76)	OC>N (.48)
Strategies	2.22	.97	2.70	1.17	3.42	1.03	.51	.604	.004	34.37	.001 ^a	.201	RP>N (1.21)	RP>OC (.66) OC>N (.47)
Non-acceptance	2.50	1.22	2.99	1.16	3.43	1.16	.72	.488	.005	15.31	.001 ^a	.101	RP>N (.78)	OC>N (.41)
FFMQ-SF														
Observing	3.23	.82	3.26	.98	3.38	.92	.33	.719	.002	.81	.444	.006		
Describing	3.34	.85	3.24	.87	3.11	.97	.90	.409	.007	2.09	.125	.015		
Awareness	3.64	.83	3.53	.82	3.10	.91	.32	.728	.002	8.55	.001 ^a	.059	RP<N (.63)	RP<OC (.49)
Non-judging	3.03	.77	2.72	.80	2.68	.77	1.74	.178	.013	7.25	.001 ^a	.050	RP<N (.46)	OC<N (.40)
Non-reactivity	3.05	.76	2.77	.76	2.44	.72	1.12	.327	.008	15.24	.001 ^a	.100	RP<N (.82)	RP<OC (.44)
RRS														
Brooding	2.32	.72	2.67	.73	2.81	.73	1.29	.277	.009	16.89	.001 ^a	.110	RP>N (.68)	OC>N (.48)
Reflection	2.32	.75	2.61	.72	2.63	.67	3.46	.033	.025	7.65	.001 ^a	.053	RP>N (.43)	OC>N (.39)
Depression	1.52	.55	1.93	.68	2.45	.95	.14	.867	.001	41.85	.001 ^a	.234	RP>N (1.28)	RP>OC (.61) OC>N (.70)
Anxiety	2.29	.53	2.44	.48	2.72	.53	.62	.538	.005	17.66	.001 ^a	.114	RP>N (.81)	RP>OC (.55)

Non-SH = non-self-harm (N); Repetitive = repetitive self-harm (RP); Occasional = occasional self-harm (OC). Tukey's HSD test for comparison; Cohen's d: .2 = small, .5 medium, .8 large

^a Controlled for FDR, p-value was statistically significant; There was no significant difference for interaction term (Frequency Group X Culture)

4.6.2 Frequency

4.6.2.1 Descriptions

One hundred and thirty-nine people who self-harmed provided frequency information; two Thai people did not disclose this information. Eighty-seven people (62.6%) reported repetitive self-harm and 52 people (37.4%) occasional self-harm. Considering the two countries, 52 British people (83.9%) and 35 (45.45%) Thai people reported repetitive self-harm, whereas 16.1% and 54.5 % of people who self-harm in the UK and Thailand reported occasional self-harm.

Comparing people with repetitive self-harm to people with occasional self-harm, those in the repetitive group were more likely to report onset at a younger age (mean [SD] = 18.12 [5.84] vs. 13.52 [3.38]); more self-harm methods (mean [SD] = 2.63 [1.79] vs. 6.16 [3.32]); and more recent self-harm and motivation to die (odd ratio = 0.77, 1.72, 5.18, 2.30, respectively) as shown in table 30.

4.6.2.2 Psychosocial factors

4.6.2.2.1 Cultural Interactions

No significant interaction between culture and the repetitive self-harm group on psychosocial factors was found (see table 35).

4.6.2.2.2 Distinction between Repetitive and Occasional Self-harm

Only culture showed significant differences between people with occasional and repetitive self-harm. British people were more likely to report repetitive self-harm than Thai people.

4.6.2.2.3 Association of Repetitive and Occasional Self-harm

For repetitive self-harm, prior psychiatric service history showed the strongest association, followed by being unemployed, drug consumption, chronic physical illness, and being heterosexual (see table 35).

In terms of occasional association, only psychiatric service history was associated with occasional self-harm. An association with prior psychiatric service history was found in both subgroups, although there was a stronger association with repetitive than with occasional self-harm (odd ratio = 11.81 vs. 5.23).

4.6.2.3 Psychological Characteristics

4.6.2.3.1 Cultural Interactions

The interaction term between culture and psychological characteristics showed no significant differences when controlled for FDR (see table 36).

4.6.2.3.2 Distinctions between Repetitive and Occasional Self-harm

4.6.2.3.2.1 Personality

Extraversion, Agreeableness, and Emotionality showed significant differences between people with occasional and repetitive self-harm ($d = 0.66, 0.61, 0.49$). Repetitive self-harm individuals were more likely to have higher scores on Emotionality and lower scores on Extraversion and Agreeableness.

4.6.2.3.2.2 Impulsivity

There was no significant difference in all scales of impulsivity between repetitive and occasional self-harm.

4.6.2.3.2.3 Difficulties in Emotion Regulation

Goal (difficulty with goal-directed behaviour in the context of emotional distress) and Strategies (limited access to adaptive emotion regulation skills) can distinguish between repetitive and occasional self-harm ($d = 0.71, 0.66$). Impulsive DER also showed a small effect size ($d = 0.26$). People who reported repetitive self-harm were more likely to have higher scores on these scales.

4.6.2.3.2.4 Mindfulness

Awareness and Non-reactivity indicated lower scores in repetitive than occasional self-harm; the effect was small ($d = 0.49, 0.44$).

4.6.2.3.2.5 Rumination

There was no significant difference in Brooding and Reflection Rumination between repetitive and occasional self-harm.

4.6.2.3.2.6 Depression and Anxiety

Depression and Anxiety significantly distinguished self-harm groups ($d = 0.61, 0.55$). People who reported repetitive self-harm were more likely to have higher scores on Depression and Anxiety than those who reported less frequent self-harm.

In summary, the strongest differentiating psychological constructs between repetitive self-harm and occasional self-harm were Goal DER, followed by

Strategies DER, Extraversion, Agreeableness, Depression, Anxiety ($d = 0.71, 0.66, 0.66, 0.61, 0.61, 0.55$, respectively); all of these are medium effect sizes; Emotionality, Awareness Mindfulness, and Non-reactivity Mindfulness reported only small effect sizes ($d = 0.49, 0.49, 0.44$, respectively) (see table 36).

4.6.2.3.3 Differences of Repetitive and Occasional Self-harm compared to Non-self-harm

Psychological characteristics which showed significant differences between repetitive self-harm and non-self-harm were Depression (the largest difference), followed by Strategies DER, Extraversion, Non-reactivity Mindfulness, Anxiety, Negative Urgency, Non-acceptance DER, Impulsive DER, Goal DER, Clarity DER, Brooding Rumination, Awareness Mindfulness, Emotionality, Non-judging Mindfulness, Agreeableness, Reflection Rumination, Openness, and Positive Urgency ($d = 1.28, 1.20, 1.02, 0.82, 0.81, 0.81, 0.78, 0.76, 0.73, 0.71, 0.68, 0.63, 0.55, 0.46, 0.44, 0.43, 0.37, 0.34$). Repetitive self-harm reported higher scores on these scales except Extraversion and scales on Mindfulness, which indicated lower scores than non-self-harm.

Comparing occasional self-harm to non-self-harm, most significant comparisons showed similar small effect sizes, except Depression, which showed a medium effect size ($d = 0.70$). Other scales which showed significant differences were Brooding Rumination, Impulsive DER, Positive Urgency, Strategies DER, Non-acceptance DER, Non-Judging Mindfulness, Negative Urgency, and Reflection Rumination ($d = 0.48, 0.48, 0.48, 0.47, 0.41, 0.40, 0.39, 0.39$). People who occasionally self-harmed were more likely to have higher scores on these scales (but lower Non-Judging Mindfulness) compared to those who did not self-harm.

Table 37 Personal information of motivation to die subgroup

	Non-SH (141)		Other motives (83)		Motive to die (58)		P-value
	N	(%)	N	(%)	N	(%)	
Culture							.165
UK	63	44.7%	42	50.6%	20	34.5%	
Thailand	78	55.3%	41	49.4%	38	65.5%	
Age							.202
18-22 years old	58	41.1%	24	28.9%	27	46.6%	
23-30 years old	51	36.2%	38	45.8%	17	29.3%	
31-40 years old	32	22.7%	21	25.3%	14	24.1%	
Gender^b							.346
Male	25	17.7%	16	19.5%	6	10.5%	
Female	116	82.3%	66	80.5%	51	89.5%	
Gender Orientation							.003 ^a
Heterosexual	122	86.5%	56	67.5%	47	81.0%	
Non-heterosexual	19	13.5%	27	32.5%	11	19.0%	
Education level							.502
Higher than Bachelor's Degree	35	24.8%	20	24.1%	8	13.8%	
Bachelor's Degree	71	50.4%	43	51.8%	32	55.2%	
Lower than Bachelor's Degree	35	24.8%	20	24.1%	18	31.0%	
Marital status^c							.225
Single	125	88.7%	67	80.7%	49	84.5%	
Married	15	10.7%	12	15.0%	6	10.5%	
Widowed, Divorced, Separated	1	0.7%	4	5.0%	3	5.3%	
Employment status							.008 ^a
Employed	66	47.1%	43	53.1%	19	34.5%	
Unemployed	3	2.1%	5	6.2%	8	14.5%	
Student	71	50.7%	33	40.7%	28	50.9%	
Income							.072
1 st quintile	41	29.1%	13	15.7%	9	15.5%	
2 nd – 4 th quintile	71	50.4%	57	68.7%	30	51.7%	
5 th quintile (lowest)	29	20.6%	13	15.7%	19	32.8%	
Living status^d							.606
Alone	33	23.6%	19	22.9%	10	17.2%	
Others	107	76.4%	64	77.1%	48	82.8%	
Living area^e							.133
Urban	104	74.8%	65	79.3%	50	87.7%	
Rural	35	25.2%	17	20.7%	7	12.3%	
Psychiatric service history	22	15.6%	43	51.8%	31	53.4%	.001 ^a
Chronic physical illness	13	9.2%	13	15.7%	16	27.6%	.002 ^a
Alcohol Abuse	79	56.0%	53	63.9%	36	62.1%	.468
Drug Consumption	17	12.1%	23	27.7%	18	31.0%	.002 ^a
Illegal Activities	11	7.8%	8	9.6%	4	6.9%	.823
Exposure to self-harm of others	86	61.0%	62	74.7%	43	74.1%	.053

^a Controlled for FDR, p-value was statistically significant

^b missing data = 2; ^c missing data = 5; ^d missing data = 1; ^e missing data = 4

Marital status: domestic partnership was merged with single; income: 2nd, 3rd, 4th quintiles were merged together; employment status: six homemaker classed as missing data.

Table 38 Association between personal information and motivation to die subgroups

	Others vs .Motive to die				Other motives vs .Non-SH				Motives to die vs .Non-SH				Motivation X Culture
	B	P	OR	95 %C.I.	B	P	OR	95 %C.I.	B	P	OR	95 %C.I.	
Culture	.91	.018	2.49	1.17-5.29	-.41	.170	.66	.37-1.20	.50	.153	1.64	.83-3.24	
Age	.68	.023	1.98	.71-5.49	.05	.060	1.05	1.00-1.10	-.03	.377	.97	.92-1.03	.837
Gender^b	-.07	.190	.93	.87-.99	-.09	.792	.91	.45-1.84	.59	.227	1.80	.69-4.67	.526
Gender Orientation	-.90	.038	.41	.17-.95	1.19	.001 ^a	3.29	1.66-6.54	.29	.502	1.34	.57-3.11	.997
Education level													.123
Higher than Bachelor's Degree													
Bachelor's Degree	.29	.577	1.33	.49-3.66	.39	.295	1.47	.71-3.04	.67	.161	1.96	.77-5.03	
Lower than Bachelor's Degree	.69	.314	1.99	.52-7.63	.49	.333	1.63	.61-4.40	1.18	.062	3.25	.94-11.20	
Marital status^c													.385
Single													
Married	.14	.823	1.15	.34-3.83	.22	.634	1.25	.50-3.12	.36	.537	1.43	.46-4.49	
Widowed, Divorced, Separated	.44	.613	1.55	.29-8.34	1.85	.108	6.35	.67-60.39	2.28	.058	9.81	.93-103.71	
Employment status													.114
Employed													
Unemployed	1.06	.115	2.89	.77-10.76	1.03	.185	2.79	.61-12.68	2.09	.005 ^a	8.04	1.86-34.76	
Student	.48	.400	1.61	.53-4.89	-.32	.448	.73	.32-1.67	.16	.765	1.17	.42-3.22	
Income													.675
1 st quintile													
2 nd – 4 th quintile	-.18	.718	.84	.32-2.22	.91	.014	2.49	1.21-5.13	.73	.091	2.08	.89-4.86	
5th quintile (lowest)	.83	.177	2.30	.69-7.70	.38	.449	1.46	.55-3.84	1.21	.019	3.34	1.22-9.18	
Living status^d	-.17	.707	.84	.35-2.05	-.13	.695	.87	.45-1.71	.30	.457	.74	.33-1.65	.195
Living area^e	-.62	.212	.54	.20-1.43	-.25	.473	.78	.40-1.53	-.87	.057	.42	.17-1.03	.916
Psychiatric service history	.45	.267	1.58	.71-3.52	2.08	.001 ^a	7.97	3.83-16.61	2.53	.001 ^a	12.56	5.34-29.54	.216
Chronic physical illness	.78	.080	2.18	.91-5.19	.54	.212	1.72	.74-4.02	1.32	.002 ^a	3.74	1.64-8.51	.366
Alcohol Abuse	.14	.711	1.16	.54-2.47	.30	.329	1.36	.74-2.49	.45	.197	1.57	.79-3.09	.844
Drug Consumption	.73	.100	2.07	.87-4.93	1.00	.010	2.71	1.27-5.80	1.73	.001 ^a	5.62	2.34-13.49	.836
Illegal Activities	-.08	.908	.93	.25-3.42	.10	.844	1.10	.41-2.97	.02	.972	1.02	.30-3.49	.977
Exposure to self-harm of others	.06	.883	1.06	.47-2.43	.68	.037	1.97	1.04-3.73	.74	.045	2.10	1.02-4.34	.031

Multinomial Logistic regression was controlled for culture, age, and gender; first groups listed were reference.

^a Controlled for FDR, p-value was statistically significant; ^b missing data = 2; ^c missing data = 5; ^d missing data = 1; ^e missing data = 4

There was no significant difference for interaction (Motivation Group X Culture)

Table 39 Psychological characteristics of motivation to die subgroups

	Non-SH		Other motive		Motive to die		Motivation X Culture			Motivation groups			Significant comparison (d)		
	Mean	SD	Mean	SD	Mean	SD	F-test	P	h _p ²	F-test	P	h _p ²			
HEXACO-60															
Honesty-Humility	3.51	.59	3.52	.61	3.47	.62	.04	.959	.000	.16	.852	.001			
Emotionality	3.36	.60	3.53	.60	3.67	.60	.39	.676	.003	5.44	.005 ^a	.038	D>N (.52)		
Extraversion	3.27	.60	2.93	.66	2.52	.67	4.11	.017	.029	34.40	.001 ^a	.200	D<N (1.21)	D<O (.62)	O<N (.55)
Agreeableness	3.21	.50	3.21	.65	2.96	.66	3.20	.042	.023	2.49	.085	.018	D<N (.45)	D<O (.38)	
Conscientiousness	3.48	.53	3.53	.55	3.34	.57	.11	.897	.001	1.20	.303	.009			
Openness	3.30	.56	3.58	.59	3.38	.69	.64	.530	.005	5.77	.003 ^a	.040			O>N (.13)
UPPS-P															
Negative urgency	2.30	.69	2.58	.59	2.96	.63	.93	.397	.007	22.03	.001 ^a	.138	D>N (.98)	D>O (.63)	O>N (.43)
Lack of perseverance	1.81	.43	1.82	.46	1.80	.44	2.80	.063	.020	.02	.983	.000			
Lack of premeditation	1.88	.45	2.05	.54	1.96	.50	.10	.907	.001	3.31	.038	.023			O>N (.35)
Sensation seeking	2.52	.66	2.50	.74	2.48	.78	.05	.953	.000	.16	.856	.001			
Positive urgency	1.89	.65	2.11	.64	2.21	.67	.25	.780	.002	5.18	.006 ^a	.036	D>N (.49)		O>N (.34)
DERS-16															
Clarity	2.23	1.00	2.72	1.19	3.16	1.26	1.67	.190	.012	14.04	.001 ^a	.092	D>N (.86)		O>N (.46)
Goal	2.91	1.02	3.12	1.05	3.74	1.08	.70	.495	.005	13.84	.001 ^a	.091	D>N (.80)	D>O (.58)	
Impulsive	2.04	1.04	2.43	1.02	3.23	1.15	.95	.389	.007	25.79	.001 ^a	.157	D>N (1.11)	D>O (.74)	O>N (.38)
Strategies	2.22	.97	2.82	1.06	3.60	1.06	3.11	.046	.022	42.53	.001 ^a	.236	D>N (1.38)	D>O (.74)	O>N (.60)
Non-acceptance	2.50	1.22	3.09	1.19	3.48	1.12	1.89	.152	.014	17.52	.001 ^a	.113	D>N (.82)		O>N (.49)
FFMQ-SF															
Observing	3.23	.82	3.33	.91	3.34	.98	.25	.778	.002	.39	.675	.003			
Describing	3.34	.85	3.25	.86	3.04	1.02	.30	.738	.002	2.96	.054	.021			
Awareness	3.64	.83	3.44	.82	3.03	.96	1.61	.202	.012	14.20	.001 ^a	.093	D<N (.70)	D<O (.69)	
Non-judging	3.03	.77	2.79	.75	2.58	.79	3.90	.021	.027	9.80	.001 ^a	.066	D<N (.58)		
Non-reactivity	3.05	.76	2.71	.75	2.36	.69	1.22	.296	.009	19.46	.001 ^a	.124	D<N (.93)	D<O (.48)	O<N (.45)
RRS															
Brooding	2.32	.72	2.56	.72	3.04	.65	.06	.945	.000	19.24	.001 ^a	.122	D>N (1.03)	D>O (.69)	O>N (.33)
Reflection	2.32	.75	2.49	.69	2.78	.66	.51	.603	.004	6.61	.002 ^a	.046	D>N (.63)		
Depression	1.52	.55	2.03	.82	2.57	.89	2.60	.076	.019	52.35	.001 ^a	.275	D>N (1.58)	D>O (.64)	O>N (.77)
Anxiety	2.29	.52	2.54	.51	2.71	.54	2.17	.116	.015	16.92	.001 ^a	.109	D>N (.80)		O>N (.48)

Non-SH = non-self-harm (N); Other motive = Other motivations (O); Motive to die = Motivation to die (D); P = P-value; Tukey's HSD test for comparison; Cohen's d: .2 = small, .5 medium, .8 large

^a Controlled for FDR, p-value was statistically significant; There was no significant difference for interaction term (Motivation Group X Culture)

4.6.3 Motivation to die as a motive for Self-harm

4.6.3.1 Description

Motivation to die was reported by 58 out of 141 participants (41.1v%). Of people who self-harmed, 20 out of 62 British people (32.3 %) and 38 out of 79 Thai people (48.1 %) reported motivation to die.

In general, people reporting motivation to die were more likely to report recent and repetitive self-harm, as well as higher numbers of self-harm methods than people reporting other motivations (odd ratio = 2.68, 2.30, and 1.15 respectively). There was no significant difference in onset age of self-harm between people with motivation to die and those without (see table 30).

4.6.3.2 Psychosocial Factors

4.6.3.2.1 Cultural Interactions

As shown in table 38, there was no significant interaction between culture and the motivation to die subgroups on all psychosocial factors.

4.6.3.2.2 Distinction between Motivation to die and Other motivations

There was no significant difference in all psychosocial factors between motivation to die and other motivations subgroups.

4.6.3.2.3 Association between Motivation to die and Other motivations

The associations between people with motivation to die and those who had never self-harmed were unemployed status, psychiatric service history, chronic psychical illness, and drug consumption. As for other motivation groups, only being non-heterosexual and a psychiatric service history were associated with other motivations.

4.6.3.3 Psychological Characteristics

4.6.3.3.1 Cultural Interactions

There was no significant interaction term found between the motivation subgroups and culture on all psychological characteristics (see table 39).

4.6.3.3.2 Distinction between Motivation to die and Other motivations

4.6.3.3.2.1 Personality

Extraversion and Agreeableness distinguished between people who reported motivation to die and people who did not ($d = 0.62, 0.38$). People who reported motivation to die were likely to have a lower score on Extraversion (i.e. to be more introverted) and lower Agreeableness than people who did not report motivation to die (see table 39).

4.6.3.3.2.2 Impulsivity

Only Negative Urgency distinguished people who reported motivation to die from those who did not ($d = 0.63$). People who reported motivation to die were likely to have higher scores on Negative Urgency.

4.6.3.3.2.3 Difficulties in Emotion Regulation

Only the Impulsive, Strategies, and Goal subscales distinguished people who reported motivation to die and those who did not ($d = 0.74, 0.74, 0.58$). In other words, people who reported motivation to die were likely to have higher scores on these subscales.

4.6.3.3.2.4 Mindfulness

Only Awareness and Non-reactivity significantly distinguished between people who reported motivation to die and those who did not ($d = 0.69, 0.48$). People who reported motivation to die were likely to have lower Awareness and lower Non-Reactivity.

4.6.3.3.2.5 Rumination

Only Brooding showed a difference between people with and without motivation to die ($d = 0.69$); people with motivation to die were more likely to have higher scores for Brooding.

4.6.3.3.2.6 Depression and Anxiety

People with motivation to die had higher scores for Depression ($d = 0.64$). No difference in Anxiety was found.

In summary, the strongest distinction was in Strategies DER, Impulsive DER, followed by Brooding Rumination, Awareness Mindfulness, Depression, Negative Urgency, Extraversion, and Goal DER, which showed medium effect sizes ($d = 0.74, 0.74, 0.69, 0.69, 0.64, 0.63, 0.62, 0.58$) whereas Non-reactivity and Agreeableness showed only small effect size ($d = 0.48, 0.38$).

4.6.3.3.3 Differences of Motivation to die and Other motivations for Self-harm comparing to Non-self-harm

Depression was the largest difference followed by Strategies DER, Extraversion, Impulsive DER, Brooding Rumination, Negative Urgency, Non-reactivity Mindfulness, Clarity DER, Non-acceptance DER, and Anxiety, all showing large effect sizes ($d = 1.58, 1.38, 1.21, 1.11, 1.03, 0.98, 0.93, 0.86, 0.80$). Awareness Mindfulness, Reflection Rumination, Non-Judging Mindfulness, and Emotionality showed medium effect sizes ($d = 0.70, 0.63, 0.52$). Positive Urgency and Agreeableness showed only small effect sizes ($d = 0.49, 0.45$). People with the motivation to die reported higher scores on almost these scales except Extraversion, Agreeableness, and scales of Mindfulness, which showed lower scores than those who did not report motivation to die.

Depression was also the largest difference for other self-harm motivations, followed by Strategies DER, and Extraversion, which showed medium effect sizes ($d = 0.77, 0.60, 0.55$). Non-acceptance DER, Non-reactivity Mindfulness, Anxiety, Clarity DER, Negative Urgency, Impulsive DER, Lack of premeditation, Positive Urgency, Brooding Rumination, and Openness showed small effect sizes ($d = 0.49, 0.49, 0.48, 0.46, 0.43, 0.38, 0.35, 0.34, 0.33, 0.13$).

4.7 Discussion

This section examines the differences in psychosocial factors and psychological characteristics among the subgroups of self-harm, comparing British and Thai participants in the study.

4.7.1 Role of Culture in Subgroups of Self-harm

No significant interaction was found between culture and all subgroups on all psychosocial factors and psychological characteristics after control for FDR. Different self-harm groups in different cultures express similar psychological characteristics. Although no previous studies explicitly examine culture in relation to subgroups of self-harm, similar outcomes of subgroups of motivation to die have been reported by a number of studies undertaken in different countries (Bjureberg et al., 2018; Grøholt et al., 2000; Mars et al., 2014; Wei et al., 2018).

The findings detailed in Chapter 3 of the present study indicate that culture does play a role in self-harm characteristics (e.g. British people reported higher prevalence and frequency). However, the risk factors across the UK and Thailand were not significantly different. This is consistent with this chapter's findings that the subgroup indicated similar psychosocial factors and psychological characteristics between the UK and Thailand.

These findings indicate that there was no evidence found of differences in characteristics of subgroups (recency, frequency, and motivation) between the UK and Thailand in this present data.

4.7.2 Recency

4.7.2.1 Descriptions

Descriptive data for people reporting recent self-harm demonstrated the high intensity and severity of self-harm characteristics compared to people reporting past self-harm. People with recent self-harm were more likely to report repetitive self-harm, motivation to die, and a higher number of self-harm methods. Consistent with the findings of the present study, Andrews et al. (2013) found that people with continuing NSSI reported higher frequency of the behaviour, more potential lethality, and a higher number of self-harm methods than those without. However, in terms of onset age, no subgroup differences were found in this present study.

4.7.2.2 Psychosocial Factors

4.7.2.2.1 Distinction between Recent and Past Self-harm

Existence of prior psychiatric history distinguished between recent self-harm and past self-harm groups. Those reporting recent self-harm (continuing) were more likely to report a psychiatric history than those with past self-harm (discontinued). Skegg (2005) concluded that psychiatric illness is a significant risk factor for both subsequent repetitive self-harm and suicide. People with psychiatric problems have an increased likelihood to continue their self-harm than past self-harm.

4.7.2.2.2 Association of Recent and Past Self-harm

Recent self-harm had the similar risk factors as noted generally in Chapter 3: psychiatric history, unemployment, drug consumption, chronic psychical illness,

and non-heterosexuality. Income and exposure to self-harm did not show significant differences between recent self-harm and non-self-harm. Prior psychiatric service, drug consumption, and being non-heterosexual consistently showed up as self-harm risks (Plener et al., 2015). Being unemployed and having chronic physical illness could cause stress and could trigger self-harm (Barnes et al., 2016; Kim, 2016; Mucci et al., 2016). Notably, the findings of the present study also show that drug consumption was significantly different between people who reported past self-harm and people who have never self-harmed. Gladstone et al. (2004) examined the difference between abused women who reported self-harm and those who did not and concluded that drug abuse may be a way of shifting or avoiding negative emotions. The hypothesis is that when problems emerge, people with past self-harm may use drugs as the way to cope. Other current problems (e.g. being unemployed or suffering chronic physical illness) did not lead to significant differences. This suggests that solving life problems may lead people to discontinue self-harm behaviour.

4.7.2.3 Psychological Characteristics

4.7.2.3.1 Distinction between Recent and Past Self-harm

The psychological characteristics which best distinguished the recent and past self-harm subgroups were Strategies DER (limited access to adaptive emotion regulation skills), and Goal DER (difficulty with goal-directed behaviour in the context of emotional distress); these showed large effect sizes in the mean differences. Awareness Mindfulness, Non-reactivity Mindfulness, Negative Urgency (rash action in response to negative affect), Depression, Non-acceptance (non-acceptance of emotional state) showed medium effect sizes.

This list of constructs reflected that the recent self-harm group finds it difficult to regulate their emotions; difficult to focus on goals and to remain aware of what they are doing. Furthermore, the recent self-harm group also reacts more to their inner emotions and thoughts, has more difficulty tolerating their impulsivity when facing negative feelings, suffers more depression, and finds it more difficult to accept their own negative emotions than people who had discontinued self-harm (i.e. those reporting past self-harm).

This in line with previous studies; Andrews et al. (2013) also found that people with continuing self-harm have emotion regulation problems, and in particular

that they have poor cognitive reappraisal and greater emotional suppression. Zielinski, Hill, and Veilleux (2018) similarly indicated that current NSSI was associated with poorer emotion regulation than past NSSI. Although there have been no studies directly concerning the relationship between self-harm and either acting with awareness or non-reactivity to inner experience, these dimensions were associated with reducing depression in a longitudinal study (Royuela-Colomer & Calvete, 2016). Taliaferro and Muehlenkamp (2015) found that high school and college students who had recently self-harmed had greater depressive symptoms and hopelessness than the past self-harm subgroup. As for Negative Urgency, the longitudinal study of Riley, Combs, Jordan, and Smith (2015) indicated that Negative Urgency was the best predictor of self-harm onset, and that when people reduce taking rash action, it becomes more possible to discontinue self-harm.

4.7.2.3.2 Differences of Recent and Past Self-harm to Non-self-harm

Almost all risk factors for self-harm found in Chapter 3 were also significantly associated with recent self-harm; only Describing Mindfulness was not. Chapter 3 indicates this measure had the small effect size, and the analysis reported in the present chapter found that there was no significant difference.

Considering characteristics that showed large and medium effects, the factor showing the largest difference for recent self-harm versus non-self-harm was Depression, followed by Strategies DER, Extraversion, Non-reactivity Mindfulness, Non-acceptance DER, Negative Urgency, Brooding Rumination, Goal DER, Impulsive DER, Anxiety, Awareness Mindfulness, and Clarity DER.

These findings indicate that key components of continuing (i.e. recent) self-harm are emotional distress (depression and anxiety), introverted traits, difficulties in regulating or coping with emotions, difficulties in controlling impulsive acts, being trapped in negative thoughts and emotions (reactive, repetitive thinking), and difficulties in focusing on the present moment (including goals) when facing distress.

When comparing the past and non-self-harm subgroups, almost all psychological characteristics were unable to differentiate the groups. This suggests that people who have discontinued self-harm have improved their psychological states and their problems. However, Depression was significantly higher in the past self-harm subgroup than in the non-self-harm subgroup ($d =$

0.57). This in line with Brown et al. (2007) who found that negative emotions, including sadness, showed significant differences between past self-harm and non-self-harm participants. Moreover, longitudinal studies have revealed that people who stop harming themselves after one year still suffer significantly more depression than people who have never harmed themselves (Duggan, Heath, Hu, psychiatry, & health, 2015).

4.7.2.4 Summary and Conclusions regarding Recency of Self-harm

Compared to people who have not self-harmed, and who have discontinued their self-harm behaviour (i.e. past self-harm), people engaging in continuing (i.e. recent) self-harm have more life problems (e.g. unemployment, chronic physical illness), as well as more psychiatric problems.

Another major finding that comes out of the present work was that in most respects, participants in the past self-harm group and in the non-self-harm group showed no significant differences in all psychological characteristics except depression. This is a very encouraging finding, as it suggests that solving or addressing the various detrimental issues and circumstances in one's life may lead to major and lasting improvement in psychological characteristics assessed in this study.

In terms of characteristics found in the recent self-harm group, the present study has found that people who continue self-harm are depressed (largest effect size), lack adequate ability and strategies to cope with their emotions, and are generally unable to shift themselves away from their negative thoughts and feelings. This leads them to focus mainly on their actual or emotional problems rather than other positive thoughts or circumstances (e.g. goals, positives in life). This can cause them to feel trapped as they may perceive no possible rescue. Although depression plays the greatest role in determining the risk of self-harm, factors such as emotion regulation as well as impulse control and the ability to focus on the present moment and on goals, differentiate people who continue self-harm from those who discontinue this behaviour.

These results make it clear that it is essential for clinicians to provide patients with strategies to regulate and cope with negative emotions; training how to be aware of the present moment and focusing on goals. All of this would allow patients to avoid getting locked into internal distress and negative psychological

or physical reactions. It is necessary for clinicians to help patients with depression, for example by shifting patients' focus to the positives in life and to their own potential. In addition, past self-harm still requires assessment, in order to explore psychological problems such as depression and to provide treatment if necessary. Clinicians should also help with the life problems of their patients, and problem-solving skill training is required to prolong the patients' ability in the long term.

4.7.3 Frequency

4.7.3.1 Descriptions

People with repetitive self-harm were more likely to report recent self-harm, the motivation to die, and a higher number of self-harm methods than the occasional self-harm group.

Considering onset age, the repetitive self-harm group was more likely to report a younger self-harm onset than the occasional self-harm group. This in line with O'Connor et al. (2018) who found persons with an earlier age onset were more likely to have frequent NSSI and/or suicide attempts.

4.7.3.2 Psychosocial Factors

4.7.3.2.1 Distinction between Repetitive and Occasional Self-harm

Most psychological factors showed no differences between repetitive and occasional self-harm. Only culture showed a significant distinction; people from the UK were more likely to report repetitive self-harm than people from Thailand. This has also been shown and discussed in the previous chapter.

4.7.3.2.2 Association between Repetitive and Occasional Self-harm

The repetitive self-harm group was more likely to report more risks than the non-self-harm group, psychiatric service history showed the strongest association, followed by (in decreasing order) being unemployed, drug consumption, chronic physical illness, and being non-heterosexual. Only psychiatric history was associated with occasional self-harm, although psychiatric service history showed a stronger association with repetitive than with occasional self-harm (odd ratio = 11.81 vs. 5.23). This is exactly in line with Brunner et al. (2007) who found that psychological problems were associated with both repetitive and occasional self-harm and that repetitive self-

harm showed a stronger association. Clearly, repetitive self-harm is associated with more life problems than occasional self-harm is.

4.7.3.3 Psychological Characteristics

4.7.3.3.1 Distinction between Repetitive and Occasional Self-harm

In the present study, many psychological characteristics distinguished repetitive from occasional self-harm; in order of decreasing strength the characteristics are: Goal DER, Strategies DER, Extraversion, Agreeableness, Depression, and Anxiety; these were medium effect size. Emotionality, Awareness Mindfulness, and Non-reactivity Mindfulness were only small effect size.

The dimensions of Goal DER and Strategies DER were significantly different between subgroups. People engaging in repetitive self-harm found it more difficult to focus on goal-directed behaviour, and lacked emotional regulation skills. No study has examined the differences in emotional regulation between these subgroups before. However, in the closest study, Lüdtke (2017) found that higher levels of antisocial behaviour and lower levels of self-directedness predicted repetitive NSSI rather than occasional self-harm. Low self-directedness (i.e. responsible/goal-directed vs. insecure/inept) is associated with all dimensions of the Difficulties in Emotion Regulation index (Wolz et al., 2015). In an expanded meta-analysis, antisocial and aggressive outcomes are generally found related to low Agreeableness with high Neuroticism (Vize, Miller, & Lynam, 2018).

Differences in personality played an important role in distinguishing between the repetitive and occasional self-harm groups. The repetitive group was more introverted (lower Extraversion), ill-tempered, stubborn, and more choleric (lower agreeableness); they were also emotional, sentimental, and vulnerable (evidencing higher emotionality) than the occasional self-harm group. As in the previous discussion, Introverted and Emotionality were important traits for self-harm engagement. This chapter highlights that Agreeableness was an important differentiating characteristic for repetitive versus occasional self-harm. One systematic review (Brezo, Paris, & Turecki, 2006) stated that a higher number of suicide attempts was related to Anger and Psychoticism (in terms of the FFM, a combination of low Agreeableness and Conscientiousness). This indicated that the repetitive group were angrier and more aggressive than the occasional group.

The present study has also found that depression and anxiety distinguished between subgroups, which is consistent with previous studies such as Brunner et al. (2007). People who harm themselves repetitively are more depressed and anxious than people who harm themselves only occasionally. The present study also shows that people who self-harm repetitively have lower scores on Mindfulness subscales (Awareness and Non-reactivity) than those who self-harm only occasionally, however the effect is small.

Repetitive self-harm showed more severe psychological problems than occasional self-harm. However, no dimensions of Impulsivity and Rumination were significantly different between the subgroups.

4.7.3.3.2 Differences of Repetitive and Occasional Self-harm to Non-self-harm

Other than Personality, Clarity DER, Goal DER, Awareness Mindfulness, Non-reactivity Mindfulness, and Anxiety, many psychological risk factors for repetitive self-harm were also risk factors for occasional self-harm. As expected, repetitive self-harm showed stronger association for most risk factors. This is in line with Brunner et al. (2007), who found that psychological problems (being withdrawn, having somatic complaints, anxiety/depression, social problems, thought problems, attention problems, and delinquent behaviours) had a stronger association with repetitive than occasional self-harm. Lüdtke et al. (2018) also found that repetitive self-harm was associated with a higher degree of psychopathology (affective disorder, anxiety disorder) than occasional self-harm.

The factors differentiating repetitive self-harm and non-self-harm were similar to those associated with recent self-harm, with the exception of Agreeableness and Positive Urgency which showed significant differences only on repetitive self-harm, at a small effect size. Therefore, psychological characteristics of repetitive self-harm were similar to those of recent self-harm, as discussed above in the section on recent self-harm. Almost all differences between occasional self-harm and non-self-harm (Brooding Rumination, Impulsive DER, Positive Urgency, Strategies DER, Non-acceptance DER, Non-Judging Mindfulness and Negative Urgency) showed only small effect sizes, except Depression which showed a medium effect size. Compared to the non-self-harm group, the occasional group was more depressed and ruminating, had difficulty

in controlling their impulses when facing emotion, and showed lower emotion regulation skills.

4.7.3.4 Summary and Conclusions Regarding the Frequency Group

Most psychosocial factors showed no differences between repetitive and occasional self-harm populations. Being British was the only factor significantly associated with the likelihood of repetitive self-harm. However, several psychological characteristics were different between both subgroups. Personality and Emotion regulation were the most important differentiating characteristics. The repetitive self-harm group found it more difficult to focus on goals rather than negative emotions, lacked emotion regulation skills, and were more aggressive, introverted, depressed, and anxious (Goal DER, Strategies DER, Extraversion, Agreeableness, Depression, Anxiety) than the occasional self-harm group.

When compared to non-self-harm, repetitive self-harm showed more associations with psychosocial factors (psychiatric history, being unemployed, chronic physical illness, drug consumption, and being non-heterosexual). The important psychological characteristics for repetitive self-harm were similar to those for recent self-harm: having emotional distress, being introverted, having difficulties in coping with and regulating emotion and in controlling impulsive acts, experiencing difficulties in shifting from negative emotion and thoughts to focus on the present moment and/or goals. Also, anger, aggression, and anxiety were prominently important for repetitive self-harm.

The findings here also highlight that persons with a younger self-harm onset had a tendency to repeat their self-harm. Clinicians must be highly aware of these factors and must intervene early with such patients. Knowing the differences between the subgroups allows clinicians to consider the appropriate treatment for particular patient populations; for example repetitive self-harm persons should be assessed for mental problems. This chronic group also seems to need a more intense intervention focusing on distress tolerance, distraction techniques, emotional coping and regulation, mindfulness, and relaxation. One thing to be careful of is that although the occasional self-harm group may seem to have less severe psychological problems, the findings clearly show that they do need significant psychological review, as well as assistance in managing depression.

4.7.4 Motivation to Die

4.7.4.3.1 Descriptions

People with an expressed motivation to die had significantly more severe self-harm characteristics than other populations; they were more likely to report recent, repetitive self-harm, and a higher number of self-harm methods than patients expressing other motivations for self-harm. There is no difference in onset age of self-harm between the subgroups.

4.7.4.3.2 Psychosocial Factors

4.7.4.2.1 Distinction between Motivation to die and Other motivations

No psychosocial factors showed significant differences when people who self-harmed with the motivation to die were compared with those who self-harmed stating other motivations.

4.7.4.2.2 Association of Motivation to die and Other motivations

The motivation to die subgroup demonstrated more associated risk factors and stronger risk effects than the other motivation subgroup.

Motivation to die, but not other motivations, was associated with unemployment, chronic physical illness, and drug consumption. People with a motivation to die were more likely to report life problems than people who did not self-harm. This in line with Mars et al. (2014); Wei et al. (2018), who found people who self-harm with suicidal ideas were more likely to be experiencing life problems (e.g. unemployment and divorce).

People with and without the motivation to die shared psychiatric history risk in the present study. The association between psychiatric history and the motivation to die group was stronger than that with other motivation groups. Likewise, Mars et al. (2014) found suicidal intent to be strongly associated with psychiatric disorders. Non-heterosexuality was associated with other motivations, not with the motivation to die; previous literature has found non-heterosexuality to be associated with non-suicidal self-injury (NSSI) (Batejan et al., 2015).

4.7.4.3 Psychological Characteristics

4.7.4.3.1 Distinction between Motivation to die and Other motivations

In terms of the important psychological characteristics, Strategies DER (limited access to adaptive emotion regulation skill), and Impulsive DER (difficulties controlling impulsive behaviour when experiencing negative emotions) showed up equally as the largest distinctions, followed in decreasing order by Brooding Rumination, Awareness Mindfulness, Depression, Negative Urgency, Extraversion, and Goal DER (small effects were also found for Agreeableness and Non-reactivity Mindfulness).

In the present study, higher depression and anxiety significantly distinguished the motivation to die from other motivations, confirming the findings of studies such as Bjureberg et al. (2018) and Grøholt et al. (2000). Negative Urgency also distinguished between the subgroups; people who reported the motivation to die were more likely to have higher scores for Negative Urgency. Impulsivity also showed a significant link with suicidal self-harm. In other research, individuals with both suicide attempts and NSSI were consistently more likely to have higher impulsivity on BIS than individuals with NSSI alone (Liang et al., 2014).

There has been a lack of literature comparing people with and without the motivation to die regarding some of the variables used in the present study; it is important to note that here Rumination, Mindfulness, and Difficulties in Emotion Regulation distinguished people with the motivation to die from those with other motivations for self-harm. The results of the present study indicate that, compared to people without the motivation to die, people reporting the motivation to die were more introverted, depressed, and ruminating, showed less skill in coping with negative emotions, and found it more difficult to control their impulses and to be fully aware of their actions in the moment and goals.

4.7.4.3.2 Differences of Motivation to die and Other motivations to Non-self-harm

The psychological features of the motivation to die subgroup were similar to those associated with recent self-harm, but showed larger differences from people who never harmed themselves. Depression again is the strongest indicator, followed by Extraversion, Strategies DER, Impulsive DER, Brooding, Negative Urgency, Non-reactivity Mindfulness, Clarity DER, Non-acceptance

DER, Anxiety, and Goal DER; all of these showed large effect size. This indicates individuals who are very depressed and anxious have poor emotional and impulse control, and are trapped by rumination into negative emotion cycles where it is difficult for them to concentrate on direct purposes or to extricate themselves from these negative thoughts. These results are as expected; previous studies have consistently reported that people with the motivation to die have more mental health problems (Mars et al., 2014; Wei et al., 2018) than people without motivation to die and also more than people with no self-harm history.

Many variables were shared between motivation to die and other motivations for self-harm. However, the motivation to die group showed significant differences from the group reporting other motivations. Again, depression was the largest and most significant difference, followed in decreasing order by Introversion, Strategies DER, Impulsive DER, Brooding Rumination, Negative Urgency, Non-reactivity Mindfulness, Clarity DER, Non-acceptance DER, Anxiety, Emotionality, and Positive Urgency.

Notably, Openness and Lack of premeditation only showed significant differences in the other motivation group, not in the motivation to die group. People without a motivation to die were more open to the new experience (Openness) and more likely to act rashly without thinking about consequences (Lack of premeditation). Several studies found that Openness was associated with NSSI but not with self-harm regardless of suicidal intention (Brown, 2009; Goldstein et al., 2009; MacLaren & Best, 2010). Eades et al. (2018) indicated that a high level of Openness was a protective factor against suicidal ideas. It is possible that Openness plays an important role in non-suicidal self-harm. As for Lack of premeditation, a systematic review found impulsivity and self-harm indicated Lack of premeditation; those studies were conducted on NSSI rather than self-harm regardless of suicidal intention (Lockwood et al., 2017).

4.7.4.4 Summary and Conclusions Regarding the Motivation to Die Group

It has been demonstrated that self-harm with and without the motivation to die share many risk factors. Depression is the overriding factor and is strongly associated with both groups. The group reporting the motivation to die tends to be experiencing a greater number of life problems than the group reporting

other motivations. Thus, self-harm with the motivation to die seems to have an underpinning of more serious and severe mental health problems, whereas lack of premeditation and increased openness seem to be associated with self-harm in the absence of the motivation to die. Similarly, depression was the largest difference between the group with other motivations for self-harm and the group with no self-harm history, whereas the other motivation group was significantly more depressed than the non-self-harm group. These findings confirm that self-harm without the motivation to die certainly requires psychological treatment. For people with the motivation to die, psychiatric assessment is crucial in order to detect mental health problems and to deliver intensive treatments, especially regarding depression and emotional coping.

4.8 Conclusion

This chapter has sought to investigate the differences between the subgroups of self-harm, namely recency (recent versus past), frequency (repetitive versus occasional) and motivation (motivation to die versus other motivations); comparing between the UK and Thailand.

The psychosocial factors and psychological characteristics of different subgroups did not show significant differences between the British and Thai participants in this study; despite cultural differences, the characteristics of self-harm subgroups were similar across both countries. This may indicate that the model of self-harm is universal. People who self-harm similarly have core psychological problems across cultures.

The present study reveals that characteristics of recent self-harm, repetitive self-harm, and self-harm with the motivation to die were more severe than those of past self-harm, occasional self-harm, and self-harm with other motivations, respectively. These more severe subgroups reported a higher number of self-harm methods and higher frequency of self-harm. However, only the frequency groups differed significantly in terms of onset age; participants with the younger age of onset self-harm were more likely to engage in repetitive self-harm; other intergroup comparisons revealed no differences in age of onset.

Comparison of the psychosocial factors within the subgroups revealed that almost all psychosocial factors were not significantly different between subgroups; except culture distinguished repetitive self-harm from occasional self-harm and psychiatric service history distinguished recent self-harm from past self-harm. This indicated that people who self-harm in all groups have similar psychosocial risk factors. Therefore, it is important to help patients to remove the stressors and to train them in how to solve problems in the long run.

In terms of the psychological characteristic differentiation for the recency subgroup, the distinctions indicating recent rather than past self-harm were: worse emotion regulation skill including focus on achieving goal, less mindfulness in terms of awareness of present moment and not reacting to negative emotion, and poor impulse control when facing distress (Strategies DER, Goal DER, Awareness Mindfulness, Non-reactivity Mindfulness, and Negative Urgency). Personality (i.e. angry, stubborn, and introverted), Emotion regulation (Goal DER, Strategies DER), and Anxiety distinguished between repetitive and occasional groups. Motivation to die was associated more strongly than other motivations with the following factors: depression, introversion, repetitive negative thinking, poor emotional coping, and acting rashly when experiencing negative emotions (Goal DER, Strategies DER, Depression, Extraversion, Negative Urgency, and Brooding Rumination).

When comparing all self-harm subgroups to the non-self-harm group, the associations for more severe subgroups (recent, repetitive, motivation to die) had similar features. Depression had the strongest association, followed by Strategies, and Extraversion in all severe subgroups. This showed that the common risks were shared by all severe groups.

Given these similarities and commonalities, it is essential to note that motivation to die consistently resulted in the strongest associations, followed by recent self-harm, and next by repetitive self-harm. The group expressing the motivation to die experienced more severe mental health problems, especially severe depression. The other motivations group (non-suicidal self-harm) seemed to be more open to new experiences; compared to non-self-harm participants, they had a poorer ability to consider consequences of their actions, and had more depression and anxiety. Past self-harm was not associated with most

characteristics, with the notable exception of depression. For repetitive self-harm, the most indicative traits were depression, anxiety, anger, reacting to negative emotions, and impulsivity.

This clearly shows that the more severe subgroups are more depressed, have greater difficulties coping with their negative emotional states, and are less able to extract themselves from negative emotions; they react repetitively and negatively to distressing thoughts and feelings, which may lead to feelings of defeat and transfer to entrapment. All of this combined with impulsivity could lead them to self-harm enactment. Although the findings show the importance of mindfulness (Awareness and Non-reactivity), it is difficult to train individuals in mindfulness in the early stages of treatment and intervention, as patients in severe self-harm subgroups have difficulty focusing on their present actions and goals rather than their inner experience. Therefore, restricting access to the means of self-harm is a crucial strategy for clinicians to prevent patients not to self-harm. Coping strategies and emotional management techniques were necessary to help them manage their own emotion and problems. Distraction strategies such as seeking help and engaging in positive activities is required to help them shift their focus from negative thoughts and emotions. This may allow the patients to perceive positives of life, their potential, sense of belonging and connection. As discussed, all self-harm groups were depressed; it is important for clinicians to pay attention to this and to help patients cope with these potentially destructive feelings.

4.8.1 Clinical Implications

The implication of these findings from a clinical perspective is that practitioners should focus on assessment of both self-harm characteristics (previous self-harm, onset age, method, number of methods, frequency, and motivation) and self-harm risks (psychiatric history, physical illness, and life event problems). This can help the patients with their living problems. It is important for clinicians to provide appropriate psychological treatment; clinicians should understand and differentiate the subgroups of self-harm patients. The severe subgroups should receive robust assessment of mental health problems and the most intensive intervention. Clinical services should take serious actions to prevent patients from repetitive self-harm/suicide, such as admission to a safe environment, or not letting patients stay alone.

In general, people who self-harm need to learn how to cope with their distress, perceive rewarding positives of life, control their impulsivity, regulate their emotions, and how to be aware of what they are doing, rather than reacting or repetitively thinking about negative emotions or thoughts. For this, distraction and relaxation techniques are essential. Treatment for recent self-harm needs to focus more on emotion regulation and impulsivity control. As for the repetitive self-harm group, distress tolerance and intensive emotion regulation are important. Care-givers for persons with an overt motivation to die should be highly aware of their patient's mental health issues (depression and hopelessness). It is important to encourage hope, and to emphasise the positives of life.

As mentioned above, emotion regulation, impulsivity control, and mindfulness could clearly help individuals who self-harm in this present study. These components are the core skills of existing interventions such as Dialectical Behaviour Therapy (DBT) and Mentalisation-Based Treatment (MBT). Mindfulness, emotion regulation, distress tolerance, and interpersonal effectiveness are mainly trained in DBT (Linehan, 2014). "Mentalising is the ability to understand the actions of other people and oneself according to underlying mental states" (Bateman & Fonagy, 2019). Both approaches seek to develop interpersonal relationships, emotion regulation and impulsive controls, and enhance self-awareness and attentional control, and flexible thinking (Swenson & Choi-Kain, 2015). Specifically, DBT and MBT have been effective tools to reduce repetitive self-harm for adolescents (Hawton et al., 2016).

In terms of adapting the Western approach to Thailand, these findings suggest that similar effective treatments should work well in both cultures, as the characteristics of people who self-harm (see findings from Chapter 3) and subgroups of self-harm in different cultures showed similar traits. Therefore, in principle, Thai patients could benefit from DBT and MBT as much as do patients from the UK. However, culture may play a role in the context of stressors. Given the collectivist society they live in, Thai people may perceive stressors more related to other peoples' opinions or social pressures. Keeping one another's face is also the way to foster interpersonal relationships in Thai society. Thai people are more likely to avoid confrontation and criticism, to use indirect communication, and to suppress their own's negative emotions (Ukosakul, 2005). Consequently for Thai people, being unable to communicate what they

actually want or feel, especially when they have negative emotions, may cause undesired responses from others. Although DBT and MBT also focus on personal relationships, Thai people may commonly need extra skills to manage their relationships as communication skills. Regarding encouraging hope, Thai people who are interdependent with others may find it easier to perceive support and be positive about life. Clinicians should consider family members, friends and religion as integrated ways to help patients, which may also help their family or people they are close to, to cope with both the patients and their own feelings. While clinicians can deliver the same approaches in both countries, Thai people may require extra communication skills, and the cultural influences such as the collectivistic society still need to be taken into account.

4.8.2 Strengths, Limitations, and Future Directions

This study is the first study to examine the differences between the subgroups of self-harm (regardless of suicidal intention) comparing the UK and Thailand. In addition, there are a lack of studies of self-harm examining the differences between the subgroups (recent vs. past; repetitive vs. occasional; suicidal vs. non-suicidal). The present study contributes to the literature by capturing a comprehensive array of potential factors and exploring the differences; analysis of the several domains in the scales enhances the understanding of how particular characteristics are associated with self-harm subgroups, and so puts a great deal of crucial information in the hands of clinicians and mental health providers of all types.

However, this study is limited by differences in the numbers of participants in the two countries, as well as by differences in the demographic data. These limitations were overcome by matching cases to reduce the biases, yet matched samples may not be a representative view of a population, and this technique also reduced the number of participants (smaller sample size). However, controlling the false discovery rate (FDR) reduced such problems.

Further study should focus on a clinical sample as this may indicate a more specific type of self-harm, and may include self-harm behaviours of greater severity. In the present study, the subgroups of occasional self-harm were “once” and “more than one time”, and may include people who employed different methods, both less dangerous (cutting, biting, etc.) and more

dangerous (hanging, jumping, etc.). Different methods are associated with different psychological characteristics (Hirvikoski & Jokinen, 2012). Although the findings of this study revealed enlightening differences among the recency subgroups, longitudinal studies are necessary to observe the differences in natural outcomes between people who carry on self-harming and those who discontinue self-harm. This was a self-report study and acquired anonymous results; however, a qualitative interview method may be beneficial to gain a deeper understanding of the differences between the subgroups.

Notwithstanding these limitations, the findings in this chapter demonstrate clear differences in self-harm subgroups regarding psychosocial factors and psychological characteristics. The study confirms that people who self-harm in different subgroups share particular characteristics across the UK and Thailand. There are some common basic treatments for people who self-harm in different subgroups. However, it is recommended that particular individuals be provided with specific treatments appropriate to their particular needs, and these treatments should be based at least in part on subgroup analysis.

Chapter 5: Guideline for Self-harm Early Intervention for Thai Clinicians

5.1 Introduction

In recent years, the number of individuals who self-harm has increased, which is alarming and has drawn attention to what the effective treatments may be for individuals who self-harm. Previous literature has conclusively shown that long-term treatment can benefit individuals following self-harm acts. Considering treatment for adults, it has been demonstrated that Cognitive Behaviour Therapy effectively reduces both the incidence of repetitive self-harm cases and the frequency of self-harm, whereas Dialectical Behaviour Therapy (DBT) does not reduce repetitive self-harm but does the frequency (Hawton et al., 2016).

Although there is still a need for further investigations for children and adolescents' treatments, DBT and Mentalisation-based therapy showed some positive findings (Hawton et al., 2016). Importantly, it has been reported that early intervention after self-harm is helpful (Cooper et al., 2005). Unfortunately, adolescents who self-harm attended less follow-up in hospital (Granboulan et al., 2001) and this decreased the effectiveness of their treatment. However, therapeutic assessment has shown significant improvement of engagement in treatment (Hawton et al., 2016). Improving the engagement of individuals who self-harm can enhance their probability of receiving effective long-term treatment. Moreover, there are long waiting lists for patients to receive treatment. Therefore, it is important to conscientiously provide early treatment, to encourage patients to engage in the long-term treatment, and to provide advice regarding basic coping skills straightaway.

To make treatment consistent and efficient, it is necessary to provide clinicians with guidelines (Woolf, Grol, Hutchinson, Eccles, & Grimshaw, 1999). Thailand faces a serious lack of guidelines regarding how clinicians should provide interventions for individuals who self-harm, at an earlier stage. Delphi technique is a flexible, effective, and efficient research method and has commonly been used to create guidelines (Skulmoski, Hartman, & Krahn, 2007). This present

study aims to develop a guideline for Thai clinicians working with patients who self-harm, through Delphi expert consensus, regardless of suicidal intention, and to evaluate the feasibility of this guideline by piloting it with Thai clinicians.

5.2 Objectives

1. To develop, using Delphi technique, a clinicians' guideline for early treatment of patients who self-harm in Thailand.
2. To evaluate the feasibility of the guideline by piloting it with clinicians in Thailand.

5.3 Literature Review

5.3.1 Mental Healthcare System in Thailand

Thailand's healthcare system consists of primary, secondary, and tertiary care. Primary care is basically prevention and treatment, the first point of access to healthcare, and is distributed in communities located in rural areas. Secondary care is more specialised than primary care, while tertiary care consists of the most advanced investigation and treatment, and is located in urban areas. Thai clinicians are concentrated in urban areas, especially in Bangkok (World Health Organization, 2017).

Regarding the mental healthcare system in Thailand, there are 122 psychiatric outpatient departments (OPDs): 25 in regional hospitals, 70 in provincial hospitals, 10 in general hospitals, and 17 in mental hospitals, including inpatient psychiatric departments (IPDs) and OPDs. According to the World Health Organization (2007) Thailand has only 25 community-based IPDs in general hospitals. Consultancy units exist in some general hospitals, which are for other physical departments to consult with the psychiatric department about the patients who have not only physical but also mental symptoms and conditions. Mental health clinics represent another type of OPD service that is not located within hospitals.

The psychiatric service in Thailand consists of psychiatrists, psychologists, nurses, social workers, and occupational therapists working together in multidisciplinary mental health teams (World Health Organization, 2007). Although all clinicians who receive training qualify to provide psychotherapy, the three professions that most commonly provide psychotherapy for patients in Thailand are psychiatrists, psychiatric nurses, and clinical psychologists. Psychiatrists play an essential role in diagnosing patients and in providing pharmacological and psychological treatments. The roles of psychiatric nurses are management, collaboration, consultation, and evaluations, as well as providing mental healthcare (Kleebthong, Chareonsuk, & Kristiansen, 2018). Psychiatric nurses regularly play a role in the first step of patient evaluation before patients meet OPD psychiatrists. Some psychiatric nurses provide only basic intervention while others offer psychotherapy as well. On the other hand, the role of clinical psychologists is normally to provide psychological assessment and psychotherapy as requested by psychiatrists (Sukhatunga, 2011). However, in some settings clinical psychologists meet patients for assessment before psychiatrists do so.

All of this indicates that approaching patients who self-harm varies by work setting. Emergency units are the most common place for patient presentation. Some patients in the emergency unit might be referred to a psychiatric OPD, an IPD, or a consultancy unit if initially doctors consider that psychological intervention is required. However, in some hospitals, the psychiatric service works by a regular routine, assessing patients and providing psychological treatment for all those who self-harm. Moreover, it must be noted that some patients who self-harm present directly to mental hospitals.

5.3.2 Guidelines

Clinical guidelines can help clinicians make decisions about appropriate health care (Jackson & Feder, 1998), and can enhance the quality and consistency of care. Patients thus benefit from guidelines (Woolf et al., 1999). In order to develop quality guidelines, several aspects must be taken into account (Jackson & Feder, 1998).

Firstly, healthcare services involve multiple decisions; it is important to identify both the key decisions and consequences in relation to relevant assessment,

and alternative treatment options. It is possible to produce a flow diagram or algorithm. However, guidelines which are too inflexible are a concern; different patients may have different needs (Woolf et al., 1999).

Secondly, useful guidelines and informed decisions must be based on relevant and valid evidence. Making evidence-based decisions may have greater potential than generally believed. The effects of treatment decisions regarding risks and benefits should be explicitly addressed in the guidelines. However, many recommendations in clinical guidelines are insufficiently explicit because a lack of evidence prevents adequate calculation of outcome probabilities.

Lastly, guideline presentation is essential. A simple, concise, and accessible format is important to make guidelines user-friendly and to allow the user to immediately retrieve and assimilate guideline information (Jackson & Feder, 1998). Guideline content and construction thus significantly affects the guideline user. Another factor is that research shows that overly complex guidelines are less likely to be complied with (Prior, Guerin, & Grimmer - Somers, 2008).

Although guidelines can be very helpful for clinicians, misleading or misinterpreted guidelines may be actively harmful, so the guideline development process is therefore vital. When identifying experts or a guideline development team to assist with the process, it should be ascertained that the experts could provide useful concept recommendations to represent population norms (Woolf et al., 1999). The clarity and presentation of the guidelines should be taken into account in order to ensure that practitioners can consistently and accurately interpret them. To ensure the acceptability of the guidelines, a follow-up process is required in which practical feasibility is evaluated by target clinicians implementing them in work routine.

Compliance by clinicians is another aspect to consider, and one research team Grol, Dalhuijsen, Thomas, Rutten, and Mokkink (1998) determined which attributes of clinical practice guidelines influence regular use of guidelines. Their findings indicated that the guidelines should not be too controversial, should be precisely defined with specific advice in different cases, should accord with the work routine, and should contain explicit description of the scientific evidence. However, less compliance was evident if guidelines required new skills or routine change, or generated negative reactions to patients.

5.3.3 Guideline for Self-harm Early Intervention created for Delphi Study

The draft guideline was developed from previous empirical studies' findings (Chapters 3 and 4) and literature review.

The findings presented in the quantitative studies contributed to the development of the draft guideline. The Assessment section was designed to highlight the importance of firstly evaluating the risk factors of repetitive self-harm and self-harm characteristics in patients. With regard to the Intervention section, the findings from Chapter 4 indicated that different subgroups may require different treatments and it was important to consider *Depression* when helping patients in all subgroups. The findings emphasized that impulsivity influences self-harm enactment; *Restrict access to the means of self-harm* is crucial. *Emotional management* was clearly highlighted as important skills for people who self-harm. People in the recent self-harm group showed they were impulsive, ruminating and had difficulties controlling their emotions and shifting from their negative thoughts or present moment. Therefore, it may be difficult to train them to gain the new skills in the beginning stage, *basic relaxation and distraction techniques* including help seeking (guideline could help encourage patients to seek help) or alternative activities were important to note. As for Thai culture, *communication skills* also seemed to benefit. *Helping their family and friends to cope with and support the patients* was also necessary for Thai patients.

The literature review was also intended to focus on producing intervention guidelines for self-harm in the broad definition of intentional self-injury or self-poisoning, and specifically considered nonfatal outcomes regardless of suicidal intention. The literature contains very few studies spanning Western and Asian countries (Bennewith et al., 2002; National Institute for Clinical Excellence, 2004; Silva et al., 2016; World Health Organization, 2017) and there are no direct guidelines for clinicians who specialise as psychiatrists, clinical psychologists, and psychiatric nurses in Thailand.

However, after reviewed, the guideline created for Delphi study consisting of 63 items was divided into three sections: Instructions, Assessment, and Intervention.

5.3.3.1 Instructions

The eight-item set of instructions included title, definition of self-harm, section descriptions, explanation of important points such as the meaning of links, how to periodically assess some items, and the flexibility of how to choose each item of the guideline in practice (see Appendix 8).

5.3.3.2 Assessment

In order to provide the appropriate intervention, comprehensive and effective assessment is crucial.

There were 26 items provided for the assessment part. It is imperative to assess the risk of repetitive self-harm (National Institute for Clinical Excellence, 2004) and to note that self-harm plans, current emotions, and thoughts can represent high risk. Other risk factors for repetitive self-harm or suicide include previous self-harm, psychiatric problems (psychiatric illness history, depression, and alcohol and drug consumption), and life event problems (physical illness, psycho-social problems, and financial problems) (Chan et al., 2016; Hawton et al., 2012). Most importantly, understanding of self-harm characteristics such as methods, severity, hospitalisation, motives, triggers, planning, emotions, and thoughts allows clinicians to provide particular treatments for individual patients.

5.3.3.3 Intervention

The guideline developed for clinicians through this study aims to provide primary psychological treatments allowing patients to basically cope with their problems. The Intervention part consisted of 29 items. Hawton et al. (2012) note that *restricting the access to the means of self-harm* is a crucial element of prevention. Depression and hopelessness are key problems leading to self-harm (Steeg et al., 2016); thus to *encourage the positives and awareness of the reasons to be alive* may primarily help patients not to harm themselves (Bennewith et al., 2002; Organization, 2017). *Immediate coping* is important, particularly when patients' negative emotions lead them to harm themselves impulsively, for example to distract themselves (Silva et al., 2016). The guideline created is to provide patients with assistance with coping by themselves, in addition to psychological support, seeking help from a close person, and seeking help from professionals. In order to protect the patients from negative consequences, clinicians in Thai society usually advise that

patients should talk to people whom they can trust. As Buddhism is prevalent in Thai culture, using religion in the guidelines can help with coping. Improving patients' *problem solving skills* is an important intervention and results in significant improvement in depression and hopelessness, and also of their own problems (Townsend et al., 2001). As the most common motive for self-harm is to get relief from a terrible state of mind (Rasmussen et al., 2016), it is necessary to train patients how to regulate their emotions. *Communication skills* training seems to benefit Thai patients; the findings in the previous chapter show that Thai people tend to have difficulties communicating directly with others when they have emotional problems.

5.3.4 Delphi Technique

Consensus-based methods such as Delphi methods help clinicians to make effective decisions in situations where there is contradictory or insufficient information or options (Hasson, Keeney, & McKenna, 2000). Given its flexibility, effectiveness and efficiency, Delphi technique has commonly been used to create guidelines (Skulmoski et al., 2007).

Delphi is designed to get the most reliable consensus of a group of experts by giving them a number of in-depth questionnaires and also making use of controlled opinion feedback (Dalkey & Helmer, 1963).

5.3.4.1 The Delphi Process

The Delphi method is an iterative process that uses a series of data collection by anonymous opinions and judgments of experts to help improve our understanding of problems and solutions (Skulmoski, Hartman, & Krahn, 2007). This process allows experts to reconsider the items and questions in light of other experts' opinions provided in the previous round. Opinions are summarised between rounds and communicated back to the experts through a process of controlled interactive feedback, repeatedly until consensus is reached or until the final round set (Hasson et al., 2000). Feedback can be provided as estimates (mean, median, and standard deviation), summaries of other experts' ideas, or comments by other experts (Lamichhane, 2014).

As this present study is a qualitative study, summaries of the experts' opinions and answers were provided in each round for subsequent experts' consideration.

5.3.4.2 Experts

5.3.4.2.1 Criteria

It is crucial to properly identify the experts. In order to select appropriate experts, the main requirements are knowledge and experience in the topic being investigated, capacity and willingness to take part in the study, sufficient time for the study, and effective communication skills (Skulmoski et al., 2007).

As the aim of the present study has been to develop an early intervention guideline for clinicians, priority has been given to both psychotherapy experience with patients who self-harm and to practical healthcare service experience as the defining criteria for a clinician to be included as an expert in this study.

5.3.4.2.2 Number of Experts

The number of experts varies from study to study; there are no strict rules when selecting the sample size. Systematic review indicated a wide range of sample size in the final round of the studies, from fewer than 10 to more than 100 (Diamond et al., 2014). Some studies have only three participants (Skulmoski et al., 2007).

The views of the participants must be representative of the wider population. Sufficient opinion is required for making decisions. Some research may require a large number of participants, especially for heterogeneous samples. However, this increases the complexity and difficulties of collecting and analysing the data and verifying the results (Skulmoski et al., 2007).

Although homogeneous samples may require a smaller number of experts than heterogeneous samples do, results should be interpreted cautiously when the sample size is small.

Because of the limited number of experts who specialise in self-harm and psychotherapy in Thailand, only five experts were recruited in this study. However, verification with follow-up research may be used for the small sample (Skulmoski et al., 2007). Therefore, a feasibility study was subsequently conducted to verify how effective the guideline is when using Delphi method.

5.3.4.3 Design of the Delphi Method

The methodologies of Delphi technique can vary, and some researchers use a mix of methods. Quantitative technique is the typical Delphi method, however qualitative research facilitates holistic understanding of rich, contextual and detailed data (Skulmoski et al., 2007).

The draft guideline was produced through the findings of the previous chapters combined with the literature review, although for this study deep contextual information from experts in Thailand context was still required. Therefore, the qualitative methodology was chosen to perform the Delphi technique in this study.

5.3.4.4 Number of Rounds

Most studies stop the Delphi at a specified number of rounds. However, some studies stop the Delphi when consensus is reached or responses become stable (Diamond et al., 2014). The number of rounds depends on how the research is defined.

Two or three rounds are generally considered sufficient (Skulmoski et al., 2007), and indeed most studies consist of either two or three rounds (48% and 42%, respectively) (Diamond et al., 2014). Again, homogeneous or qualitative research may require fewer than three rounds (Skulmoski et al., 2007).

To ensure consistency with the literature as described above, a homogeneous set of experts (specialists in psychotherapy and self-harm) were selected and the draft guideline had already been produced from the literature review and the findings in previous chapters. A two round Delphi technique with semi-structured interview methods was considered appropriate for this study.

5.3.4.5 The Criteria of Consensus

It is very important to define consensus before the Delphi process takes place (Diamond et al., 2014). Various definitions of consensus are chosen for different methods, such as percentage agreement or median threshold selection. The most commonly used is percentage of agreement (Diamond et al., 2014).

This study defines consensus in terms of percentage of agreement. Although there has not been universal agreement in the literature regarding the most suitable proportion, 51%-80% agreement has been suggested (Hasson et al.,

2000). Due to the small number of experts included, this study used 80% agreement as the criteria for determining consensus.

In order to develop a quality guideline, it is essential to include both useful items and clear language presentation; therefore, this present study focused not only on the necessity of the items but also on the understanding of the items.

5.3.5 Feasibility Study

Before a large number of clinicians use the guideline developed from the panel of Delphi experts, it is crucial to conduct a study to ensure the feasibility and acceptability of the guideline.

Feasibility studies are used widely in health promotion, as they are designed to examine whether an intervention is appropriate for further testing; they allow the researcher to assess whether findings are reliable and reproducible or if they need modification, and also give guidance concerning how to improve interventions.

In order to determine whether interventions are truly acceptable, it is important to do feasibility studies in the real setting of the target population. Feasibility focuses on acceptability, demand of use, implementation, practicality, adaptation, expansion of use, and limited efficacy (Bowen et al., 2009). The appropriate design can vary. Some studies are random control feasibility studies, whilst other studies might examine feasibility by a retrospective study. Some might conduct a prospective cohort study. Others might consider an experimental study. When designing the study, a wide range of advantages and disadvantages should be considered.

This study aimed to evaluate whether the guideline developed by five experts through a Delphi method was feasible for Thai clinicians who work with patients who self-harm. The design of this study was that the target clinicians recruited were asked to implement the guideline in their routine work. The data collected from the interviews that followed a six-week implementation was used to evaluate whether the guideline is acceptable and what the clinicians' thoughts on the guideline were.

5.4 Delphi Technique

The clinical guideline (see Appendix 8) was drafted through literature review and findings from previous chapters in this thesis. This study consisted of two rounds, where experts were asked for their feedback on the draft clinical guideline.

5.4.1 Participants of the Delphi Method

Due to the small number of clinicians in Thailand who specialise in self-harm, five experts who have experience in working with self-harm patients, and who have expertise in psychological treatment and psychotherapy, in addition to willingness, sufficient time, and effective communication (i.e. appropriate access to the internet, phone, or Skype) were invited to take part in the study via email. The information sheets and consent forms were provided to them.

5.4.1.1 Recruitment of Experts

Purposive sampling was used to recruit the participants in the Delphi method, as detailed below.

5.4.1.1.1 Inclusion Criteria

- 1) Professional qualification (licensed psychiatrist or licensed clinical psychologist).
- 2) Specialising in therapy (supervisor in psychotherapy training).
- 3) More than five years' experience in working with patients who self-harm.

5.4.1.1.2 Exclusion Criteria

- 1) Unable to access phone, Skype, or internet facilities.
- 2) Unable to carry out the interview processes and return the guideline work sheets in a timely manner.

5.4.2 Delphi Process

5.4.2.1 Round 1

In a semi-structured interview, the experts were asked to consider how necessary and how easy to understand the guideline items were (see the interview questions in Appendix 16), by rating each item on a five-point Likert scale and also by providing qualitative feedback, reasons, and suggestions for additional items, including the design and sequence of the guideline.

5.4.2.2 Round 2

The experts were asked to rerate the items for which there was minor agreement and to suggest additional items; the design was changed on the evaluation sheet for Round 2, in which a revised guideline design was provided to the experts. The Round 2 evaluation sheet also provided the reasons why the experts found particular items necessary or unnecessary, or difficult to understand in the first round. This allowed each expert to reconsider after reading the others' opinions. In order to save the time of the experts, this round went straight to the items where agreement wasn't reached in order to fully consider the suggestions given on the evaluation sheet for Round 2.

5.4.2.3 Timeframe of the Delphi Method

The Delphi method required a duration of six weeks as follows:

1. After participants agreed to take part in this study and sign the consent form, they were contacted via email to arrange convenient dates and times for the interview Rounds 1 and 2.
2. The participants received the guideline and Guideline Evaluation Sheet 1 (see Appendix 9) one week before Round 1 by post or email as requested.
3. The participants were asked to review and rate Guideline Evaluation Sheet 1 and to send it back to the researcher two days before the interviews took place.
4. Round 1 took place through a semi-structured interview format.
5. Interviews were transcribed and an amended guideline produced within one week following the interviews.
6. The amended guideline and Guideline Evaluation Sheet 2 were sent to the participants within one week.
7. The participants were allowed one week to review the amended guideline after receiving the document and before Round 2 took place.

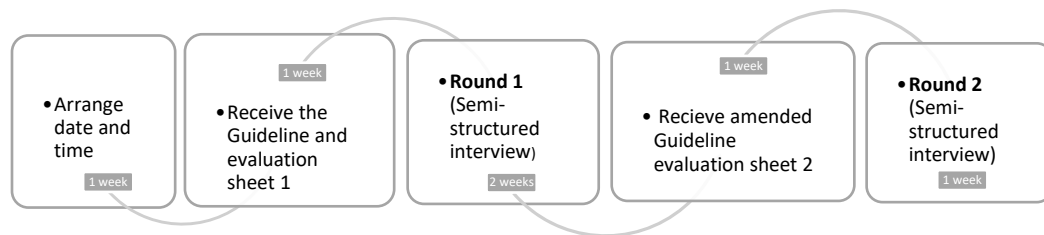


Figure 8 Timeline of the Delphi method

5.4.3 Delphi Analysis

5.4.3.1 Definition of Consensus

Agreement: 80% or 100% (4 or 5 experts) agree on 'necessary' or 'very necessary' on Likert scale.

Minor agreement: 60% (3 experts) agree on 'necessary' or 'very necessary' on Likert scale.

No agreement: 40% or less (2 or fewer experts) agree on 'necessary' or 'very necessary' on Likert scale.

5.4.3.2 Quality Check

In order to verify the accuracy of the research interpretations, a quality check was undertaken on a random sample of approximately 10% of the transcripts (i.e. 6 out of 63 items.) The transcripts were translated to English by a bilingual psychologist. Research supervisors with knowledge and experience in this type of study undertook the quality check, allowing alternative interpretations to be considered.

The finding of the quality check was 91.67% similar analyses (see in Appendix 12). Therefore, the researcher's analysis was considered trustworthy.

5.4.3.3 Analysis of Round 1

To analyse the qualitative data, the whole interviews were recorded and transcribed, and in order to avoid preconceived perspectives, categories were determined by inductive content analysis. In the coding process, units of the

transcript were grouped by concept and coded by the words that represented the main concepts. This analysis was used to explore experts' responses and to improve the guideline, for example by providing the reasons for the changes, additional items, and suggestions on Guideline Evaluation Sheet 2.

The guideline items achieving agreement as defined above on Guideline Evaluation Sheet 1 for both categories, 'necessary' and 'understandable', were included in the final guidelines, whereas items receiving only no agreement were left out of the revised guideline. For items where there was agreement or minor agreement for the 'necessary' category but which were rated as 'not understandable' (less than 80%), experts were asked to suggest alternative or modified phrasing.

The study focused primarily on the category 'necessary'. Only items which reached agreement and minor agreement in that regard were considered in terms of the category 'understandable'.

5.4.3.4 Analysis of Round 2

The same coding process was employed to analyse the data to improve the final guideline. Items that achieved 'agreed' in Round 2 (80% or 100%) were included in the revised guideline. In addition, items that reached only minor agreement were included, so that these items could be further investigated in the feasibility study.

In Round 2, there were two considerations:

1. The items from Round 1 that reached minor agreement and additional items were further analysed using the same analysis method as Round 1.
2. The items from Round 1 that reached agreement as 'necessary' but did not reach agreement in 'understanding' were adjusted following the experts' suggestions on Guideline Evaluation Sheet 1. The experts were also asked to rate how 'necessary to change' the items were. 80% or 100% agreement regarding 'necessary to change' and 'very necessary to change' on the items was considered agreement, and such items would be incorporated into the guideline instead of the original items. However, on items that reached only 'minor agreement' (60%) in the category 'necessary to change,' the experts were asked for a final conclusion in the Round 2 interview. Items rated 'no agreement' (40% or less) were rejected, and the original items were chosen.

Guideline Evaluation Sheet 2 asked the experts to provide their reasons and suggestions. The suggestions were investigated through interviewing the other experts in the Round 2 interviews in order to finalise the developing guideline.

For items where there were multiple suggestions in the final interview regarding the wording, the most popular phrasing, as chosen by the experts, was used in the final version of the guideline.

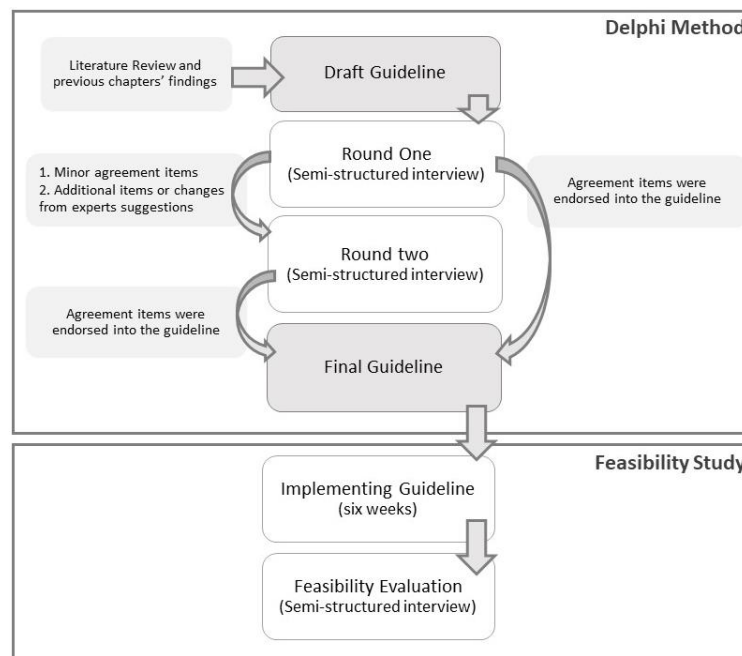


Figure 9 Delphi Method and Feasibility Study Process

5.4.4 Ethical Considerations

5.4.4.1 Ethical Approval

Ethical approval for the Delphi and feasibility study was granted by the Division of Psychiatry & Applied Psychology's Research Ethics Sub-Committee, University of Nottingham.

5.4.4.2 Informed Consent

Participants in the Delphi and feasibility studies received participant information sheets and consent forms via email. The participants could ask the researcher any questions they wished about the study. To record the interviews, permission

Table 40 The number of the items in the criteria

	Necessary				Understanding			
	Agreement	Minor	No	Additions	Agreement	Minor	No	Phrasing Suggestions
Round 1	63	-	-	12 ^a	52	11 ^a	-	39 ^a
Round 2								
Additions	9	3 ^c	-	-	5	7 ^c	-	
Changes	34 ^b	3 ^{bc}	13 ^b	-	33	4 ^c	-	10 ^c
Interview	1	2	-	-	14	5	5	

Minor = minor agreement; No = no agreement; ^a These items were included in Guideline Evaluation Sheet 2;

^b Agreement regarding necessity to change; ^c These items were reconsidered in the Round 2 interviews.

5.4.5.2 Round 1

All 63 items reached agreement on 'necessary'. Of 63 items, 52 items reached agreement on 'understanding', but 11 items reached only minor agreement and were included in Guideline Evaluation Sheet 2 for re-consideration in Round 2.

The interviews allowed the experts to explain, justify, and clarify their judgments regarding the necessity of the items included in the draft guideline. The benefit of this is that the guideline could be adjusted, improved, and finalised.

The link (*) included in the draft presented in Round 1 was removed from the revised guideline, and in Round 2 the experts were asked to rate this adjustment regarding the category 'necessary to change'. The reasons are as follows.

In Round 1 interviews, two experts mentioned problems with the link (*). One indicated confusion about the meaning of the link (*) between assessment and intervention. Another mentioned that leaving the link (*) in the guideline might cause difficulties to follow, and this expert suggested that patients be categorised into groups; different groups need different treatments. Although three experts did not mention any problems with the link, the researcher decided to change the design in order to make the guideline easier to follow, as can be seen in Appendix 10. Two other experts also suggested that the format be redesigned through the use of graphic information. Following analysis and in order to improve the format design and make it easier for users to understand the guideline, four separate domains for both assessment and intervention were created, although the content remained the same.

'Action plan' was added at the end of 'preventing repetitive self-harm' and 'coping when the patient wants to harm him/herself'. 'Remove patients from triggers that causes stress or increases self-harm (e.g. contacting a self-harm group online)' was added in the intervention part as an additional item after the experts added 'contacting an online group of people' that harm themselves in the assessment part.

Of the 39 items with recommended phrasing changes, 36 were experts' suggestions and three were the researcher's, as explained above. Finally, there were 62 items (12 additional items and 50 phrasing items) for experts to assess in Round 2.

There were six additional items (items 1-6) suggested by the experts and a further six items (items 7-12) added by the researcher following the experts' comments:

1. Note: This guideline is suitable for psychiatrists, clinical psychologists, psychiatric nurses and individuals who have been trained (included in 'Instructions').
2. Wants revenge, punish or hurt someone by hurting themselves (included in 'Motive of the Assessment').
3. Other things that enhances self-harm; for example, contacting an online group of people that harm themselves (included in 'Assessment').
4. Supporting system (included in 'Assessment').
5. Admit patients to hospital if sending them home presents high risk of repetitive self-harm (included in 'First Domain of Intervention').
6. Prepare concrete action plan (included under 'Problem Solving' in 'Intervention').
7. Remove patients from triggers that cause stress or increase self-harm (e.g. by contacting a self-harm group online) (included in 'First Domain of Intervention').
8. Symbols used in the Intervention section
 - ☺ Give the treatment only when the patient has emotional readiness
 - 🗣 Give the treatment only when communication problems are found (included in 'Instructions').
9. Symbols used on the last page (included in 'Intervention').

10. Previous self-harm acts (Evaluate as above and add the topic 'How long ago?') (included in 'Assessment').
11. Current Status, Psychiatric Illness, Life Problems, and Understanding Self-Harm (Group 4: Assessment of Domains of Repetitive Self-harm Risk).
12. Preventing Repetitive Self-harm, Hope, Cope, and Cooperation (Group 4: Domains of Intervention).

5.4.5.3 Round 2

All 12 additional items reached agreement on 'necessary'; nine reached agreement on 'understanding' and the remaining three reached only minor agreement on 'understanding'.

Regarding the phrasing changes, 34 items reached agreement and were revised accordingly; 13 items reached no agreement and were left unchanged; three items reached minor agreement and were included for reconsideration.

Of 37 items (34 agreement and 3 minor agreement of change), 33 items reached agreement on 'understanding' and 4 items reached minor agreement. Normally when the experts rated items unclear, they provided alternative phrasing. There were 10 further phrasing suggestions.

In the Round 2 interviews, the researcher conscientiously attempted to finalise all issues, presenting to the experts the items that reached minor agreement on 'necessary/understanding' (14 items) and the 10 phrasing suggestions. After the interviews, there remained minor agreement on 'necessary' for 2 items and on 'understanding' for 5 items. For some additional items that did not reach agreement, different clinicians suggested different alternative phrasing. The researcher judged the options and chose the most popular phrasing. These items were included in the final guideline and were evaluated again in the feasibility study. The main design kept the same pattern, except the colour was changed in order to make the guideline easier to read (Rello & Bigham, 2017). Minute details were adjusted in Round 2 (see Appendix 11 for final guideline).

5.5 Feasibility Study

In order to ensure that guideline is feasible to implement, it is important to assess acceptability and practicality in practice.

5.5.1 Participants of the Feasibility Study

Seventeen clinicians who were either clinical psychologists, psychiatrists or psychiatric nurses and who worked with patients who self-harm, were sent an email inviting them to take part in this study. The clinicians were asked to implement the guideline for six weeks.

5.5.1.1 Recruitment for the Feasibility Study

Recruitment for the feasibility study used purposive sampling strategy in order to ensure the variety of participants' characteristics (Barbour, 2001).

5.5.1.1.1 Inclusion Criteria

1. Participants were clinicians currently working with patients who self-harm.
2. Participants were allocated as per the quota below:

Table 41 Inclusion criteria of participants

Criteria	Number	No of invitations
Age	At least 3 people who are 22-33 years old	6
	At least 3 people who are 34-45 years old	9
	At least 3 people who are 46-60 years old	3
Gender	At least 6 females	7
	At least 4 males	5
Profession	At least 5 clinical psychologists	12
	At least 3 psychiatrists	3
	At least 2 psychiatric nurses	2
Type of Hospital	At least 5 people working in psychiatric hospitals	9
	At least 5 people working in general hospitals	6
Hospital Location	At least 5 people working in Bangkok	6
	At least 5 people working in other provinces	9

5.5.1.1.2 Exclusion Criteria

1. Participants who were part of the Delphi method.
2. Participants who cannot access phone, Skype, or Internet facilities.
3. Participants who cannot meet the required timeframe.

5.5.2 Methods

5.5.2.1 Process of the Feasibility Study

The clinicians were asked to implement the guideline. After six weeks, they were asked, in semi-structured interviews, to provide feedback and recommendations about the acceptability and practicality of the guideline, given their routine work (see the interview questions in Appendix 16). Discussion also addressed how necessary the minor agreement items from the Delphi method were.

5.5.2.2 Analysis of the Feasibility Study

Deductive content analysis of the interview transcripts was employed in feasibility study. The categories were pre-selected based on research questions (see the identified themes in Appendix 13). The data was reviewed and applied the predefined codes into all phrases of the text transcription. The codes were arranged into a matrix of categories as columns and clinician codes as rows (see Appendix 15).

5.5.3 Results

The draft guideline developed in this study was presented in Round 2 of the Delphi method, and this enabled revision and subsequent production of a complete and finalised guideline. The purpose of the feasibility study was to investigate whether this final guideline was acceptable for clinicians to use with patients who self-harm.

Although 17 clinicians were invited to take part in the study, one was excluded as it proved impossible to schedule an interview within the study timeframe. The feasibility study therefore comprised sixteen participants.

5.5.3.1 Demographic Data

Table 42 Demographic data of the clinicians in the feasibility study

Characteristics		N	%
Gender			
	Male	4	25
	Female	12	75
Age			
	Under 33	4	25
	33-40	8	50
	41-45	2	25
	Over 46	2	25
Work Experience			
	Less than 5 years	3	18.75
	6-14	9	56.25
	More than 15 years	4	25
Profession			
	Psychiatrist	3	18.75
	Clinical Psychologist	11	68.75
	Psychiatric Nurse	2	12.50
Health Service			
	General hospital	8	50
	- with no Medical school	(5)	(62.5)
	- with Medical school	(3)	(37.5)
	Mental Health Service	8	50
	- Mental hospital	(4)	(50)
	- Mental health clinic	(4)	(50)
Location			
	Bangkok	6	37.5
	Suburbs of Bangkok	5	31.25
	Other provinces	5	31.25
	- North	(1)	(20)
	- North-east	(1)	(20)
	- East	(2)	(40)
	- South	(1)	(20)

5.5.3.2 Quality Check

To enhance the credibility of the findings, a quality check was undertaken on a sample of transcripts by research supervisors with knowledge and experience in this type of study. To independently evaluate the analysis, two interview transcripts were translated to English by a psychologist fluent in both English and Thai.

The first attempt at analysis was to put the transcripts into the framework categories. As translations between English and Thai can be subjective, as well as the interpretation of the framework categories, the percentage of analysis similarities between the researcher and the supervisor were low with 65.51%.

After not achieving an acceptable level of inter-rater agreement the first time, a discussion of the discrepancy in the coding framework between the researcher and the researcher's supervisor took place. The new quality check strategy was to first define the framework categories as can be seen in Appendix 13. Secondly, analysis options of 'Yes', 'Yes with conditions', 'No', and 'Not applicable' were generated for the domains of the framework, as can be seen in Appendix 14. The second inter-rater agreement reached 94.23%, which (following McHugh, 2012) was considered an almost perfect agreement.

5.5.3.3 Clinician Evaluation of the Guideline

Sixteen clinicians implemented the guideline for six weeks. Most clinicians had opportunities to use the guideline with their patients. Three clinicians did not have any patients, but their opinions regarding the guideline were explored. The guideline evaluation analysis followed the framework as set out in Appendix 15.

5.5.3.3.1 Quality of the Guideline

The term 'quality' refers to how good the guideline is with regard to the categories of clarity, comprehensiveness, succinctness, and design satisfaction.

5.5.3.3.1.1 Clarity

All 16 clinicians agreed that the guideline was easy to understand. The vast majority of clinicians (93.75%) mentioned that the language used was clearly understandable, simple, and not too formal, and that the explanations were useful. Most clinicians (68.75%) noted that design presentation such as boxes, colours, and bold letters were clear and easy to follow, while 31.25% responded that the symbols were very clear. Only three clinicians (18.75%) suggested modifications to make the guideline more effective, for example to adjust the design, increase the font size, or adjust the colour scheme.

5.5.3.3.1.2 Comprehensiveness

All clinicians agreed that the guideline covered all areas of comprehensive evaluation and early interventions for patients who self-harm. One clinician also indicated that the guideline was broadly up to date, especially the evaluation part relating to contacting online support groups for people who self-harm.

5.5.3.3.1.3 Succinctness

Only nine clinicians (56.25%) mentioned succinctness. Of these, seven clinicians agreed that the guideline was concise. Only two clinicians reflected that this guideline could be more succinct, saying that only the headline topics themselves were clear enough. One is a 38-year-old psychiatrist with 11 years' working experience and the other is a 33-year-old psychologist with 6 years' experience. Both work in a general hospital that includes medical school training in Bangkok and another province.

5.5.3.3.1.4 Design Satisfaction

All 16 clinicians were satisfied with the design presentation. The majority of the clinicians (87.50%) mentioned that the design was attractive, interesting, and pleasant to read. Seven clinicians (43.75%) indicated that the colour of the design (pretty, polite, and soft in tone) was comfortable for the eyes; likewise 43.75% reported that the design (e.g. colour division, the boxes, and the bold font) benefited understanding, organisation of thoughts and helped to memorise the contents. In addition, a few (18.75%) of the clinicians mentioned that the design affected their emotions; it reduced stress and could be entertaining.

However, three out of sixteen clinicians suggested minor detail amendments, i.e. in relation to the sizes of the pictures, minor colour changes, and the spacing between the letters. Almost all clinicians stated the importance of effective use of colour to make the final guideline attractive and easy to approach, as opposed to a black-and-white format. However, one clinician argued that some work places have spending limitations in terms of colour printing, so it would be reasonable to use a black and white format.

5.5.3.3.2 Effectiveness

Effectiveness refers to whether the guideline is useful in practice, and all sixteen clinicians agreed that this guideline certainly was useful for working with patients who self-harm, reporting that the guideline helped clinicians work more effectively.

They explained that the guideline helped clinicians work comprehensively and not omit important points; reading the guideline would serve a reminder of what the clinicians should be aware of for the patients who self-harm (93.75% mentions). The guideline also served as a guide to direct the clinicians regarding

how to evaluate and give the appropriate interventions so that help clinicians to plan ahead and work more systematically (62.50% mentions).

The guideline was also useful for patients (81.12%); implementing the guideline helped clinicians to broadly understand patients' problems, and this would lead to appropriate treatments including dealing with their families. It helped clinicians to give further information to multidisciplinary teams (one clinician mentioned this). Moreover, two clinicians (12.50%) used the guideline to teach colleagues in other professions. Another clinician desired to use the guideline to teach staff, and asked permission first.

One clinician reported that the guideline helped the clinician feel more confident when approaching the patients who self-harm. One clinician who had started working two months before indicated that the guideline was helpful for saving time as it gets straight to the point rather than asking many unnecessary questions.

Although all clinicians agreed that the guideline was useful, one clinician found only the 'Hope' and 'Cope' topics of the 'Intervention' section useful. Other parts seemed less useful to this clinician, as the clinician had already known about it; nonetheless the clinician mentioned that the guideline could help clinicians to avoid neglecting important points, steps, or factors. The clinician reasoned that topics one and four in the 'Intervention' section are suitable for other professions. Looking closer, this clinician is a psychiatrist with over 15 years' experience in a mental health clinic where there are no emergency units or inpatient wards.

5.5.3.3.3 Acceptability

Acceptability refers to whether the clinicians consider the guideline is appropriate for their routine work; all of them did. All clinicians agreed that the guideline was suitable for their work places. These are OPDs (Outpatient Departments), IPDs (Inpatient Departments), and Consultation units (units consulted by other physical departments) in general hospitals, mental health services in Bangkok, suburbs, and other provinces. Although all clinicians work in full-time jobs in public hospitals, one clinician mentioned that it is also suitable for their part-time job in a private general hospital.

Two clinicians (12.50%) found only some parts of the guideline suitable for their work. One, who is a clinical psychologist, found only the Assessment part and topic three (Cope) in the Intervention part suitable. The other, who is a psychiatrist, found only intervention topics two and three (Hope and Cope) suitable. Both have over 15 years' work experience in a mental health clinic. These clinicians also viewed that the guideline was suitable for other professions such as psychiatric nurses, general nurses, and general doctors who work in emergency units or in the mental health service in the community or who work in the screening step. Of the 87.50% who agreed that the whole guideline is suitable for their work, two work in mental health clinics but their age and experience is lower than the previous two clinicians.

5.5.3.3.4 Practicality

Practicality refers to whether the guideline can easily be put into practice with patients who self-harm. Almost all clinicians (93.75%) agreed that the guideline was practical and easy to implement.

Of this 93.75%, 33% of clinical psychologists (five out of eleven clinical psychologists) were concerned about using the guideline in front of the patients; some thought it did not look professional (mentioned by three clinicians) and some worried about colour attracting the patients (mentioned by two clinicians). Some of them made notes on a small piece of paper, stuck the guideline on the table, and remembered the guideline before meeting patients. On the other hand, two clinicians mentioned that they read the guideline out loud to the patients or gave the guideline to the patients to read by themselves. One is a psychiatric nurse with 1.5 years' experience and the other is a clinical psychologist with 13 years' experience.

Only one clinician, who is a psychiatrist with advanced experience in a mental health clinic, thought the guideline was not practical, explaining that as the guideline was very general, there were too many aspects to consider; this clinician found a lack of specific details in each item.

5.5.3.3.5 User-Friendly

The term user-friendly refers to whether the guideline is simple to use; all clinicians agreed that the guideline was user-friendly. The guideline was simple and easy to follow (mentioned by 68.75% of clinicians) compared to other

guidelines which are more complicated. The format was attractive so clinicians were happy to use it (mentioned by 75% of clinicians). The colour was comfortable for the eyes to look at and read (mentioned by 43.75% of clinicians). Moreover, the guideline was easy to understand at a glance in the short time before meeting a patient (mentioned by 43.75% of clinicians).

5.5.3.3.6 Suggestions

Most of the clinicians (68.75%) reported no obstacles when using the guideline. 25% reported minor obstacles, such as the guideline being three pages long, a lot of text on page three, some small letters, and the unclear headline of 'People or sources that are ready to help'. Many useful recommendations were given to improve the guideline.

5.5.3.3.6.1 Remove unnecessary items/points

All aspects were seen as necessary; 93.75% of the clinicians found no parts to remove.

Only one clinician indicated that the part that could be removed was 'Clinicians should consider choosing topics.....for each patient'. This clinician reasoned that this guideline is for clinicians who have already been trained so they already know what to consider for the patients, whereas two other clinicians suggested to emphasise this part as it is important.

5.5.3.3.6.2 Add additional items/points

Three clinicians suggested that more details be added in the family or caregiver parts, for example what clinicians should do for family, how the family should prepare before patients are discharged, how to monitor patients, and how to deal with patients. For younger adolescents, the family should be more involved in monitoring and intervention.

One clinician suggested adding more information regarding long-term prevention, meaning making patients resilient, or using religion to help patients. Two clinicians who are younger than 33 years old wanted to see more information on how to make the patient more open. One of them also required more explanation of the clinical psychologist's role in the process of intervention.

Another clinician, who is over 33 years old, recommended adding grounding techniques if there was further development of the manual. This clinician also

suggested adding a section on basic counselling skills on the first page, in order to remind the clinicians; an example extract was “respect, not judge, active listening and not interrupt while patients talking”. Three clinicians suggested that the link between the assessment and intervention be made more explicit. However, one of the three clinicians mentioned that there might be too many links.

5.5.3.3.6.3 Remove some detailed text

Two clinicians suggested that all explanation be removed, as the headline topics alone are clear (mentioned above in 5.5.3.3.1.3: Succinctness above). Two other clinicians suggested removing the hotline 1667 as it might not be available or might be difficult to reach. One clinician suggested removing some explanation of problem solving and adding explanation of communication instead.

5.5.3.3.6.4 Clarify some items

Adding more explanations on how to assess the patients and what clinicians could do, was suggested by four clinicians (25%) who are under 33 years old. Five clinicians (31.25%) suggested to generate a way on how to identify risk of repetitive self-harm. Three clinicians individually suggested adding explanation on three items regarding Communication Skills, Emotion Awareness, and Reconstruct Thoughts. Adding some words in the assessment parts, such as psychotic symptom, the severity of alcohol consumption, or chronic physical illness was advised by one clinician. One clinician suggested adding ‘overdose’ to the definition of self-harm.

Adjusting the wording was also suggested; a change from psychiatric unit to psychiatric service. One clinician suggested changing the title ‘Guideline of Psychological Intervention in self-harm patients for Clinicians at Early stage’ to ‘Guideline of Early Self-harm Psychological Intervention for Clinicians’. Moreover, three clinicians reflected that the guideline could be made clearer by adjusting some parts of the design; the headline ‘People or sources that are ready to help’ should have a more outstanding presentation. Only one clinician did not clearly understand the difference between “1. Encourage positives” and “2. Awareness of reasons for living or not harming oneself” in section 2 of the intervention part.

5.5.3.3.6.5 Adjust the content structure

Two clinicians (12.50%) suggested that the most important part be prioritised: what to do in all cases or what must be done in severe cases. One of the two clinicians suggested that there be more specific details such as how long the monitor period should be, how to take concrete actions, how to do particular interventions (both clinicians work in mental health clinics; one is a clinical psychologist with 9 years' experience and the other is a psychiatrist with 15 years' experience).

One clinician, a psychiatrist with 1.5 years' experience in a mental health clinic, suggested changing the sequence of the head topics in the Assessment Section to "1. Understanding the Self-Harm Act", "2. Psychiatric Illness", "3. Current Status", "4. Life Problems". Another point is that two clinicians mentioned the first domain of the assessment was in an unfamiliar position at the bottom and one suggested that it be moved to a higher position.

5.5.3.3.6.6 Alternative versions

Although clinicians were satisfied with the version of the guideline presented, alternative versions were suggested: for example, one clinician suggested a QR code guideline for the phone. Another suggestion was an extra short version; seven clinicians suggested to keep the final version of the guideline and to produce a shorter version. Four clinicians, three of whom work in mental health clinics, suggested a flow chart, one suggested a checklist, and two suggested a headline version with the explanations removed, for easy reference (see section 5.5.3.3.1.3: Succinctness above).

Given the need for more information, five clinicians suggested an extended manual that would contain elaboration and details such as knowledge, processes, and sentence or question examples.

5.5.3.3.6.7 Adjust the design

Two clinicians suggested to remove the cartoon pictures as it was not necessary for memorising the contents, whereas three other clinicians mentioned that the cartoon pictures made it easy for them to understand. Two of them suggested to expand the size of some pictures.

It was suggested to adjust the symbols, and two clinicians suggested to use more than one person in the communication symbol to make it clearer. One clinician suggested to make the symbol size bigger.

The instruction “Clinicians should consider choosing topics.....for each patient” should be made to stand out more to emphasise the importance of this paragraph was suggested by two clinicians.

Three clinicians mentioned that page three of the guideline had too much information packed into a very tight space. They advised that if the design could be made more spacious, the guideline would be more comfortable for the eyes. However, on the other hand the clinicians were aware of the benefits of compact size.

5.5.3.3.6.8 Expanding the use of the Guideline

Three clinicians mentioned that the guideline could be widely used by colleagues in other professions. In their opinion, not only clinicians (qualified psychiatrists, psychiatric nurses, and clinical psychologists) but also general doctors and nurses in community hospitals or mental health services would benefit from this guideline.

5.5.3.3.7 Other Issues

Two of the clinicians were concerned that some other clinicians who are working with the patients who self-harm have a negative attitude towards the patients. This caused problems for the patients, and meant the patients did not have good service in the hospital. One of the two clinicians also emphasised that clinicians may not have the necessary skills or may have the wrong approach to patients; therefore there is a need for training courses in order to improve their skills and their attitudes.

5.5.3.3.8 The Inquiry from the Delphi Method

For the items that did not reach consensus in the Delphi Round 2, the aim was to re-check with the clinicians who implement this guideline whether those items were necessary or understandable.

There were five items that did not reach consensus of understandable from the Delphi method (see the final guideline in Appendix 11):

1. Emotional readiness (page 1 of the guideline)

Almost all clinicians (93.75%) understood this phrase. Of the 15 clinicians who understood, four (26.67%) clinicians expressed that it was difficult to judge.

2. Other things that enhances self-harm (page 2 of the guideline)

All clinicians reported that they could understand this item. However, four clinicians (25%) considered that the headline alone was not very clear; they offered some alternatives such as factors, others, triggers, other reasons, etc.

3. Strengths (page 3 of the guideline)

All clinicians understood this item. One clinician recommended to have an explanation if the researcher considered making a manual.

4. Positive aspects of life (page 3 of the guideline)

All clinicians understood this item. The same clinician recommended to have an explanation in the manual. Another clinician offered the alternative word "resources".

5. Communication skills (page 3 of the guideline)

All clinicians understood this item. Three of them were concerned that if some clinicians had not been trained in this skill before, they might not fully understand. However, one of the three stated that it was understandable but when the clinician explained their understanding, it showed that they did not completely understand.

There were two items that did not reach the consensus of necessary:

1. Admit patients into the hospital (page 3 of the guideline)

All clinicians agreed that this item is necessary. Two clinicians reasoned this is very important so it should be emphasised to make it distinct from the other parts such as by using a bold font or a different colour. Two clinicians suggested to have an explanation of how to identify high risk for admitting. Two psychologists suggested to change the wording to "refer for admission" because the psychologist could not make the decision to admit the patients by themselves; only the psychiatrist or the doctors have the authority to admit.

2. Box of symbols (page 3 of the guideline)

Fourteen of clinicians (87.5%) reported that this box is necessary. Only two clinicians thought that it was not necessary as the symbols were on the first page (in the Instructions). One clinician, who indicated that the box of symbols was useful, argued that letters could be used instead of symbols; five others (mentioned in section 5.5.3.3.1.1: Clarity) thought that the symbols were useful to make it easier to understand.

5.6 Discussion and Conclusion

To the author's knowledge, this study is the first development of an early psychological intervention guideline for self-harm regardless of suicidal intention for clinicians in Thailand. Overall, the findings demonstrated that the guideline is feasible and acceptable for clinicians to implement with patients who self-harm.

5.6.1 Guideline Evaluation

5.6.1.1 Quality of the Guideline

The results of the feasibility study concluded that sixteen clinicians confirmed that the guideline was clear and comprehensive, and they were satisfied with the guideline design. The guideline covered all aspects necessary for clinicians to work effectively with self-harm patients. The majority of clinicians (77.78%) agreed that the guideline is concise and does not include unnecessary content. This in line with the key components of clinical guidelines from Jackson and Feder (1998), which are simple, concise, and accessible. However, two clinicians (22.22%), who work in medical schools, mentioned that the guideline could be even more concise. The nature of a medical school is to service patients and train clinicians to work in the health services. It is possible that the clinicians who work in medical schools have greater knowledge and experience, whereas other clinicians with less experience commented that detailed explanations helped them to better understand the guideline.

5.6.1.2. Effectiveness

The results of the study showed that the guideline is effective, beneficial, and useful for all clinicians who work with patients who self-harm, as it helps

clinicians improve patients' care (Grol, Hutchinson, Eccles, & Grimshaw, 1999). The guideline served as a guide and a helpful reminder for the clinicians. As a result of the more accurate investigation, the patients received the appropriate treatments including their families. Using the guideline allowed clinicians to cooperatively work with multidisciplinary teams. This guideline is also a tool for teaching other clinicians. For less experienced clinicians, the guideline can save the clinicians and patients' time to precisely ask and give the appropriate intervention. However, for the psychiatrist with over 15 years' experience working in the mental health clinic, the guideline was less beneficial and seemed to be useful in only certain parts.

5.6.1.3 Acceptability

As for acceptability, the guideline was shown to be acceptable for all professions (psychiatrists, psychiatric nurses, and clinical psychologists) covering all ages working in both psychiatric and general hospitals in all areas in Thailand. To ensure effective implementation, it is important to test the acceptance of the guideline by the target clinicians (Grol et al., 1998). The routine work types are IPDs, OPDs, and consultancy units. It is worth noting that the guideline seems suitable in only particular parts for the two clinicians (12.50%) who have 15 years' working experience in the mental health clinic. Despite this, younger and less experienced clinicians who worked in the same mental health clinics indicated acceptability of the entire guideline. This reflects that for the clinicians who have more experience in mental health clinic, the guideline does not seem fully acceptable. They added that the guideline would be acceptable for other professions such as psychiatric nurses, general nurses, and general doctors. Mental health clinics do not have admission wards; the patients who present to the clinic are usually not in acute danger of self-harm. They first present with other problems such as depression, anxiety and adjustment, then additionally later with self-harm acts. Therefore, some parts of the guideline such as prevention of repetitive self-harm by restricting access to the means of self-harm or cooperation with other physical departments and their families seem to be less important for these clinicians.

5.6.1.4. Practicality

Almost all clinicians (93.75%) agreed that the guideline is practical and easy to follow. It should be noted that given concerns over how professional and how

attractive the guideline is to the patients, almost half of Thai clinical psychologists had an issue with using the guideline in front of patients. Only one clinician (6.25%), who is a psychiatrist with over 15 years' experience in the mental health clinic, found the guideline not practical.

5.6.1.5. User-friendly

With regard to the user-friendly aspect, all clinicians agreed that the guideline is user-friendly. Most clinicians found the guideline to be simple and easy to follow and to have an attractive design; they are happy to use it.

5.6.1.6. Suggestions

There were some recommendations. Although clinicians advise understanding how to identify high risk of repetitive self-harm, in the literature review it seems that risk assessment cannot be relied on (Carter et al., 2016). In other words, if patients are low risk, clinicians still need to monitor, prevent repetitive self-harm, and give treatments. Links between assessment and intervention were also suggested in this study. In the draft guideline (Delphi Round 1), there was an attempt to create the links, but after discussing with experts in the interviews, it became clear that the links caused confusion. Almost all interventions were found necessary for all patients who self-harm with the exception of 'reconstruct thoughts' in Emotion Management, Problem Solving Skills and Communication Skills. These interventions can be given only when patients are emotionally ready. Communication skills were taught to patients only when they had communication problems.

Family approach was another aspect for which clinicians recommended further detail be included, although this may be more useful if a separate manual is considered. It was evident that the younger clinicians needed more explanations, and advised that a manual would be useful together with the guideline. One clinician, who worked in the mental health clinic, suggested a flow chart version. Two clinicians revealed that the issue of negative attitudes and the ability of Thai clinicians may require further investigation. Expanding the use of the guideline may be useful for other clinicians working in emergency units or in other professions in community service. However, training would be essential in order for them to know how to properly and effectively use the guideline (Carter et al., 2016).

5.6.1.7. Guideline Evaluation Summary

Summarising the concluding points above, the guideline developed through this research has been successful. The clinicians ensured that all items not reaching consensus from Delphi process were necessary and well-understood. It is feasible and acceptable for clinicians to use the guideline during their routine work in hospitals with patients who self-harm. The feasibility study likewise concluded the guideline is effective, clear, concise, covers all necessary aspects, and has an attractive design. The guideline is also user-friendly and practical for clinicians who work in IPDs, OPDs, and Consultancy units in hospitals.

5.6.2 Strengths and Limitations

The two-round Delphi technique with semi-structured interview methods was an effective way of obtaining deep insights from five experts in order to develop the guideline. The feasibility study allowed the researcher to examine whether the guideline is feasible for clinicians to work with self-harm patients. Implementation of the guideline by a wide range of clinicians resulted in a broad evaluation of feasibility in the Thailand setting. However, including only 16 clinicians is still a limitation. Moreover, this study focused only on clinicians' opinions towards the guideline; although clinicians viewed that it is useful for the patients, there is a lack of patient evaluations.

5.6.3 Research Implications

Although this study was to test feasibility, further research may be beneficial for ensuring acceptability in a larger population size. It would also be useful to conduct a randomised control trial study for the outcome of self-harm between clinicians who use the guideline and who do not. Further study is required for the specific recommendations in the guideline such as high risk of repetitive self-harm identification, duration of monitoring, and prioritising what to provide to patients first. Moreover, this guideline was produced specifically for Thai culture. Different implementation contexts would require further investigations.

5.6.4 Clinical Implications

The research findings have shown that the final version of this guideline is feasible for Thai clinicians to use with self-harm patients. Using this guideline

helps clinicians work more effectively in their routine activities. The quality and the design of the guideline with colour codes seems to affect clinicians' perceptions (organise, remember, understand the guideline) and desire to use the guideline. It may be useful for workplaces to invest in a colour copy of the guideline rather than to reproduce it in black and white. This guideline can also be used in IPDs, OPDs, and Consultancy units in psychiatric and general hospitals. However, for mental health clinic settings which have no emergency unit or inpatient ward, the guideline may require more specific evaluation and interventions. Training sessions and a briefer manual may be considered as a pathway for more skill improvements and a more positive clinician attitude adjustment in the Thai context. Expanding the use of the guideline to other professions would still require validation and training. Producing a more detailed manual and additional training would be beneficial for less experienced clinicians.

With regard to guideline adaptation, previous empirical studies indicated that similar interventions may work across cultures. This suggests that almost all guideline content would benefit British clinicians who work with patients who self-harm. However, guideline design, wordings, and the clinical service system (i.e. referral process) may vary between countries. Therefore, the guideline may require some adaptations to ensure it is feasible for clinicians to implement in the UK.

Chapter 6: Conclusion

This thesis has investigated the differences in self-harm between the UK and Thailand, irrespective of suicidal intention. Several potential factors for self-harm were comprehensively explored through the two cultures. To understand the differences within self-harm, differentiation factors between subgroups were subsequently examined using quantitative methods. After gaining knowledge of cultural influences and the psychological roles of different subgroups of self-harm, the guideline for self-harm early intervention was developed for clinicians in Thailand using the qualitative method.

This final chapter will reintroduce the research aim and summarise the findings of each study. Contributions to the literature and to clinical implementation will be discussed, and the strengths, limitations, and implications of the research will be addressed at the end of this chapter, as well as directions for further research.

6.1 Summary of Each Study

The primary aim of this thesis has been to investigate the differences in self-harm comparing the UK and Thailand; the second aim has been to clarify which psychological characteristics differentiate between the subgroups of self-harm. Having gained an understanding from the study findings and the literature review, the guideline for self-harm early intervention has been developed. Finally, this thesis tested the feasibility of implementing the guideline in the Thai healthcare setting.

The quantitative studies (Chapters 3 and 4) used the same methodology but different matching models. Personality, impulsivity, difficulties in emotion regulation (DER), mindfulness, rumination, depression and anxiety were captured to examine the differences between the two cultures.

6.1.1 Summary of Chapter 3: Differences in Self-harm between the UK and Thailand

It has been suggested that culture plays a significant role in suicidality (Evans et al., 2005). In order to explore potential protective factors, the distinctly different cultures were taken into account. This chapter aimed to comprehensively investigate the differences in self-harm characteristics between the UK and Thailand. To reduce bias, as the participant numbers and demographics differed between the UK and Thailand (165 vs. 548), matching case by age groups and gender with a 1:2 ratio was performed. A total of 165 UK and 256 Thai participants from the sample were matched.

6.1.1.1 Self-harm Characteristics

British participants showed a higher prevalence of self-harm than Thai participants (36.7% vs. 16.8%). British participants also reported a higher number of different methods of self-harm (mean: 6.29 vs. 4.14), as well as higher frequencies of self-harm than the Thai participants. The most common method in the UK was cutting, whereas punching was the most common in Thailand. Cutting, burning, carving, preventing wounds from healing, and consuming recreational drugs were more commonly reported methods of self-harm in the UK than in Thailand.

The reasons why people harm themselves are key to understanding self-harm behaviours. Both British and Thai participants similarly reported that the most common motivation was “wanted to get relief from a terrible state of mind” which could be classed as a “cry of pain” (87.1% and 79.1%). Thai people were more likely to report cry for help motivations (“wanted to find out whether someone really loved me”, “wanted to be a part of the group”, “wanted to get my own back on someone”, and “wanted to avoid doing something or being in some situation” etc.) than British participants.

Both cultures reported similar self-harm onset ages (14.25 years old in the UK; 14.65 in Thailand), and more severe methods notably had higher onset ages. The data shows that engagement of multiple methods rather than a single method was common in both cultures (95.2% and 83.3%), and not seeking help was also common in both. There was no significant difference between the countries regarding hospitalisation or disclosure for each method. Across all

reports, disclosure (24.57% and 40.67%) was reported more than hospitalisation (9.06% and 2.50%). This shows that Thai people seem to disclose their acts to others more but seek hospitalisation less than British people.

6.1.1.2 Risk Factors for Self-Harm

Despite the distinct cultural differences, the risk factors for engagement in self-harm were similar; analysis revealed no significant difference in interaction terms between culture and risk factors.

Psychosocial factors associated with self-harm were female gender, non-heterosexuality, unemployment, chronic physical illness, psychiatric service history, drug consumption, and exposure to the self-harm behaviour in others. As for psychological characteristics, the largest distinction between self-harm and non-self-harm for the psychometric scales were for Depression, followed in decreasing order by Strategies DER, low Non-reactivity Mindfulness, low Extraversion, Negative Urgency, Non-acceptance DER, Anxiety, Clarity DER, Brooding Rumination, Emotionality, low Non-judging Mindfulness, Goal DER, Impulsive DER, low Awareness DER, Reflection Rumination, Openness, and low Describing Mindfulness.

These psychometric measures were commonly correlated with each other. When entered into multivariate logistic regression, only female gender, non-heterosexuality, psychiatric service history, chronic physical illness, drug consumption, Non-reactivity Mindfulness, and Depression were uniquely associated with self-harm.

6.1.1.3 Different Characteristics of People between Cultures

Comparing the UK and Thailand, Thai people have lower levels of responsibility, and lower self-discipline and forethought than people in the UK (lower Conscientiousness showed the strongest distinction). However, Thai people have a higher ability to tolerate boredom and to remain focused despite distraction (lower Lack of Perseverance), and are better able to attend to their activities in the present moment (higher Awareness Mindfulness). Higher Brooding Rumination and Anxiety was also identified in Thai people. When it comes to the emotional situation, Thai people seem to have less control (Higher

Impulsive DER), whereas participants from the UK have higher Depression self-ratings than Thai participants.

Thai people reported fewer risk-taking behaviours (alcohol abuse, drug consumption, and exposure to self-harm) than British people. It was more common for Thai people to live with parents and extended family. Thai people also reported less psychiatric service history (in line with lower hospitalisation, as mentioned above) but reported more considering the need for such treatment. Moreover, Thai people reported more chronic physical illness.

6.1.2 Summary of Chapter 4: Psychosocial Factors and Psychological Characteristics that Differentiate Subgroups of Self-harm

Different subgroups in the breakdown of self-harm revealed different characteristics. This study examined the differences of psychosocial factors and psychological characteristics between subgroups of self-harm (recency, frequency and motivation to die) comparing the British and Thai participants. In order to capture all self-harm cases, case matching was performed by culture, age group, and gender at a 1:1 ratio (people who self-harm to people who do not self-harm). 141 people who self-harmed and 141 who did not self-harm were entered into the matching data.

6.1.2.1 Cultural Influence

No significant interactions were found between culture and any subgroup on psychosocial factors or psychological characteristics.

6.1.2.2 Recency Subgroups

The recent self-harm group (within past year) was more likely to report a higher number of self-harm methods, repetitive self-harm, and motivation to die than the past self-harm group (more than one year ago).

Comparing recent and past self-harm revealed that the recent self-harm participants often had psychiatric service history. Higher Strategies DER, and Goal DER ($d = 0.98, 0.94$) in the recent self-harm group indicated significantly different characteristics. Lower Awareness Mindfulness, lower Non-reactivity Mindfulness, higher Negative Urgency, Non-acceptance DER, Depression,

Introversion, Brooding, and Impulsive DER also demonstrated significant differences ($d = 0.77, 0.77, 0.76, 0.72, 0.68, 0.55, 0.45, 0.45$).

Compared to non-self-harm, recent self-harm showed similar risk factors as to when the large, matched cohort was examined (see section 6.1.1.2). Importantly, almost all psychological characteristics were comparable between past and non-self-harm, except Depression, which was higher in the past self-harm group than in non-self-harm group ($d = 0.57$). In addition, only drug consumption appeared in the past self-harm group when comparing to the non-self-harm group.

6.1.2.3 Frequency Subgroups

People engaging in repetitive self-harm were more likely to report recent self-harm, the motivation to die, a higher number of self-harm methods, and a younger onset age of self-harm than people engaging in occasional self-harm.

In terms of differences of psychosocial factors between repetitive and occasional self-harm, almost all psychosocial factors were comparable except for culture. British participants reported more repetitive self-harm than Thai participants. As for psychological characteristics, Goal DER, Strategy DER, Extraversion, Agreeableness, Depression, Anxiety, Emotionality and Awareness Mindfulness, and Non-reactivity Mindfulness were all significantly different between the groups (effect sizes were $d = 0.71, 0.66, 0.66, 0.61, 0.61, 0.55, 0.49, 0.49, 0.44$, respectively); repetitive self-harm showed higher scores on all these scales except Extraversion, Agreeableness, Awareness Mindfulness, and Non-reactivity Mindfulness, which showed lower scores for repetitive than occasional self-harm.

Comparing repetitive and occasional self-harm to non-self-harm, repetitive self-harm has more adverse psychosocial characteristics than occasional self-harm was. The psychosocial factors associated with recent self-harm were similarly revealed in the sample engaging in repetitive self-harm. Only psychiatric service history was positively associated with occasional self-harm. Psychological characteristics of repetitive self-harm were also similar to those of recent self-harm, except that Agreeableness showed a significantly lower score and Positive Urgency showed higher scores in the repetitive than in the non-self-harm self-harm sample. Occasional self-harm was associated with higher scores on

Depression and showed a medium effect size ($d = 0.70$), effect sizes were small for other factors (Positive Urgency, Strategy DER, Non-acceptance DER, low Extraversion, Negative Urgency, Clarity DER and low Non-reactivity Mindfulness).

6.1.2.4 Motivation to die versus Other motivations

In both the UK and Thailand, participants expressing the motivation to die were more likely to report recent self-harm, repetitive self-harm, and a higher number of self-harm methods than participants reporting other motivations.

In terms of psychosocial factors, those who expressed the motivation to die were comparable to those who reported other motivations in all factors. Regarding psychological characteristics, the data shows that Strategy DER, Impulsive DER, Brooding Rumination, low Awareness mindfulness, Depression, Negative Urgency, low Extraversion, Goal DER, and low Non-reactivity Mindfulness were evident in motivation to die rather than other motivations ($d = 0.74, 0.74, 0.69, 0.69, 0.64, 0.63, 0.62, 0.58, 0.48, 0.38$, respectively).

Compared to non-self-harm, the motivation to die group demonstrated results similar to the recent self-harm group. However, those expressing the motivation to die had a larger magnitude of the differences than recent self-harm and repetitive self-harm did, except that gender orientation did not show a significant association with the motivation to die. For the group expressing other motivations for self-harm, non-heterosexuality and psychiatric service history showed significant associations. Depression, Strategy DER, and Extraversion were also significantly different between other motivations and non-self-harm, showing a medium effect size ($d = 0.77, 0.60, 0.55$, respectively). Other psychological characteristics also showed differences but only small effect sizes, namely Non-acceptance DER, Anxiety, Clarity DER, Non-reactivity Mindfulness, Negative Urgency, Impulsive DER, Lack of premeditation, Positive Urgency, Brooding Rumination, and Openness.

6.1.3 Summary of Chapter 5: Guideline for Self-harm Early Intervention for Thai Clinicians

In order to enhance the possibility of patient engagement with long-term treatment, self-harm early intervention is required. This study aimed to develop a guideline for self-harm early intervention for Thai clinicians.

The findings of the previous chapters provide useful clarification of self-harm behaviours regardless of suicidal intention, in the different cultural contexts and different subgroups of self-harm. The literature review combined with interpretation of the findings presented in the quantitative study has enabled comprehensive guidelines to be created.

This study consisted of two processes (the Delphi method and a feasibility study). Feedback was received from five experts, through evaluation sheets and interviews on a two-round Delphi method to ensure that the items included in the guideline were necessary and understandable. The feasibility study was subsequently used to evaluate the feasibility of the guidelines by allowing 16 clinicians to implement the guideline in a variety of Thai healthcare settings for six weeks. The clinicians selected to take part intentionally had varying characteristics: age, gender, profession (psychiatrists, clinical psychologists, psychiatric nurse), type of healthcare service, and location of the service. Both the Delphi method and the feasibility study approaches were used for the interview process. The credibility of content analysis in the Delphi process and feasibility study was enhanced by a quality check.

6.1.3.1 Delphi Method

Round 1: All 63 items of the guideline created reached agreement as “necessary”. In terms of the “understanding” aspect, 52 items reached agreement and 11 original items reached only minor agreement, while 39 phrasing suggestions were gathered. Some items had multiple phrasing suggestions from different experts. These 50 items and 12 additional items were entered into Round 2 for evaluation.

Round 2: Of the 12 additional new items, nine reached agreement as necessary and five out of 12 items reached agreement as understandable. There remained three items of minor necessary agreement and seven items of minor understanding agreement. In the evaluation sheets, experts also gave further

advice regarding ten more phrasing suggestions. As for Round 1 phrasing suggestions, 34 out of 50 items reached agreement, 13 items reached no agreement, and three items reached only minor agreement.

Only three items in the category of “necessary” and 24 items in the category of “understanding” (minor agreement) were verified by the experts through the final interview. Eventually, there remained two items of necessary and five items of understanding for minor agreement. These items were confirmed as both necessary and understandable in the feasibility study interviews.

6.1.3.2 Feasibility Study

Overall the study was successful in developing the guideline for use in self-harm early intervention for Thai clinicians. The following section will address guideline evaluation analysis.

Quality of the guideline

The guideline developed was deemed good quality. All clinicians agreed that the guideline had clarity (easy to understand), was comprehensive (covered all necessary aspects), and showed design satisfaction. The majority of clinicians (77.78%) mentioned succinctness. However, two clinicians working at medical schools who possessed great knowledge and experience suggested that the guideline could be made even more concise. Less experienced clinicians suggested that a manual, complete with fuller explanations, be produced.

Effectiveness

All clinicians agreed that the guideline was useful for helping clinicians to provide accurate assessment, appropriate intervention, and effective cooperation with multidisciplinary teams. The guideline also served as a clinical tool for teaching other clinicians. However, one psychiatrist with over 15 years’ experience working in a mental health clinic found only some parts (Hope and Cope) useful.

Acceptability

The guideline was demonstrated to be acceptable for the routine Thai work setting for all professions (psychiatrists, clinical psychologists, and psychiatric nurses), for all ages, for both psychiatric and general hospitals and in IPDs, OPDs, and Consultancy units (i.e. units consulted by other physical departments). In addition, the guideline was found acceptable to the healthcare service in the city and other provinces. However, one psychiatrist and one

clinical psychologist, both with over 15 years' experience working in the field of clinical mental health, found only some parts of the guideline suitable for their routine work (psychiatrist: Hope and Cope; clinical psychologist: Assessment and Cope).

Practicality

Almost all clinicians (93.75%) agreed that the guideline was practical and easy to implement. Only one psychiatrist, as mentioned above, stated that the guideline was not practical. Notably, five clinical psychologists (out of 11) were concerned over how professional and how attractive the guideline would seem to patients when using in front of the patients.

User-friendly

All clinicians agreed that the guideline was user-friendly, simple, and easy to follow. The design was attractive to motivate clinicians to use it, and made it easy to understand immediately even when only glancing it. Clinicians noted that they would be happy to use the guideline.

Other issues

Two clinicians raised the concern of other clinicians' potential negative attitudes towards patients who self-harm, and that some clinicians may have insufficient skills to approach patients. These may lead to the patients not receiving good service or appropriate treatment.

6.2 General Discussion

6.2.1 The Role of Culture in Self-harm

No cross-cultural studies have yet to comprehensively examine the differences in self-harm regardless of suicidal intention between distinct cultures, being in this instance the UK and Thailand. Therefore, this thesis makes a significant contribution to literature, improving our understanding of the cultural influences on self-harm behaviours, especially with regard to comprehensive general factors.

The current findings suggest that culture plays significant roles in several self-harm characteristics (prevalence, methods, frequency, number of methods

employed, and secondary motives). However, the research does reveal universal similarities across both cultures, which were primary motive, age onset, and risk factors, including the characteristics of subgroups of self-harm.

Different cultures report different self-harm prevalence; overall the Thai participants in the present study reported a lower prevalence of self-harm than the British participants did (16.8% vs. 36.7%). This is in line with previous studies in which Asian countries reported a lower prevalence of self-harm than Western countries (Evans et al., 2005). Thai people also reported a lower frequency of self-harm and a lower number of self-harm methods than British people. Likewise, a systematic review of self-harm presentation at hospitals supports the view that Asian countries report lower rates of repetitive self-harm than European countries (Carroll, Metcalfe, & Gunnell, 2014).

In addition, Thailand has a collectivist culture, which gives priority to their in-group goals, whereas the UK is classed as an individualistic culture which gives priority to an individual's personal goals (Triandis, 2001). It seems possible that the influence of social norms discourages Thai people from engaging in self-harm. These trends also reflect that Buddhism and kinship influences Thai peoples' attitude and behaviours. Thai participants in the present study reported higher number of living with parents and other relatives compared to the UK. Kinship influences the way Thai people live; Thai children are taught to look after their parents (Rosenberg et al., 2009). Perceiving family responsibility may discourage Thai people from self-harm engagement; in Hong Kong, another Asian culture, it has been found that perceiving family responsibility was a protective factor against suicidal ideation (Chan et al., 2009).

Thai participants in the present study also reported less engagement in alcohol abuse and drug consumption than British participants. A previous study suggests that Thai people, who generally have a high level of moral belief and who tend to participate often in religious activities, are less likely to consume alcohol (Chamrathirong et al., 2010; Wongtongkam et al., 2014). The fifth Buddhist precept is to abstain from intoxicants (substances) (Disayavanish et al., 2007). Thai people believe that observing the five Buddhist precepts improves the present life (Klunklin & Greenwood, 2005). This highlights the Buddhist influence. Importantly, abstinence from taking life is the first precept; this includes taking one's own life. Buddhists believe that suicide is not the way

to escape from suffering (distress), as the suffering will continue into their next life (Disayavanish et al., 2007). If suicidal thoughts emerge, as when one feels entrapped after a challenge, and if the person believes that neither escape nor rescue is possible, then suicidality may seem to be the only way to escape (O'Connor & Kirtley, 2018). This reflects a process that Buddhism may possibly countermeasure, and thus Buddhist philosophy may possibly be seen as protective factor against self-harm. How kinship and Buddhism actually influence self-harm in Thailand requires further investigation.

Different cultures seem to favour different self-harm methods. The most common method in the UK was cutting, whilst Thailand reported punching as the most common method. All skin injury methods (cutting, burning, carving, scratching, and preventing wounds from healing), as well as recreational drug consumption were more common in the UK than in Thailand. This could be explained by social learning from friends, internet, music, movies, books, and celebrities in different cultures, as indicated by a systematic literature review (Jarvi et al., 2013). Social media in Western culture may glamorise the cutting methods and the consumption of recreational drugs more than Thai culture.

Despite cultural influences, the most commonly reported motive for self-harm among both the British and Thai participants (87.1% vs. 79.1%) was "to get relief from a terrible state of mind", which is classified as a "cry of pain". This confirms that suicidality adheres to the same Cry of Pain model across distinctly different cultures, indicating feelings of defeat and entrapment, as well as the perception of no possibility of rescue (Williams & Pollock, 2000). However, communicative motives could represent a secondary motive for self-harm (ibid). Thai people were more likely to report a cry for help than British people. Not surprisingly, culture plays an important role in determining the motives driving self-harm. As explained above, Thai people give priority to the in-group over their personal goals, and are more concerned about personal relationships. Therefore, other people's opinions have more impact on the behaviours of Thai people than they do on the behaviours of British people. More importantly, collectivist culture seems to indicate less direct expression of emotions (Matsumoto et al., 2008), yet self-harm can act as a way to communicate for Thai people. This may link with disclosure of self-harm; Thai participants seemed to let other people know about the overall acts more than British

participants did, even though the disclosure when considered in each method were not significantly different between the two countries.

In general, the Thai participants reported less hospitalisation following self-harm than the British participants did, likewise psychiatric service history, but it is interesting to report that the Thai participants actually considered themselves potentially in need of such care at a higher rate than the British participants did. This may be explained by the fact that Asian people were more likely to perceive stigma than British people with the same difficulty (Alonso et al., 2008). However, when considering disclosure or hospitalisation in each separate method, neither found the significant differences comparing the UK and Thailand. Therefore, it is of concern that people in both countries are less likely to seek help.

Culture shapes how personality is expressed; in general, Thai people are concerned more about the context than the content (Triandis, 2001), and therefore Thai people's decisions are diplomatic. Thai participants reported a lower level of self-discipline (lower Conscientiousness), but a higher ability to tolerate boredom and to attend to their present activities (lower Lack of Perseverance; higher Awareness Mindfulness). As Buddhists, Thai people try to control themselves in order to foster social norms. Given the collectivist nature of Thai culture, higher levels of both Brooding rumination and Anxiety towards other people's opinions were reported by the Thai participants. However, when it comes to the emotional situation, Thai people seem to have less control (Higher Impulsive DER) than British people.

Across the board, depression shows up as the most important risk factor for self-harm. The British sample demonstrated a higher score on the Depression measure; individualists consistently report more loneliness than collectivists (Triandis, Bontempo, Villareal, Asai, & Lucca, 1988). Drug consumption, exposure to self-harm, and psychiatric service history, which were also more prevalent in the British sample, were also risk factors for self-harm engagement. These risk factors may partially explain why British people show a higher prevalence of self-harm. Several risk factors (Anxiety, Brooding Rumination, Impulsive DER, and higher incidence of chronic physical illness) were reported in the characteristics of the Thai participants, but Awareness Mindfulness was revealed as a protective factor.

In summary, the present study makes it clear that culture does play a significant role in self-harm characteristics; overall Thai culture reported a lower prevalence of self-harm. Within Thai culture, Buddhism, family, and social norms strongly influence Thai people's behaviours, and it is quite possible that these act as protective factors against self-harm. Clinical assessment, before treatment is devised, should explore the links of patient problems to their family and social approval. For example, the stress of being unemployed may relate to the family situation, such as an inability to take responsibility for the family, or worries about negative attitudes from others towards unemployment. The treatments for Thai people who self-harm should recognise these problems and encourage family, social supports, or Buddhism to help. Moreover, it is important to train patients in communication skills so that the at-risk individuals would be able to cope with social interaction, to communicate their feelings and thoughts more directly and efficiently.

However, one essential point, which highlights the universal nature of this behaviour, is that culture did not play a role in the onset age of self-harm. The findings confirmed the importance of the puberty stage across both cultures (14.25 years old in the UK; 14.65 in Thailand). Importantly, the risk factors (psychosocial factors and psychological characteristics) of self-harm and characteristics of subgroups were not significantly different between the two cultures. Therefore, the model or mechanism of self-harm can be seen as universally similar across different cultures.

6.2.2 The Role of Risk Factors regarding Self-harm and Subgroups of Self-harm

The published literature shows a lack of research examining subgroups in relation to self-harm, regardless of suicidal intention; the present study contributes by broadening our understanding of the psychosocial factors and psychological characteristics that influence the subgroups. This study also investigates the factors in new and relevant areas; the Five Facet Mindfulness and Difficulties in Emotion Regulation measures have never yet been directly examined in relation to self-harm regardless of suicidal intention.

6.2.2.1 Psychosocial Factors

Certain psychosocial factors have been shown to be stressors that can precipitate self-harm (Hawton et al., 2012). The present study shows that several psychological stressors are associated with lifetime self-harm. However, psychosocial factors did not play much role in differentiating the subgroups of self-harm. Only culture distinguished the frequency group, and psychiatric service history distinguished the recency group.

6.2.2.1.1 Culture

As mentioned above, residing in the UK can be seen as a risk factor. British participants were more likely to report self-harm engagement. Culture distinguished only between frequency subgroups; British participants reported higher frequencies of self-harm than Thai participants, as discussed above.

6.2.2.1.2 Age

The present study indicates that the mean age onset of self-harm in the UK and Thailand was similar (14.26 and 14.89); this could be explained by puberty (Hawton et al., 2012) which is a critical period of stressors in terms of biological, psychological, and social change (Ge et al., 2001). Self-harm initiated by adolescents therefore is of particular concern (Hawton et al., 2012). However, people of almost all ages engaged in multiple methods, and older people who self-harm employed more severe methods such as hanging, suffocating and strangulation shown in this present study. A systematic review of suicide rates reported a higher rate in older persons than in adolescents (Chung et al., 2017). Self-harm prevention interventions should be aimed at young adolescents, whilst treatment of older people should be focused on reducing the use of more severe methods given the graver outcome such methods can facilitate.

6.2.2.1.3 Gender and Gender Orientation

This study found that self-harm was more common in females than males, which is in line with the previous literature (Hawton et al., 2002). As for gender orientation, non-heterosexuality shows up as a risk factor for self-harm (Batejan et al., 2015). Non-heterosexuality was also found to be a risk factor for recent self-harm, for repetitive self-harm, and for self-harm without the intent to die. Batejan et al. (2015) conducted a meta-analytic review which found that non-heterosexuality was associated with non-suicidal self-injury (NSSI).

6.2.2.1.4 Socioeconomic Status

Hopelessness related to experiencing financial difficulties can trigger people to harm themselves (Barnes et al., 2016). The current study found that unemployment can be a risk factor for self-harm comparing to non-self-harm. More severe subgroups also indicated unemployment as risk factors. Income and marital status did not reach the level of significance in overall analysis, and the interactions between the culture and self-harm showed no significance with regard to all subgroups. However, regarding self-harm versus non-self-harm in general, the present study shows that being widowed, divorced, or separated is a particularly important factor in Thai culture whereas income level is more important for UK culture.

6.2.2.1.5 Chronic Physical Illness

Chronic physical illness plays an important role in self-harm (Goodwin, Marusic, & Hoven, 2003). In this study, chronic physical illness indicated an important risk for self-harm and more severe subgroups (recent, repetitive, motivation to die), in line with Webb et al. (2012) who found chronic physical illness was a significant risk factor for self-harm. Moreover, physical health problems was revealed as a predictor of suicide (Cooper et al., 2005).

6.2.2.1.6 Psychiatric Service History

Participants reporting psychiatric service history were much more likely to engage in self-harm. Skegg (2005) indicated that the majority of patients who self-harm presented at emergency units with at least one psychiatric disorder diagnosed with the standard criteria. In the present study, psychiatric service history was an important factor for every subgroup. The only distinction shown was in the recency groups; the recent self-harm group was more likely to report psychiatric service history. This reflects that people with mental health problems are more likely to continue self-harm. Therefore, detecting people with mental health problems is a crucial step in early intervention and prevention.

6.2.2.1.7 Substance Consumption

Recreational substance consumption consistently showed up as a risk factor for self-harm; the present study revealed a strong association between drug consumption and self-harm, in line with previous studies such as Hawton et al. (2002) especially in the high-frequency group. The present study also found

that drug consumption was associated with the repetitive group, motivation to die, recent self-harm, and past self-harm, not occasional self-harm and other motivation groups. It is possible that drug abuse may be a way of shifting negative emotions (Gladstone et al., 2004) as the repetitive and suicidal groups have more psychological problems. Interestingly, the past self-harm group also showed an association. It is possible that people in the past self-harm group may have been using drugs as a form of self-medication only when they have problems in their lives. Another finding of the present study is that alcohol abuse was not found to be associated with self-harm, which contradicts previous studies that found alcohol abuse was an important risk for self-harm (Rossow et al., 2007). The possible reason is that the present study captured only a single item of drinking ('experiencing too much alcohol') which did not ask for further details of the drinking.

6.2.2.1.8 Exposure to Self-harm

Exposure to the self-harm of family and friends is an important risk factor for self-harm engagement. O'Connor & Nock (2004) confirms that self-harm is enabled by exposure to the self-harm of others. It is possible that having cognitive accessibility to self-harm can trigger people to harm themselves. In line with the current findings, people from the UK were more likely to report exposure to self-harm than people from Thailand. As such, the UK also reported a higher prevalence. However, when broken down into subgroups of self-harm, exposure to self-harm did not reach the level of significance.

6.2.2.1.9 Living Status, Living Area, and Illegal Activities

Living status, living area, and illegal activities did not play any role in self-harm in the current study. This was inconsistent with previous findings that people living in urban areas were more likely to self-harm (Harriss & Hawton, 2011) in both clinical and community based populations (Davaasambuu et al., 2017). However, the current study identified the home area of the participants who completed the online survey from several places, whereas previous studies collected data specifically at particular places such as hospitals or schools. It is possible that personal area identification may not be precise in the present study. As for living status, a systematic review of hospital based studies found living alone to be associated with repetitive self-harm (Larkin et al., 2014). It is possible that the previous studies recruited the patients who presented in the

hospital after self-harm, whereas non-clinical samples were collected in the present study. The clinical group may need someone whom they live with to intensively monitor and support. Moreover, other factors such as hopelessness was important for repeating self-harm; patients who live alone with hopelessness were the risk factors, but living alone without hopelessness was not significant (Steeg et al., 2016).

6.2.2.1.10 Summary of Psychosocial Factors

Psychosocial factors play a crucial role in self-harm regardless of suicidal intent; people who self-harm have life problems. Most factors were unable to distinguish between the subgroups. This reflects that in general the psychosocial factors of different subgroups were not different. Considering self-harm risks when comparing to non-self-harm, more severe self-harm groups have more adverse life problems and more self-harm risks than less severe groups.

6.2.2.2 Psychological Characteristics

6.2.2.2.1 Personality

Certain vulnerable personality traits can lead people to engage in self-harm behaviours (O'Connor & Kirtley, 2018). In the present study, Introversion, Emotionality and Openness were risk factors for self-harm. High levels of Introversion and Emotionality were shown to be significantly different from non-self-harm in more severe subgroups (recent, repetitive, and motivation to die), whereas past and occasional self-harm did not show any difference in personality domains when compared to non-self-harm. The group expressing other motivations (no wish to die) showed only high Introversion when compared to non-self-harm.

In a systematic review of personality traits, Neuroticism (Emotionality) and Introversion demonstrated a consistent association to suicidal behaviours (Brezo, Paris & Turecki, 2006) and the present study also found that Agreeableness was associated in the repetitive self-harm group and the motivation to die group. In particular the repetitive self-harm group showed a difference from the occasional group, at a medium effect size ($d = 0.61$). Low Agreeableness showed a positive association with higher numbers of self-harm methods, in line with the same systematic review. The subgroup that did not wish to die, as well as the repetitive and recent subgroups, had higher scores

for Openness than the non-self-harm group did. Openness was possibly demonstrated in certain types of self-harm such as NSSI (Brown, 2009; Goldstein et al., 2009; MacLaren & Best, 2010). Moreover, some studies have shown that Openness is negatively associated with suicidal ideation (Eades et al., 2018) and therefore acts as a protective factor. Although the present study did not find Openness to be a protective factor, high Openness scores were less prevalent in the motivation to die group.

6.2.2.2.2 Impulsivity

Impulsivity is a crucial characteristic of self-harm enactment (O'Connor & Kirtley, 2018). The findings of the present study are that Negative Urgency (rash actions in response to negative affect) demonstrated a significant role as a self-harm risk factor in all subgroups except past self-harm. In a systematic review, Negative Urgency was found to have the most consistent association with lifetime self-injury (Lockwood et al., 2017). Severe subgroups importantly showed differences with large effect sizes comparing to non-self-harm; poor control over their impulses can lead people to rashly harm themselves. Only Negative Urgency showed a significant difference in the recency subgroups (recent vs. past) and motivation subgroups (motivation to die vs. other motivations) ($d = 0.76, 0.63$), but it showed no association with the frequency subgroups. Positive Urgency also showed an association with the repetitive self-harm and motivation to die group compared to non-self-harm, but at a small effect size. Rash actions on emotion-based disposition can be described by Positive and Negative Urgency (Cyders & Smith, 2008). Therefore, Positive Urgency represent the difficulties to control their impulse. Higher Lack of premeditation (acting rashly without thinking about consequences) showed in only the other motivation subgroup, at a small effect size. Indeed, some studies have reported this association on NSSI (Lockwood et al., 2017); which indicates that lack of premeditation may be important for people without motivation to die.

6.2.2.2.3 Difficulties in Emotion Regulation (DER)

Emotion regulation is the most commonly reported function of self-harm (Edmondson et al., 2016). In comparisons of subgroups of self-harm to non-self-harm, significantly higher DER is seen in all subgroups except past self-harm, and more severe subgroups showed larger differences in DER scores than

less severe groups, compared to non-self-harm. Importantly, Strategy DER (limited access to emotion regulation strategies) showed the largest effect for all subgroups. Notably, Goal DER (difficulty engaging in goal-directed behaviour) and Strategy DER seem to be the most important psychological characteristic when differentiating the recent self-harm subgroup from the past self-harm subgroup ($d = 0.95, 0.93$) and the repetitive self-harm subgroup from the occasional self-harm subgroup ($d = 0.71, 0.66$). Strategies, Impulsive (inability to control behaviour), and Goal distinguished the motivation to die subgroup from other motivations subgroup ($d = 0.74, 0.74, 0.58$). Limited access to effective emotion regulation strategies (Strategies) makes individuals feel unconfident to effectively regulate their emotion. Difficulty engaging in goal-directed behaviour (Goal) restricts individuals' ability to concentrate and achieve important tasks when experiencing distress (Gratz & Roemer, 2004). It is possible that people who self-harm may find it difficult to stop thinking about or to shift their attention from their negative thoughts or emotions.

6.2.2.2.4 Mindfulness

Awareness, Non-Judging, and Non-reactivity showed significant differences in almost all subgroups. The results were in line with Caltabiano and Martin (2017), who found lower scores on Awareness, Non-Judging, and Non-reactivity in NSSI than non-NSSI. The present study also found that lower Non-reactivity and lower Awareness were reported in people who were continuing their self-harm than by those who had discontinued self-harm ($d = 0.77, 0.77$). People in the motivation to die subgroup had lower scores on these facets of Mindfulness than people in the other motivation subgroup ($d = 0.48, 0.69$). Awareness and Non-reactivity reported lower scores in repetitive self-harm group than in occasional self-harm group ($d = 0.49, 0.44$).

In this study, Non-reactivity played the most significant role in self-harm engagement, compared to other mindfulness facets (for all subgroups except past self-harm), as it showed the largest effect size of the facets of mindfulness and also remained significant in multivariate regression. Awareness was also important for the recent self-harm and motivation to die subgroups. It is possible that reacting to inner experience such as negative thoughts and emotions may lead people to harm themselves when in distress; lack of awareness of what they are doing may lead to the same outcome.

6.2.2.2.5 Rumination

Brooding is consistently associated with suicidal attempts (Rogers & Joiner, 2017). People expressing the motivation to die had higher Brooding than people in the non-self-harm; the effect size was large ($d = 1.05$). Repetitive self-harm and recent self-harm showed a medium effect ($d = 0.68, 0.78$) and the other motivations subgroup showed a small effect ($d = 0.33$). Neither occasional nor past self-harm differed from non-self-harm in terms of Brooding Rumination.

Significant differences were also found in Reflection; higher scores were evident in more severe subgroups than in non-self-harm, but showed a smaller effect size than Brooding did. Only Brooding, but not Reflection, showed differences between recency and motivation subgroups ($d = 0.45, 0.69$); the latter showed a medium-sized effect. No difference in the frequency group was found. Similarly, the literature has shown that Brooding tends to be more strongly associated with suicidality than Reflection is (O'Connor & Kirtley, 2018). Morrison and O'Connor (2008) proposed the Cry of Pain model stating that Brooding amplified inescapable feelings, which precipitated suicidal behaviours.

6.2.2.2.6 Depression and Anxiety

The literature clearly shows that depression plays a crucial role in self-harm engagement (Wild, Flisher, & Lombard, 2004). In multivariate regression in the present study, depression showed as a significant risk factor, with the largest differences between all subgroups and non-self-harm compared to other psychological characteristics; the motivation to die subgroup had the most depression. People with severe depression report more hopelessness (Becker-Weidman et al., 2009). Importantly, depression and anxiety are associated with defeat and entrapment (Taylor, Gooding, Wood, & Tarrier, 2011). Anxiety showed differences between all subgroups, except occasional and past self-harm, and non-self-harm. Depression is therefore important for all subgroups; anxiety was less important only for the lower frequency subgroup. Considering differentiation, depression distinguished all subgroups, and severe subgroups had higher scores, whereas anxiety distinguished only repetitive self-harm (higher score) from occasional self-harm.

6.2.2.2.7 Summary of Psychological Characteristics

Taken together, people who self-harm have adverse life problems. Almost all self-harm subgroups shared key psychological risk factors. The present findings

highlight the importance of Depression, Non-reactivity Mindfulness, Awareness Mindfulness, Goal DER, Strategies DER, and Negative Urgency, Brooding rumination, and Anxiety, indicating lack of ability to regulate or cope with emotions, repetitively thinking about their negative emotions or thoughts, and difficulties in being aware of present actions and goals; such individuals tend to focus on their own psychological distress rather than on the positives in their lives or their own potential. This can lead them into the entrapment phase and the perception of no rescue. Importantly, impulsivity, exposure to, and access to the means of self-harm may transfer this phase to self-harm enactment (O'Connor & Kirtley, 2018).

Considering distinctions between the subgroups, most psychosocial factors were not different, the only significant trends found were that culture distinguished repetitive from occasional self-harm and that psychiatric service history distinguished recent from past self-harm. In terms of differentiation between psychological characteristics, more severe subgroups showed more adverse psychological characteristics than less severe subgroups and non-self-harm. This in line with previous studies (Brown et al., 2007; Brunner et al., 2007; Mars et al., 2014). In the present study, recent self-harm was distinguished by Goal DER, Strategies DER, Awareness Mindfulness, Non-reactivity Mindfulness, Negative Urgency, and Depression. This implies that scores on these scales improve when people discontinue self-harm. Repetitive self-harm was distinguished from occasional self-harm by Goal DER, Strategies DER, Agreeableness, Extraversion, Depression, and Anxiety, whereas the motivation to die was differentiated from other motivations by Impulsive DER, Strategies DER, Brooding Rumination, Awareness Mindfulness, Depression, and Negative Urgency.

These findings emphasise the importance of risk assessment for repetitive self-harm to understand the characteristics that antecede the behaviour. Crucially, more severe groups require mental health evaluation and immediate intensive treatment. The recent self-harm group needs more focus on emotion regulation skills, the ability to focus on goals and to be aware of what they are doing, and ability to control their impulses. The repetitive group requires help with intense emotions such as anger, aggression, and anxiety. The motivation to die group need to focus on depression, hopelessness, rumination, and the ability to cope

with distress. Although the occasional self-harm and the other motivations subgroups have less severe psychological problems, both subgroups have more psychological problems (especially depression) than non-self-harm people; therefore, these subgroups still require treatment. Almost all psychological characteristics in the past self-harm group showed no significant differences from non-self-harm, except depression. This could imply that the majority of characteristics improved when self-harm was discontinued especially emotion regulation, impulsivity control, mindfulness and depression respectively. However, the past self-harm group continues to require the assessment of psychological problems such as depression.

In general, the present study clearly shows that treatment is important in helping with depression and hopelessness, which could be improved by encouraging positive future thinking (O'Connor & Williams, 2014) and perceive their potential, and this applies to all subgroups. Training patients how to cope with and regulate their emotions and impulsivity control, including distress tolerance, is necessary, especially for the more severe subgroups of self-harm. Clearly the findings highlight the importance of mindfulness. Dialectical Behaviour Therapy and Mentalization Based Treatment, when aimed at emotion regulation, can reduce the frequency of self-harm (Hawton et al., 2015). Both approaches also include Mindfulness practice. However, in the earlier stage of distress, it is difficult for a patient to quickly gain the ability to regulate emotions or mindfulness as individuals who self-harm find it difficult to focus on the present moment rather than negative emotions. Therefore, the crucial strategies of how not to react, or not repeatedly think about the negative emotion and thoughts are helpful; distraction techniques (Polanco-Roman, Jurska, Quiñones, & Miranda, 2015) and relaxation, including how to seek help or alternative coping activities (i.e. talking with friends or exercise), could be provided. Importantly, because of the poor impulse control when feeling distressed, restricting access to the means of self-harm is necessary (Pirkis et al., 2015). More importantly, adverse life problems cause people stress; hence problem-solving skill training for long-term life coping is crucial. Indeed, the meta-analysis of randomly controlled trials produced by Townsend et al. (2001) showed that providing problem solving treatment improves depression, hopelessness, and ability to cope with life problems. However, at the early stage of self-harm people who self-harm, especially severe subgroups, have severe

distress, and may find it difficult to shift their attention or cognition to learn the skills requiring cognition and concentration (i.e. problem solving, cognitive reconstruction, communication skill). However, other groups who have less intense emotions may benefit more from those training skills.

6.2.3 Guideline for Self-harm Early Intervention for Thai Clinicians

Aside from its unique worth in terms of cross-cultural investigation, the present study is the first to develop a guideline for self-harm intervention at an early stage, irrespective of suicidal intention, for clinicians in Thailand; as such it represents a significant contribution to both the literature and the practice of mental health.

Its empirical findings enhance the understanding of the risk factors and the differences in self-harm between the UK and Thailand, and reveal important influences on the Thai general population, while the literature review included here has been key to the creation of the guideline specifically aimed at early intervention in cases of self-harm in Thailand.

The feasibility study has demonstrated that the guideline development was successful. The guideline is feasible and acceptable for clinicians who are mental health professionals, across a multiplicity of clinical settings (i.e. IPDs, OPDs, and Consultancy Units) and in both psychiatric and general hospitals. Selection of experts who are the representatives of population yielded useful suggestions and essential review (Woolf et al., 1999); the experts included in the Delphi method were of advanced knowledge and experience in the areas of psychotherapy and self-harm. In terms of effectiveness, the guideline was deemed useful for working with patients and helpful in terms of improving assessment and intervention.

As for the quality of the guideline, the development process considered the necessity of each item and the understandability of the language. The good quality guideline (clear, concise, covered all necessary aspects and an attractive design) was reported by the clinicians. Jackson and Feder (1998) indicate that simple, concise, and accessible components are the key characteristics of effective clinical guidelines. Not surprisingly, clinicians also noted that the guideline was user-friendly, and almost all clinicians commented that the

guideline was practical for their routine work. However, for use in healthcare settings which have no emergency unit or inpatient ward, the guideline may require more specific evaluations and interventions. A training manual may be required for improving and maintaining clinicians' skills and adjusting their attitudes towards patients who self-harm. Expanding the use of the guideline to include other professions may be beneficial for patients who self-harm in various settings, and again training would be required.

Interestingly, cultural differences not only influence self-harm behaviours but may also influence clinicians' attitudes and performance. Thai clinicians seem to be concerned about how professional the guideline looks and how attractive the guideline is to patients; another point that came out of the Delphi review is that the attitudes of Thai clinicians merits further study.

6.3 Clinical Implementation

The findings in this thesis have several important implications for clinical practices. Although self-harm risks were similar in both countries, the empirical analyses performed in the present study have shown that culture influences peoples' behaviours. Clinicians should consider cultural differences with regard to the assessment of risks and intervention. It seems that Thai people may be more concerned about other peoples' attitudes and about the potential impacts of their actions on others. Therefore, the triggers and motivations leading to self-harm acts may be influenced by other people. This clearly shows that awareness of cultural differences can lead clinicians to better understanding of patients' problems. Giving the particular treatment for each patient will considerably benefit the patients.

The present study indicates the importance of self-harm prevention. Different cultures demonstrated different methods of self-harm. Skin injuries and drug consumption were more common in the UK than in Thailand. Restricting the publication and sharing of self-harm acts modelled in social media may be of benefit to both cultures. The impact of social influences on skin injuries and substance abuse in the UK should be more closely examined.

Self-harm is more common in adolescents. A major problem is that the majority of people who engage in self-harm do not present to healthcare services.

Therefore, schools should have more involvement in the early detection of self-harm. Providing early treatment for adolescents is necessary to prevent self-harm and other adverse outcomes. Help-seeking is of concern; these findings indicate that people in both cultures were less likely to disclose self-harm acts and to go to hospital after the acts. Stigmatisation may be a barrier and therefore taking steps in society is crucial, especially encouragement of help-seeking.

Effective community-based prevention programmes and improvement of clinical services are needed. Clinicians should ensure they have a positive attitude towards patients who self-harm. In the clinical service, implementing the guideline from the current study is an initial way to drive up the performance standards of clinicians treating patients who self-harm. Therefore, clinicians should use this guideline to provide effective treatment to patients who self-harm. However, this guideline may have to be carefully adapted to best suit particular healthcare settings.

6.4 Strengths, Limitations, and Further Research

There were several difficulties with the research in this thesis. One limitation was the unbalanced number of participants, and another was differences in the demographics of the participant samples in the two countries in the cross-cultural study and subgroup study. To overcome these issues, case matching was performed in the quantitative studies. However, the data may not be representative of the populations in general. One way to increase the effectiveness of the present study might have been to decrease the number of items in the questionnaires. This might have increased the number of participants in the UK cohort.

However, the use of the same methodology was key when comparing the differences in self-harm between the UK and Thailand. This study also performed a careful translation process, in order to reach equivalences regarding language and culture. Psychometric properties indicated acceptable levels of validity, reliability, and equivalence.

One strength is the comprehensive cross-cultural insight gained into the differences in self-harm behaviours regardless of suicidal intention. Further

explorations of how culture influences self-harm behaviours are required, in particular into the effects of society, family, and religion on such behaviours. The reports of life problems in particular cultures should be investigated more fully, to understand how meaningful such problems are. Investigating cultural protective factors; what may make people stop harming themselves; and what may make people who have suicidal ideas refrain from self-harm is necessary.

As for the subgroup study, different psychological characteristics pointed to different self-harm subgroups. Given the limits of the subgroups as defined here, some important subgroups may have been overlooked, such as occasional self-harm using a dangerous method, which could be different from occasional self-harm using a less dangerous method; the present study grouped these into the same subgroup. Therefore, the study of clinical samples and broad-based interviews would be important in seeking to understand self-harm behaviours in terms of specific types of self-harm and more severe self-harm. Within the cross-sectional study, it is difficult to answer questions about causation and change directions, therefore a longitudinal study is required.

The final study was a guideline development for self-harm early intervention with clinicians in Thai healthcare. The created guideline was partly produced from the empirical findings of previous chapters in the present study as well as a comprehensive understanding of self-harm and cultures. One of the strengths of this study was that participants for the research questions were purposely selected because they were the key experts who could give specific recommendations for the guideline. The target clinicians for the feasibility study were specifically chosen as they worked in various Thai healthcare settings and had a wide range of characteristics. A quality check was performed to ensure the trustworthiness of the content analysis. However, one limitation is that a larger sample size would have been more beneficial when implementing the guideline. Further, randomised control trial study and patients' evaluation would help improve guideline evaluation.

This thesis provides insight into the factors that significantly influence self-harm in the UK and Thailand. Culture plays an important role in the prevalence, frequency, methods, and motives of self-harm. Despite cultural differences, the risk factors for self-harm show universal similarity across both cultures. People who self-harm experience unbearable emotional distress, which is difficult to

cope with. The guideline developed through this study, based on an assessment of culture and of psychological difficulties proved useful for clinicians when helping the patients. However, substantial research into self-harm and continued development of effective intervention should continue.

References

- Aalto, A.-M., Elovainio, M., Kivimäki, M., Uutela, A., & Pirkola, S. (2012). The Beck Depression Inventory and General Health Questionnaire as measures of depression in the general population: a validation study using the Composite International Diagnostic Interview as the gold standard. *Psychiatry research*, 197(1), 163-171.
- Adrian, M., Zeman, J., Erdley, C., Lisa, L., & Sim, L. (2011). Emotional dysregulation and interpersonal difficulties as risk factors for nonsuicidal self-injury in adolescent girls. *J Abnorm Child Psychol*, 39(3), 389-400. doi:10.1007/s10802-010-9465-3
- Al-Sharifi, A., Krynicki, C. R., & Upthegrove, R. (2015). Self-harm and ethnicity: a systematic review. *International Journal of Social Psychiatry*, 61(6), 600-612.
- Albataineh, R. T. (2017). *PSYCHOSOCIAL DETERMINANTS OF SUICIDAL IDEATION AMONG THAI WOMEN*. Kent State University,
- Allison, P., Wiley, J., & Sons. (1999). Logistic regression using the SAS system: theory and application. Cary, NC: SAS Institute.
- Alonso, J., Buron, A., Bruffaerts, R., He, Y., Posada - Villa, J., Lepine, J. P., . . . Tachimori, H. (2008). Association of perceived stigma and mood and anxiety disorders: results from the World Mental Health Surveys. *Acta Psychiatrica Scandinavica*, 118(4), 305-314.
- Ammerman, B. A., Steinberg, L., & McCloskey, M. S. (2018). Risk-taking behavior and suicidality: The unique role of adolescent drug use. *Journal of Clinical Child & Adolescent Psychology*, 47(1), 131-141.
- Andover, M. S., Pepper, C. M., Ryabchenko, K. A., Orrico, E. G., Gibb, B. E. J. S., & Behavior, L.-T. (2005). Self-mutilation and symptoms of depression, anxiety, and borderline personality disorder. 35(5), 581-591.
- Andrews, T., Martin, G., Hasking, P., & Page, A. (2013). Predictors of continuation and cessation of nonsuicidal self-injury. *Journal of Adolescent Health*, 53(1), 40-46.
- Arensman, E., Griffin, E., Daly, C., Corcoran, P., Cassidy, E., & Perry, I. J. (2018). Recommended next care following hospital-treated self-harm: Patterns and trends over time. *PloS one*, 13(3), e0193587.
- Armitage, C. J., Panagioti, M., Rahim, W. A., Rowe, R., & O'Connor, R. C. (2015). Completed suicides and self-harm in Malaysia: a systematic review. *General hospital psychiatry*, 37(2), 153-165.
- Arnett, J. J. (2014). *Adolescence and emerging adulthood*: Pearson Boston, MA.
- Ashton, M. C., & Lee, K. (2009). The HEXACO-60: A short measure of the major dimensions of personality. *Journal of personality assessment*, 91(4), 340-345.
- Ashton, M. C., Lee, K., & de Vries, R. E. (2014). The HEXACO Honesty-Humility, Agreeableness, and Emotionality Factors A Review of Research and Theory. *Personality and Social Psychology Review*, 18(2), 139-152.
- Assanangkornchai, S., Sam-Angsri, N., Rerngpongpan, S., & Lertnakorn, A. (2010). Patterns of alcohol consumption in the Thai population: results

- of the National Household Survey of 2007. *Alcohol & Alcoholism*, 45(3), 278-285.
- Austin, P. C. (2011). Optimal caliper widths for propensity - score matching when estimating differences in means and differences in proportions in observational studies. *Pharmaceutical statistics*, 10(2), 150-161.
- Austin, P. C. (2014). A comparison of 12 algorithms for matching on the propensity score. *Statistics in medicine*, 33(6), 1057-1069.
- Babyak, M. A. (2004). What you see may not be what you get: a brief, nontechnical introduction to overfitting in regression-type models. *Psychosomatic medicine*, 66(3), 411-421.
- Baer, R. A., & Krietemeyer, J. (2006). Overview of mindfulness-and acceptance-based treatment approaches. *Mindfulness-based treatment approaches: Clinician's guide to evidence base and applications*, 3-27.
- Baer, R. A., Smith, G. T., & Allen, K. B. (2004). Assessment of mindfulness by self-report the Kentucky inventory of mindfulness skills. *Assessment*, 11(3), 191-206.
- Baer, R. A., Smith, G. T., Hopkins, J., Krietemeyer, J., & Toney, L. (2006). Using self-report assessment methods to explore facets of mindfulness. *Assessment*, 13(1), 27-45.
- Bancroft, J., Skrimshire, A., & Simkin, S. (1976). The reasons people give for taking overdoses. *The British Journal of Psychiatry*, 128(6), 538-548.
- Barbour, R. S. (2001). Checklists for improving rigour in qualitative research: a case of the tail wagging the dog? *BMJ: British Medical Journal*, 322(7294), 1115.
- Barnes, M., Gunnell, D., Davies, R., Hawton, K., Kapur, N., Potokar, J., & Donovan, J. (2016). Understanding vulnerability to self-harm in times of economic hardship and austerity: a qualitative study. *BMJ open*, 6(2), e010131.
- Barratt, E. S. (1993). Impulsivity: Integrating cognitive, behavioral, biological, and environmental data.
- Batejan, K. L., Jarvi, S. M., & Swenson, L. P. (2015). Sexual orientation and non-suicidal self-injury: A meta-analytic review. *Archives of Suicide Research*, 19(2), 131-150.
- Bateman, A., & Fonagy, P. (2019). Mentalization-based treatment for borderline and antisocial personality disorder. In *Contemporary Psychodynamic Psychotherapy* (pp. 133-148): Elsevier.
- Beaton, D. E., Bombardier, C., Guillemin, F., & Ferraz, M. B. (2000). Guidelines for the process of cross-cultural adaptation of self-report measures. *Spine*, 25(24), 3186-3191.
- Beck, A. T., Dowd, E., & Leahy, R. (2002). Cognitive models of depression. *Clinical advances in cognitive psychotherapy: Theory and application*, 14, 29-61.
- Becker-Weidman, E. G., Reinecke, M. A., Jacobs, R. H., Martinovich, Z., Silva, S. G., March, J. S. J. B., & Psychotherapy, C. (2009). Predictors of hopelessness among clinically depressed youth. 37(3), 267-291.
- Benjamini, Y., & Hochberg, Y. J. J. o. t. R. s. s. B. (1995). Controlling the false discovery rate: a practical and powerful approach to multiple testing. 57(1), 289-300.
- Bennewith, O., Stocks, N., Gunnell, D., Peters, T. J., Evans, M. O., & Sharp, D. J. (2002). General practice based intervention to prevent repeat episodes of deliberate self harm: cluster randomised controlled trial. *Bmj*, 324(7348), 1254.

- Bergen, H., Hawton, K., Waters, K., Ness, J., Cooper, J., Steeg, S., & Kapur, N. J. J. o. a. d. (2012). How do methods of non-fatal self-harm relate to eventual suicide? , 136(3), 526-533.
- Bhui, K., McKenzie, K., & Rasul, F. (2007). Rates, risk factors & methods of self harm among minority ethnic groups in the UK: a systematic review. *BMC Public Health*, 7(1), 336.
- Bjureberg, J., Ljótsson, B., Tull, M. T., Hedman, E., Sahlin, H., Lundh, L.-G., . . . Gumpert, C. H. (2015). Development and Validation of a Brief Version of the Difficulties in Emotion Regulation Scale: The DERS-16. *Journal of Psychopathology and Behavioral Assessment*, 1-13.
- Bjureberg, J., Ohlis, A., Ljótsson, B., D'Onofrio, B. M., Hedman - Lagerlöf, E., Jokinen, J., . . . Hellner, C. (2018). Adolescent self - harm with and without suicidality: cross - sectional and longitudinal analyses of a Swedish regional register. *Journal of child psychology and psychiatry*.
- Bohlmeijer, E., Peter, M., Fledderus, M., Veehof, M., & Baer, R. (2011). Psychometric properties of the five facet mindfulness questionnaire in depressed adults and development of a short form. *Assessment*, 1073191111408231.
- Borrill, J., Fox, P., Flynn, M., & Roger, D. (2009). Students who self-harm: Coping style, rumination and alexithymia. *Counselling Psychology Quarterly*, 22(4), 361-372.
- Bowen, D. J., Kreuter, M., Spring, B., Cofta-Woerpel, L., Linnan, L., Weiner, D., . . . Fabrizio, C. (2009). How we design feasibility studies. *American journal of preventive medicine*, 36(5), 452-457.
- Bränström, R., Duncan, L. G., & Moskowitz, J. T. (2011). The association between dispositional mindfulness, psychological well - being, and perceived health in a Swedish population - based sample. *British journal of health psychology*, 16(2), 300-316.
- Brezo, J., Paris, J., & Turecki, G. (2006). Personality traits as correlates of suicidal ideation, suicide attempts, and suicide completions: a systematic review. *Acta Psychiatrica Scandinavica*, 113(3), 180-206.
- Brinster, R., Köttgen, A., Tayo, B. O., Schumacher, M., & Sekula, P. J. B. b. (2018). Control procedures and estimators of the false discovery rate and their application in low-dimensional settings: an empirical investigation. 19(1), 78.
- Browell, S. (2000). 'The land of smiles': people issues in Thailand. *Human Resource Development International*, 3(1), 109-119.
- Brown, S. A. (2009). Personality and non-suicidal deliberate self-harm: Trait differences among a non-clinical population. *Psychiatry research*, 169(1), 28-32.
- Brown, S. A. (2009). Personality and non-suicidal deliberate self-harm: Trait differences among a non-clinical population. *Psychiatry Res*, 169(1), 28-32. doi:10.1016/j.psychres.2008.06.005
- Brown, S. A., Williams, K., & Collins, A. (2007). Past and recent deliberate self - harm: Emotion and coping strategy differences. *Journal of Clinical Psychology*, 63(9), 791-803.
- Brunner, R., Kaess, M., Parzer, P., Fischer, G., Carli, V., Hoven, C. W., . . . Wasserman, D. (2014). Life-time prevalence and psychosocial correlates of adolescent direct self-injurious behavior: a comparative study of findings in 11 European countries. *J Child Psychol Psychiatry*, 55(4), 337-348. doi:10.1111/jcpp.12166
- Brunner, R., Parzer, P., Haffner, J., Steen, R., Roos, J., Klett, M., & Resch, F. (2007). Prevalence and psychological correlates of occasional and

- repetitive deliberate self-harm in adolescents. *Archives of pediatrics & adolescent medicine*, 161(7), 641-649.
- Buckholtz, J. W., & Meyer-Lindenberg, A. J. N. (2012). Psychopathology and the human connectome: toward a transdiagnostic model of risk for mental illness. 74(6), 990-1004.
- Burnard, P., Naiyapatana, W., & Lloyd, G. (2006). Views of mental illness and mental health care in Thailand: a report of an ethnographic study. *Journal of Psychiatric and Mental Health Nursing*, 13(6), 742-749.
- Caffrey, R. A. (1992). Caregiving to the elderly in Northeast Thailand. *Journal of Cross-Cultural Gerontology*, 7(2), 117-134.
- Caltabiano, G., & Martin, G. J. M. (2017). Mindless Suffering: the Relationship Between Mindfulness and Non-Suicidal Self-Injury. 8(3), 788-796.
- Carroll, R., Metcalfe, C., & Gunnell, D. (2014). Hospital presenting self-harm and risk of fatal and non-fatal repetition: systematic review and meta-analysis. *PLoS One*, 9(2), e89944.
- Carter, G., Page, A., Large, M., Hetrick, S., Milner, A. J., Bendit, N., . . . Fortune, S. (2016). Royal Australian and New Zealand College of Psychiatrists clinical practice guideline for the management of deliberate self-harm. *Australian & New Zealand Journal of Psychiatry*, 50(10), 939-1000.
- Chamratrithirong, A., Miller, B. A., Byrnes, H. F., Rhucharoenpornpanich, O., Cupp, P. K., Rosati, M. J., . . . Chookhare, W. (2010). Spirituality within the family and the prevention of health risk behavior among adolescents in Bangkok, Thailand. *Social science & medicine*, 71(10), 1855-1863.
- Chan, M. K., Bhatti, H., Meader, N., Stockton, S., Evans, J., O'connor, R. C., . . . Kendall, T. (2016). Predicting suicide following self-harm: systematic review of risk factors and risk scales. *The British Journal of Psychiatry*, 209(4), 277-283.
- Chan, W. S., Law, C. K., Liu, K. Y., Wong, P. W., Law, Y. W., Yip, P. S. J. S. p., & epidemiology, p. (2009). Suicidality in Chinese adolescents in Hong Kong: the role of family and cultural influences. 44(4), 278-284.
- Chang, S.-S., Steeg, S., Kapur, N., Webb, R. T., Yip, P. S., & Cooper, J. (2015). Self-harm amongst people of Chinese origin versus White people living in England: a cohort study. *BMC psychiatry*, 15(1), 79.
- Chapman, A. L., Gratz, K. L., Brown, M. Z. J. B. r., & therapy. (2006). Solving the puzzle of deliberate self-harm: The experiential avoidance model. 44(3), 371-394.
- Christopher, M. S., Christopher, V., & Charoensuk, S. (2009). Assessing "western" mindfulness among Thai Theravāda Buddhist monks. *Mental Health, Religion and Culture*, 12(3), 303-314.
- Chuaprapaisilp, A. (1997). Thai Buddhist philosophy and the action research process. *Educational Action Research*, 5(2), 331-336.
- Chung, D. T., Ryan, C. J., Hadzi-Pavlovic, D., Singh, S. P., Stanton, C., & Large, M. M. J. J. p. (2017). Suicide rates after discharge from psychiatric facilities: a systematic review and meta-analysis. 74(7), 694-702.
- Cloninger, C. R. (1987). A systematic method for clinical description and classification of personality variants: a proposal. *Archives of general psychiatry*, 44(6), 573-588.
- Cloninger, C. R., Przybeck, T. R., & Svrakic, D. M. (1991). The tridimensional personality questionnaire: US normative data. *Psychological reports*, 69(3), 1047-1057.

- Cloninger, C. R., Svrakic, N., & Svrakic, D. M. (1997). Role of personality self-organization in development of mental order and disorder. *Development and psychopathology*, 9(04), 881-906.
- Cohen, A. B. (2009). Many forms of culture. *American psychologist*, 64(3), 194.
- Cooper, J., Kapur, N., Webb, R., Lawlor, M., Guthrie, E., Mackway-Jones, K., & Appleby, L. (2005). Suicide after deliberate self-harm: A 4-year cohort study. *American Journal of Psychiatry*, 162(2), 297-303. doi:DOI 10.1176/appi.ajp.162.2.297
- Cyders, M. A., Littlefield, A. K., Coffey, S., & Karyadi, K. A. (2014). Examination of a short English version of the UPPS-P Impulsive Behavior Scale. *Addictive behaviors*, 39(9), 1372-1376.
- Cyders, M. A., & Smith, G. T. J. P. b. (2008). Emotion-based dispositions to rash action: positive and negative urgency. *134*(6), 807.
- Dalkey, N., & Helmer, O. (1963). An experimental application of the Delphi method to the use of experts. *Management science*, 9(3), 458-467.
- Davaasambu, S., Batbaatar, S., Witte, S., Hamid, P., Oquendo, M. A., Kleinman, M., . . . Gould, M. (2017). Suicidal plans and attempts among adolescents in Mongolia. *Crisis*.
- De Vries, R. E., de Vries, A., & Feij, J. A. (2009). Sensation seeking, risk-taking, and the HEXACO model of personality. *Personality and individual Differences*, 47(6), 536-540.
- Devries, K., Watts, C., Yoshihama, M., Kiss, L., Schraiber, L. B., Deyessa, N., . . . Jansen, H. (2011). Violence against women is strongly associated with suicide attempts: evidence from the WHO multi-country study on women's health and domestic violence against women. *Social science & medicine*, 73(1), 79-86.
- Diamond, I. R., Grant, R. C., Feldman, B. M., Pencharz, P. B., Ling, S. C., Moore, A. M., & Wales, P. W. (2014). Defining consensus: a systematic review recommends methodologic criteria for reporting of Delphi studies. *Journal of clinical epidemiology*, 67(4), 401-409.
- Dickman, S. J. (1990). Functional and dysfunctional impulsivity: personality and cognitive correlates. *Journal of personality and social psychology*, 58(1), 95.
- Diedenhofen, B., & Musch, J. J. I. J. o. I. S. (2016). cocron: A Web Interface and R Package for the Statistical Comparison of Cronbach's Alpha Coefficients. *11*(1).
- Dir, A. L., Karyadi, K., & Cyders, M. A. (2013). The uniqueness of negative urgency as a common risk factor for self-harm behaviors, alcohol consumption, and eating problems. *Addictive behaviors*, 38(5), 2158-2162.
- Disayavanish, C., MD, Disayavanish, P., MA, Thammaroj, T., MD, Jianmongkol, S., MD, Kamanarong, K., MD, Prueksaritanond, S., MD, . . . Prachanpanich, N., MD. (2007). A Buddhist approach to suicide prevention. *J Med Assoc Thai*, 90(8), 1680-1688.
- Doyle, L., Treacy, M. P., & Sheridan, A. J. I. j. o. m. h. n. (2015). Self - harm in young people: Prevalence, associated factors, and help - seeking in school - going adolescents. *24*(6), 485-494.
- Duggan, J., Heath, N., Hu, T. J. C., psychiatry, a., & health, m. (2015). Non-suicidal self-injury maintenance and cessation among adolescents: a one-year longitudinal investigation of the role of objectified body consciousness, depression and emotion dysregulation. *9*(1), 21.

- Eades, A., Segal, D. L., & Coolidge, F. L. (2018). Suicide risk factors among older adults: exploring thwarted belongingness and perceived burdensomeness in relation to personality and self-esteem. *The International Journal of Aging Human Development*, 0091415018757214.
- Eby, L. T., & Dobbins, G. H. (1997). Collectivistic orientation in teams: an individual and group - level analysis. *Journal of Organizational Behavior: The International Journal of Industrial, Occupational Organizational Psychology Behavior*, 18(3), 275-295.
- Edmondson, A. J., Brennan, C. A., & House, A. O. (2016). Non-suicidal reasons for self-harm: a systematic review of self-reported accounts. *Journal of affective disorders*, 191, 109-117.
- Egan, V. (2009). The Big Five : neuroticism, extraversion, openness, agreeableness and conscientiousness as an organisational scheme for thinking about aggression and violence. In *Personality, Personality Disorder and Violence : A critical appraisal*. Wiley-Blackwell: Mary McMurran and Richard Howard.
- Embree, J. F. (1950). Thailand-A loosely structured social system. *American Anthropologist*, 181-193.
- Eremenco, S. L., Cella, D., & Arnold, B. J. (2005). A comprehensive method for the translation and cross-cultural validation of health status questionnaires. *Evaluation & the health professions*, 28(2), 212-232.
- Eskin, M., Schild, A., Öncü, B., Stieger, S., & Voracek, M. (2015). A cross-cultural investigation of suicidal disclosures and attitudes in Austrian and Turkish university students. *Death studies*, 39(10), 584-591.
- Eskin, M., Voracek, M., Stieger, S., & Altinyazar, V. (2011). A cross-cultural investigation of suicidal behavior and attitudes in Austrian and Turkish medical students. *Social Psychiatry and Psychiatric Epidemiology*, 46(9), 813-823.
- Evandrou, M., Falkingham, J., Gomez-Leon, M., & Vlachantoni, A. (2016). Intergenerational flows of support between parents and adult children in Britain. *Ageing & Society*, 1-31.
- Evans, E., Hawton, K., Rodham, K., & Deeks, J. (2005). The prevalence of suicidal phenomena in adolescents: a systematic review of population-based studies. *Suicide and Life-Threatening Behavior*, 35(3), 239-250.
- Evenden, J. L. (1999). Varieties of impulsivity. *Psychopharmacology (Berl)*, 146(4), 348-361.
- Eysenck, H., & Eysenck, S. (1976). Psychoticism as a personality dimension. *Hodder& Stoughton. Londres*.
- Eysenck, H. J. (1950). *Dimensions of personality* (Vol. 5): Transaction Publishers.
- Eysenck, S. B., Pearson, P. R., Easting, G., & Allsopp, J. F. (1985). Age norms for impulsiveness, venturesomeness and empathy in adults. *Personality and Individual Differences*, 6(5), 613-619.
- Favazza, A. R. (1998). The coming of age of self-mutilation. *The Journal of nervous and mental disease*, 186(5), 259-268.
- Fliege, H., Lee, J. R., Grimm, A., & Klapp, B. F. (2009). Risk factors and correlates of deliberate self-harm behavior: a systematic review. *J Psychosom Res*, 66(6), 477-493.
doi:10.1016/j.jpsychores.2008.10.013
- Gandhi, A., Luyckx, K., Baetens, I., Kiekens, G., Sleuwaegen, E., Berens, A., . . . Claes, L. (2018). Age of onset of non-suicidal self-injury in

- Dutch-speaking adolescents and emerging adults: An event history analysis of pooled data. *Comprehensive psychiatry*, 80, 170-178.
- Ge, X., Conger, R. D., & Elder Jr, G. H. (2001). Pubertal transition, stressful life events, and the emergence of gender differences in adolescent depressive symptoms. *Developmental psychology*, 37(3), 404.
- Geulayov, G., Kapur, N., Turnbull, P., Clements, C., Waters, K., Ness, J., . . . Hawton, K. J. B. o. (2016). Epidemiology and trends in non-fatal self-harm in three centres in England, 2000–2012: findings from the Multicentre Study of Self-harm in England. 6(4), e010538.
- Gladstone, G. L., Parker, G. B., Mitchell, P. B., Malhi, G. S., Wilhelm, K., & Austin, M.-P. (2004). Implications of childhood trauma for depressed women: an analysis of pathways from childhood sexual abuse to deliberate self-harm and revictimization. *American Journal of Psychiatry*, 161(8), 1417-1425.
- Goldberg, L. R. (1992). The development of markers for the Big-Five factor structure. *Psychological assessment*, 4(1), 26.
- Goldstein, A. L., Flett, G. L., Wekerle, C., & Wall, A.-M. (2009). Personality, child maltreatment, and substance use: Examining correlates of deliberate self-harm among university students. *Canadian Journal of Behavioural Science/Revue canadienne des sciences du comportement*, 41(4), 241.
- Goodwin, R. D., Marusic, A., & Hoven, C. W. (2003). Suicide attempts in the United States: the role of physical illness. *Social science & medicine*, 56(8), 1783-1788.
- Granboulan, V., Roudot - Thoraval, F., Lemerle, S., & Alvin, P. (2001). Predictive factors of post - discharge follow - up care among adolescent suicide attempters. *Acta Psychiatrica Scandinavica*, 104(1), 31-36.
- Gratz, K. L., & Chapman, A. L. (2007). The role of emotional responding and childhood maltreatment in the development and maintenance of deliberate self-harm among male undergraduates. *Psychology of Men & Masculinity*, 8(1), 1-14. doi:10.1037/1524-9220.8.1.1
- Gratz, K. L., & Roemer, L. (2004). Multidimensional assessment of emotion regulation and dysregulation: Development, factor structure, and initial validation of the difficulties in emotion regulation scale. *Journal of Psychopathology and Behavioral Assessment*, 26(1), 41-54. doi:Doi 10.1023/B:Joba.0000007455.08539.94
- Grøholt, B., Ekeberg, Ø., & Haldorsen, T. (2000). Adolescents hospitalised with deliberate self-harm: the significance of an intention to die. *European child & adolescent psychiatry*, 9(4), 244-254.
- Grol, R., Dalhuijsen, J., Thomas, S., Rutten, G., & Mookink, H. (1998). Attributes of clinical guidelines that influence use of guidelines in general practice: observational study. *Bmj*, 317(7162), 858-861.
- Grol, R., Hutchinson, A., Eccles, M., & Grimshaw, J. (1999). Clinical guidelines, potential benefits, limitations, and harms of guidelines. *BMJ*, 318, 527-530.
- Guadagnoli, E., & Velicer, W. J. M. B. R. (1991). A comparison of pattern matching indices. 26(2), 323-343.
- Gunnell, D., Hawton, K., Ho, D., Evans, J., O'connor, S., Potokar, J., . . . Kapur, N. J. B. (2008). Hospital admissions for self harm after discharge from psychiatric inpatient care: cohort study. 337, a2278.
- Hall, G. C. N., Ibaraki, A. Y., Huang, E. R., Marti, C. N., & Stice, E. J. B. T. (2016). A meta-analysis of cultural adaptations of psychological interventions. 47(6), 993-1014.

- Hamza, C. A., Willoughby, T., & Heffer, T. (2015). Impulsivity and nonsuicidal self-injury: A review and meta-analysis. *Clin Psychol Rev*, 38, 13-24. doi:10.1016/j.cpr.2015.02.010
- Hanh, T. N., & Hoa, M. Q. (1976). *The Miracle of Being Awake*: Buddhist Publication Society.
- Harriss, L., & Hawton, K. (2011). Deliberate self-harm in rural and urban regions: a comparative study of prevalence and patient characteristics. *Social science & medicine*, 73(2), 274-281.
- Harriss, L., & Hawton, K. (2011). Deliberate self-harm in rural and urban regions: a comparative study of prevalence and patient characteristics. *Soc Sci Med*, 73(2), 274-281. doi:10.1016/j.socscimed.2011.05.011
- Hasson, F., Keeney, S., & McKenna, H. (2000). Research guidelines for the Delphi survey technique. *Journal of advanced nursing*, 32(4), 1008-1015.
- Haw, C., Casey, D., Holmes, J., & Hawton, K. (2015). Suicidal Intent and Method of Self-Harm: A Large-scale Study of Self-Harm Patients Presenting to a General Hospital. *Suicide Life Threat Behav*. doi:10.1111/sltb.12168
- Haw, C., & Hawton, K. (2011). Living alone and deliberate self-harm: a case-control study of characteristics and risk factors. *Soc Psychiatry Psychiatr Epidemiol*, 46(11), 1115-1125. doi:10.1007/s00127-010-0278-z
- Haw, C., & Hawton, K. (2011). Living alone and deliberate self-harm: a case-control study of characteristics and risk factors. *Social psychiatry and psychiatric epidemiology*, 46(11), 1115-1125.
- Hawton, K., Bergen, H., Cooper, J., Turnbull, P., Waters, K., Ness, J., & Kapur, N. (2015). Suicide following self-harm: findings from the Multicentre Study of self-harm in England, 2000-2012. *J Affect Disord*, 175, 147-151. doi:10.1016/j.jad.2014.12.062
- Hawton, K., & Harriss, L. (2008). The changing gender ratio in occurrence of deliberate self-harm across the lifecycle. *Crisis*, 29(1), 4-10. doi:10.1027/0227-5910.29.1.4
- Hawton, K., & James, A. (2005). ABC of adolescence: Suicide and deliberate self harm in young people. *BMJ: British Medical Journal*, 330(7496), 891.
- Hawton, K., Linsell, L., Adeniji, T., Sariaslan, A., & Fazel, S. (2014). Self-harm in prisons in England and Wales: an epidemiological study of prevalence, risk factors, clustering, and subsequent suicide. *The Lancet*, 383(9923), 1147-1154.
- Hawton, K., Rodham, K., Evans, E., & Harriss, L. (2009). Adolescents who self harm: a comparison of those who go to hospital and those who do not. *Child and Adolescent Mental Health*, 14(1), 24-30.
- Hawton, K., Rodham, K., Evans, E., & Weatherall, R. (2002). Deliberate self harm in adolescents: self report survey in schools in England. *British Medical Journal*, 325(7374), 1207-1211. doi:DOI 10.1136/bmj.325.7374.1207
- Hawton, K., Rodham, K., Evans, E., & Weatherall, R. (2002). Deliberate self harm in adolescents: self report survey in schools in England. *Bmj*, 325(7374), 1207-1211.
- Hawton, K., Saunders, K. E., & O'Connor, R. C. (2012). Self-harm and suicide in adolescents. *The Lancet*, 379(9834), 2373-2382.
- Hawton, K., Witt, K. G., Salisbury, T. L. T., Arensman, E., Gunnell, D., Hazell, P., . . . van Heeringen, K. J. T. L. P. (2016). Psychosocial interventions

- following self-harm in adults: a systematic review and meta-analysis. *3*(8), 740-750.
- Hawton, K., Witt, K. G., Salisbury, T. L. T., Arensman, E., Gunnell, D., Townsend, E., . . . Hazell, P. (2016). Interventions for self-harm in children and adolescents. *BJPsych Advances*, *22*(5), 286-286.
- Hayward, C. (2003). *Gender differences at puberty*: Cambridge University Press.
- Heath, N. L., Carsley, D., De Riggi, M. E., Mills, D., & Mettler, J. (2016). The relationship between mindfulness, depressive symptoms, and non-suicidal self-injury amongst adolescents. *Archives of Suicide Research*, *20*(4), 635-649.
- Hepp, J., Hilbig, B. E., Moshagen, M., Zettler, I., Schmahl, C., & Niedtfeld, I. (2014). Active versus reactive cooperativeness in Borderline Psychopathology: A dissection based on the HEXACO model of personality. *Personality and Individual Differences*, *56*, 19-23.
- Hirvikoski, T., & Jokinen, J. (2012). Personality traits in attempted and completed suicide. *European Psychiatry*, *27*(7), 536-541.
- Hofsteds, G. (1980). Culture's consequences. In: Beverly Hills, Sage Publications.
- Horn, J. L. J. P. (1965). A rationale and test for the number of factors in factor analysis. *30*(2), 179-185.
- Iemmi, V., Bantjes, J., Coast, E., Channer, K., Leone, T., McDaid, D., . . . Lund, C. J. T. L. P. (2016). Suicide and poverty in low-income and middle-income countries: a systematic review. *3*(8), 774-783.
- Ivtzan, I., Young, T., Lee, H. C., Lomas, T., Daukantaitė, D., & Kjell, O. N. (2018). Mindfulness based flourishing program: A cross-cultural study of Hong Kong Chinese and British participants. *Happiness Studies*, *19*(8), 2205-2223.
- Jackson, R., & Feder, G. (1998). Guidelines for clinical guidelines: a simple, pragmatic strategy for guideline development. *BMJ: British Medical Journal*, *317*(7156), 427.
- Jacobson, C., Batejan, K., Kleinman, M., Gould, M. J. S., & Behavior, L. T. (2013). Reasons for attempting suicide among a community sample of adolescents. *43*(6), 646-662.
- Jarvi, S., Jackson, B., Swenson, L., & Crawford, H. (2013). The impact of social contagion on non-suicidal self-injury: A review of the literature. *Archives of Suicide Research*, *17*(1), 1-19.
- Johnson, T. P., O'Rourke, D., Burris, J., & Owens, L. (2002). Culture and survey nonresponse. *Survey nonresponse*, 55-69.
- Kabat-Zinn, J. (1982). An outpatient program in behavioral medicine for chronic pain patients based on the practice of mindfulness meditation: Theoretical considerations and preliminary results. *General hospital psychiatry*, *4*(1), 33-47.
- Kabat-Zinn, J. (1994). *Wherever you go, there you are: Mindfulness meditation in everyday life*: Hyperion.
- Kabat-Zinn, J. (2000). Indra's net at work: The mainstreaming of Dharma practice in society.
- Kaiser, H. F. J. P. (1974). An index of factorial simplicity. *39*(1), 31-36.
- Kapur, N., Cooper, J., O'Connor, R. C., & Hawton, K. (2013). Non-suicidal self-injury v. attempted suicide: new diagnosis or false dichotomy? *The British Journal of Psychiatry*, *202*(5), 326-328.
- Kejkornkaew, S., Sirapo-ngam, Y., Monkong, S., Junda, T., & Wallhagen, M. I. (2016). A grounded theory study of the quality relationships between

- family caregivers and persons with head and neck cancer. *Pacific Rim International Journal of Nursing Research*, 20(2), 161-173.
- Keng, S.-L., Smoski, M. J., & Robins, C. J. (2011). Effects of mindfulness on psychological health: A review of empirical studies. *Clinical psychology review*, 31(6), 1041-1056.
- Kharsati, N., & Bhola, P. (2015). Patterns of non-suicidal self-injurious behaviours among college students in India. *International journal of social psychiatry*, 61(1), 39-49.
- Kidger, J., Heron, J., Lewis, G., Evans, J., & Gunnell, D. (2012). Adolescent self-harm and suicidal thoughts in the ALSPAC cohort: a self-report survey in England. *BMC psychiatry*, 12(1), 69.
- Kim, S. H. (2016). Suicidal ideation and suicide attempts in older adults: influences of chronic illness, functional limitations, and pain. *Geriatric nursing*, 37(1), 9-12.
- King, M., Semlyen, J., Tai, S. S., Killaspy, H., Osborn, D., Popelyuk, D., & Nazareth, I. (2008). A systematic review of mental disorder, suicide, and deliberate self harm in lesbian, gay and bisexual people. *BMC psychiatry*, 8(1), 70.
- Kipping, R. R., Smith, M., Heron, J., Hickman, M., & Campbell, R. (2014). Multiple risk behaviour in adolescence and socio-economic status: findings from a UK birth cohort. *The European Journal of Public Health*, 25(1), 44-49.
- Kleebthong, D., Chareonsuk, S., & Kristiansen, L. (2018). Thai Psychiatric Nurses' Experiences and Perceptions of the Professional Role When Caring for Older People Displaying Depressive Symptoms. *Open Journal of Nursing*, 8(01), 45.
- Kleindienst, N., Bohus, M., Ludäscher, P., Limberger, M. F., Kuenkele, K., Ebner-Priemer, U. W., . . . Schmahl, C. (2008). Motives for nonsuicidal self-injury among women with borderline personality disorder. *The Journal of Nervous and Mental Disease*, 196(3), 230-236.
- Klonsky, E. D. (2007). The functions of deliberate self-injury: a review of the evidence. *Clin Psychol Rev*, 27(2), 226-239.
doi:10.1016/j.cpr.2006.08.002
- Klonsky, E. D., & Glenn, C. R. (2009). Assessing the functions of non-suicidal self-injury: Psychometric properties of the Inventory of Statements About Self-injury (ISAS). *Journal of Psychopathology and Behavioral Assessment*, 31(3), 215-219.
- Klonsky, E. D., & May, A. M. (2015). The three-step theory (3ST): A new theory of suicide rooted in the "ideation-to-action" framework. *International Journal of Cognitive Therapy*, 8(2), 114-129.
- Klonsky, E. D., & Muehlenkamp, J. J. (2007). Self - injury: A research review for the practitioner. *Journal of clinical psychology*, 63(11), 1045-1056.
- Klonsky, E. D., Oltmanns, T. F., & Turkheimer, E. (2003). Deliberate self-harm in a nonclinical population: Prevalence and psychological correlates. *American Journal of Psychiatry*, 160(8), 1501-1508. doi:DOI 10.1176/appi.ajp.160.8.1501
- Klunklin, A., & Greenwood, J. (2005). Buddhism, the status of women and the spread of HIV/AIDS in Thailand. *Health Care for Women International*, 26(1), 46-61.
- Knipe, E. (2017). Families and households in the UK. 2016. In.
- Lahey, B. B. (2009). Public health significance of neuroticism. *American Psychologist*, 64(4), 241.

- Lamichhane, D. (2014). Design of Delphi technique integrated with social media to make consensus based on experts'.
- Larkin, C., Di Blasi, Z., & Arensman, E. (2014). Risk factors for repetition of self-harm: a systematic review of prospective hospital-based studies. *PLoS One*, 9(1), e84282. doi:10.1371/journal.pone.0084282
- Laye-Gindhu, A., & Schonert-Reichl, K. A. (2005). Nonsuicidal self-harm among community adolescents: Understanding the "whats" and "whys" of self-harm. *Journal of youth and Adolescence*, 34(5), 447-457.
- Lazzarino, A. I., Yiengprugsawan, V., Seubsman, S.-a., Steptoe, A., & Sleigh, A. C. (2014). The associations between unhealthy behaviours, mental stress, and low socio-economic status in an international comparison of representative samples from Thailand and England. *Globalization and health*, 10(1), 10.
- Leong, C. H., Wu, A. M., & Poon, M. M.-y. J. A. o. s. r. (2014). Measurement of perceived functions of non-suicidal self-injury for Chinese adolescents. 18(2), 193-212.
- Liang, S., Yan, J., Zhang, T., Zhu, C., Situ, M., Du, N., . . . Huang, Y. (2014). Differences between non-suicidal self injury and suicide attempt in Chinese adolescents. *Asian journal of psychiatry*, 8, 76-83.
- Linehan, M. (2014). *DBT? Skills training manual*: Guilford Publications.
- Liu, X., Chen, H., Liu, Z., Wang, J., & Jia, C. (2017). Prevalence of suicidal behaviour and associated factors in a large sample of Chinese adolescents. *Epidemiology and psychiatric sciences*, 1-10.
- Lockwood, J., Daley, D., Townsend, E., & Sayal, K. (2017). Impulsivity and self-harm in adolescence: a systematic review. *European child & adolescent psychiatry*, 26(4), 387-402.
- Lorenzo-Seva, U., & Ten Berge, J. M. J. M. (2006). Tucker's congruence coefficient as a meaningful index of factor similarity. 2(2), 57-64.
- Lotrakul, M. (2006). Suicide in Thailand during the period 1998-2003. *Psychiatry and Clinical Neurosciences*, 60(1), 90-95.
- Lüdtke, J., In-Albon, T., Schmeck, K., Plener, P. L., Fegert, J. M., & Schmid, M. J. J. o. a. c. p. (2018). Nonsuicidal self-injury in adolescents placed in youth welfare and juvenile justice group homes: associations with mental disorders and suicidality. 46(2), 343-354.
- Lüdtke, J., Weizenegger, B., Rauber, R., Contin, B., In-Albon, T., & Schmid, M. J. C. p. (2017). The influence of personality traits and emotional and behavioral problems on repetitive nonsuicidal self-injury in a school sample. 74, 214-223.
- Lundh, L. G., Karim, J., & Quilisch, E. (2007). Deliberate self-harm in 15-year-old adolescents: a pilot study with a modified version of the Deliberate Self-Harm Inventory. *Scand J Psychol*, 48(1), 33-41. doi:10.1111/j.1467-9450.2007.00567.x
- MacLaren, V. V., & Best, L. A. (2010). Nonsuicidal self-injury, potentially addictive behaviors, and the Five Factor Model in undergraduates. *Personality and Individual Differences*, 49(5), 521-525.
- Madge, N., Hewitt, A., Hawton, K., Wilde, E. J. d., Corcoran, P., Fekete, S., . . . Ystgaard, M. (2008). Deliberate self - harm within an international community sample of young people: comparative findings from the Child & Adolescent Self - harm in Europe (CASE) Study. *Journal of child Psychology and Psychiatry*, 49(6), 667-677.
- Marecek, J., & Senadheera, C. (2012). 'I drank it to put an end to me': Narrating girls' suicide and self-harm in Sri Lanka. *Contributions to Indian Sociology*, 46(1-2), 53-82.

- Marlatt, G. A., & Kristeller, J. L. (1999). Mindfulness and meditation.
- Mars, B., Heron, J., Crane, C., Hawton, K., Kidger, J., Lewis, G., . . . Gunnell, D. (2014). Differences in risk factors for self-harm with and without suicidal intent: Findings from the ALSPAC cohort. *Journal of affective disorders, 168*, 407-414.
- Marteau, T. M., & Bekker, H. (1992). The development of a six-item short-form of the state scale of the Spielberger State-Trait Anxiety Inventory (STAI). *Br J Clin Psychol, 31*(Pt 3), 301-306.
- Matsumoto, D., Yoo, S. H., & Fontaine, J. (2008). Mapping expressive differences around the world: The relationship between emotional display rules and individualism versus collectivism. *Journal of cross-cultural psychology, 39*(1), 55-74.
- McHale, J. P., Dinh, K. T., & Rao, N. (2014). Understanding coparenting and family systems among East and Southeast Asian-heritage families. In *Parenting across cultures* (pp. 163-173): Springer.
- McMahon, E. M., Keeley, H., Cannon, M., Arensman, E., Perry, I. J., Clarke, M., . . . Corcoran, P. (2014). The iceberg of suicide and self-harm in Irish adolescents: a population-based study. *Social psychiatry and psychiatric epidemiology, 49*(12), 1929-1935.
- Medina, C. O., Jegannathan, B., Dahlblom, K., & Kullgren, G. (2012). Suicidal expressions among young people in Nicaragua and Cambodia: a cross-cultural study. *BMC psychiatry, 12*(1), 28.
- Meecharoen, W., Sirapo-ngam, Y., Monkong, S., Oratai, P., & Northouse, L. L. J. P. R. I. J. o. N. R. (2013). Factors influencing quality of life among family caregivers of patients with advanced cancer: A causal model. *17*(4), 304-316.
- Michl, L. C., McLaughlin, K. A., Shepherd, K., & Nolen-Hoeksema, S. (2013). Rumination as a mechanism linking stressful life events to symptoms of depression and anxiety: longitudinal evidence in early adolescents and adults. *Journal of abnormal psychology, 122*(2), 339.
- Miranda, R., & Nolen-Hoeksema, S. (2007). Brooding and reflection: Rumination predicts suicidal ideation at 1-year follow-up in a community sample. *Behaviour research and therapy, 45*(12), 3088-3095.
- Moeller, F. G., Barratt, E. S., Dougherty, D. M., Schmitz, J. M., & Swann, A. C. (2001). Psychiatric aspects of impulsivity. *Am J Psychiatry, 158*(11), 1783-1793.
- Morey, C., Corcoran, P., Arensman, E., & Perry, I. J. J. B. p. h. (2008). The prevalence of self-reported deliberate self harm in Irish adolescents. *8*(1), 79.
- Morey, Y., Mellon, D., Dailami, N., Verne, J., & Tapp, A. (2016). Adolescent self-harm in the community: an update on prevalence using a self-report survey of adolescents aged 13–18 in England. *Journal of Public Health, 39*(1), 58-64.
- Morrison, R., & O'connor, R. C. (2008). A systematic review of the relationship between rumination and suicidality. *Suicide and Life-Threatening Behavior, 38*(5), 523-538.
- Mucci, N., Giorgi, G., Roncaioli, M., Perez, J. F., Arcangeli, G. J. N. d., & treatment. (2016). The correlation between stress and economic crisis: a systematic review. *12*, 983.
- Muehlenkamp, J. J., Claes, L., Havertape, L., & Plener, P. L. (2012). International prevalence of adolescent non-suicidal self-injury and

- deliberate self-harm. *Child and adolescent psychiatry and mental health*, 6(1), 10.
- Murphy, C., & MacKillop, J. (2012). Living in the here and now: interrelationships between impulsivity, mindfulness, and alcohol misuse. *Psychopharmacology*, 219(2), 527-536.
- Murray, C. D., Macdonald, S., & Fox, J. (2008). Body satisfaction, eating disorders and suicide ideation in an Internet sample of self-harmers reporting and not reporting childhood sexual abuse. *Psychology, Health and Medicine*, 13(1), 29-42.
- Nath, Y. (2017). *Non-suicidal Self-injury and Suicidal Behaviors among Youth in India: An Investigation of their Prevalence and Psychosocial Risk Factors*. McGill University,
- National Institute for Clinical Excellence. (2004). Self-harm in over 8s: short-term management and prevention of recurrence. *London: NICE*.
- National Statistic Office. (2013). Household socio-economic survey in Thailand (2002-2013).
- National Statistical Office. (2010). The 2010 Population and Housing Census (Whole Kingdom): Executive summary.
- Ness, J., Hawton, K., Bergen, H., Cooper, J., Steeg, S., Kapur, N., . . . Waters, K. (2015). Alcohol use and misuse, self-harm and subsequent mortality: an epidemiological and longitudinal study from the multicentre study of self-harm in England. *Emerg Med J*, 32(10), 793-799.
- Nicastro, R., Jermann, F., Bondolfi, G., & McQuillan, A. (2010). Assessment of mindfulness with the French version of the Kentucky Inventory of Mindfulness Skills in community and borderline personality disorder samples. *Assessment*.
- Nielsen, E., Sayal, K., & Townsend, E. J. P. O. (2016). Exploring the relationship between experiential avoidance, coping functions and the recency and frequency of self-harm. 11(7), e0159854.
- Nock, M. K. (2010). Self-injury. *Annual Review of Clinical Psychology*, 6, 339-363.
- Nolen-Hoeksema, S., & Morrow, J. (1991). A prospective study of depression and posttraumatic stress symptoms after a natural disaster: the 1989 Loma Prieta Earthquake. *Journal of personality and social psychology*, 61(1), 115.
- Nolen-Hoeksema, S., Wisco, B. E., & Lyubomirsky, S. (2008). Rethinking rumination. *Perspectives on psychological science*, 3(5), 400-424.
- O'Connor, R. C., & Kirtley, O. (2018). The integrated motivational-volitional model of suicidal behaviour. *Philosophical Transactions of the Royal Society*, 373(1754), 20170268.
- O'Connor, R. C., & Nock, M. K. (2014). The psychology of suicidal behaviour. *The Lancet Psychiatry*, 1(1), 73-85.
- O'Connor, R. C., Rasmussen, S., & Hawton, K. (2010). Predicting depression, anxiety and self-harm in adolescents: The role of perfectionism and acute life stress. *Behaviour research and therapy*, 48(1), 52-59.
- O'Connor, R. C., Rasmussen, S., & Hawton, K. (2012). Distinguishing adolescents who think about self-harm from those who engage in self-harm. *The British Journal of Psychiatry*, 200(4), 330-335.
- O'Connor, R. C., Wetherall, K., Cleare, S., Eschle, S., Drummond, J., Ferguson, E., . . . O'Carroll, R. E. (2018). Suicide attempts and non-suicidal self-harm: national prevalence study of young adults. *BJPsych Open*, 4(3), 142-148.

- O'Connor, R. C. (2011). Towards an integrated motivational–volitional model of suicidal behaviour. *International handbook of suicide prevention: Research, policy practice, 1*, 181-198.
- O'Connor, R. C., & Kirtley, O. J. (2017). Socioeconomic disadvantage and suicidal behaviour: psychological factors. *Socioeconomic Disadvantage and Suicidal Behaviour*, 94.
- Office for National Statistics. (2011). The 2011 Rural-Urban Classification for Output Areas in England.
- Organization, W. H. (2017). mhGAP intervention guide for mental, neurological and substance use disorders in non-specialized health settings. Version 1.0. Geneva, Switzerland: WHO, 2010. In.
- Pachankis, J. E., & Goldfried, M. R. (2013). Clinical issues in working with lesbian, gay, and bisexual clients.
- Page, R. M., Yanagishita, J., Suwanteerangkul, J., Zarco, E. P., Mei-Lee, C., & Miao, N.-F. (2006). Hopelessness and loneliness among suicide attempters in school-based samples of Taiwanese, Philippine and Thai adolescents. *School psychology international*, 27(5), 583-598.
- Paholpak, P., Rangseekajee, P., Arunpongpaisal, S., Piyavhatkul, N., Thepsuthammarat, K., & Paholpak, S. J. J. o. t. M. A. o. T. (2012). Characteristics and burden of hospitalization because of intentional self-harm: Thai National, Hospital-Based Data for 2010. 95(7), 156-162.
- Papadopoulos, C., Foster, J., & Caldwell, K. (2013). 'Individualism–collectivism' as an explanatory device for mental illness stigma. *Community mental health journal*, 49(3), 270-280.
- Parent, A.-S., Teilmann, G., Juul, A., Skakkebaek, N. E., Toppari, J., & Bourguignon, J.-P. J. E. r. (2003). The timing of normal puberty and the age limits of sexual precocity: variations around the world, secular trends, and changes after migration. 24(5), 668-693.
- Patil, V. H., Singh, S. N., Mishra, S., & Donavan, D. T. J. V. U. H. S. F. K. E. P. H. (2007). Parallel analysis engine to aid determining number of factors to retain [Computer software].
- Patton, G. C., Hemphill, S. A., Beyers, J. M., Bond, L., Toumbourou, J. W., McMorris, B. J., & Catalano, R. F. (2007). Pubertal stage and deliberate self-harm in adolescents. *Journal of the American Academy of Child & Adolescent Psychiatry*, 46(4), 508-514.
- Pawa, D., & Areesantichai, C. (2017). Methamphetamine Injection among People Who Inject Drugs in Bangkok, Thailand. *EXECUTIVE EDITOR*, 5(7), 103.
- Pawa, D., & Areesantichai, C. (2017). Socio Demographic Profiles and Drug Use Patterns of People Who Inject Drug in Bangkok, Thailand. *EXECUTIVE EDITOR*, 8(1), 178.
- Pearce, N. (2016). Analysis of matched case-control studies. *bmj*, 352, i969.
- Perez, J., Venta, A., Garnaat, S., & Sharp, C. (2012). The Difficulties in Emotion Regulation Scale: Factor structure and association with nonsuicidal self-injury in adolescent inpatients. *Journal of Psychopathology and Behavioral Assessment*, 34(3), 393-404.
- Petrova, P. K., Cialdini, R. B., & Sills, S. J. (2007). Consistency-based compliance across cultures. *Journal of Experimental Social Psychology*, 43(1), 104-111.
- Petry, C. J., Ong, K. K., Hughes, I. A., Acerini, C. L., & Dunger, D. B. J. A. d. (2018). The association between age at menarche and later risk of gestational diabetes is mediated by insulin resistance. 55(8), 853-859.

- Plener, P. L., Schumacher, T. S., Munz, L. M., & Groschwitz, R. C. (2015). The longitudinal course of non-suicidal self-injury and deliberate self-harm: a systematic review of the literature. *Borderline Personality Disorder and Emotion Dysregulation*, 2(1), 2.
- Plutchik, R., & Van Praag, H. (1989). The measurement of suicidality, aggressivity and impulsivity. *Progress in Neuro-Psychopharmacology Biological Psychiatry*.
- Polanco-Roman, L., Jurska, J., Quiñones, V., & Miranda, R. (2015). Brooding, reflection, and distraction: Relation to non-suicidal self-injury versus suicide attempts. *Archives of Suicide Research*, 19(3), 350-365.
- Polit, D. F., Beck, C. T., Owen, S. V. J. R. i. n., & health. (2007). Is the CVI an acceptable indicator of content validity? Appraisal and recommendations. 30(4), 459-467.
- Portzky, G., De Wilde, E. J., & van Heeringen, K. (2008). Deliberate self-harm in young people: differences in prevalence and risk factors between the Netherlands and Belgium. *Eur Child Adolesc Psychiatry*, 17(3), 179-186. doi:10.1007/s00787-007-0652-x
- Prasatkul, P. (2015). *The Situation of the Thai Elderly 2014*. Bangkok: Amarin Printing Publishing.
- Prateeptheeranun, W. (2014). Rate of Suicide and Factors Related to Suicidal Behavior at Chaophayayommarat Hospital Suphanburi Province. *The Journal of Psychiatric Nursing*, 28, 90-103.
- Prior, M., Guerin, M., & Grimmer - Somers, K. (2008). The effectiveness of clinical guideline implementation strategies - a synthesis of systematic review findings. *Journal of evaluation in clinical practice*, 14(5), 888-897.
- Quinlivan, L., Cooper, J., Meehan, D., Longson, D., Potokar, J., Hulme, T., . . . Riseborough, E. (2017). Predictive accuracy of risk scales following self-harm: multicentre, prospective cohort study. *The British Journal of Psychiatry*, 210(6), 429-436.
- Rasmussen, S., Hawton, K., Philpott-Morgan, S., & O'connor, R. C. (2016). Why do adolescents self-harm? *Crisis*.
- Rasmussen, S. A., Fraser, L., Gotz, M., MacHale, S., Mackie, R., Masterton, G., . . . O'connor, R. C. J. B. J. o. C. P. (2010). Elaborating the cry of pain model of suicidality: Testing a psychological model in a sample of first - time and repeat self - harm patients. 49(1), 15-30.
- Rello, L., & Bigham, J. P. (2017). *Good Background Colors for Readers: A Study of People with and without Dyslexia*. Paper presented at the Proceedings of the 19th International ACM SIGACCESS Conference on Computers and Accessibility.
- Rhodes, S. D., Bowie, D., Hergenrather, K. C. J. J. o. E., & Health, C. (2003). Collecting behavioural data using the world wide web: considerations for researchers. 57(1), 68-73.
- Roberts, B. W. (2009). Back to the future: Personality and assessment and personality development. *Journal of Research in Personality*, 43(2), 137-145.
- Rodham, K., Hawton, K., & Evans, E. (2004). Reasons for deliberate self-harm: comparison of self-poisoners and self-cutters in a community sample of adolescents. *Journal of the American Academy of Child & Adolescent Psychiatry*, 43(1), 80-87.
- Rogers, M. L., & Joiner, T. E. (2017). Rumination, suicidal ideation, and suicide attempts: a meta-analytic review. *Review of General Psychology*, 21(2), 132-142.

- Rogol, A. D., Roemmich, J. N., & Clark, P. A. J. J. o. a. h. (2002). Growth at puberty. *31*(6), 192-200.
- Rosenberg, E., Jullamate, P., & Azeredo, Z. (2009). Informal caregiving: cross-cultural applicability of the person-environment model. *Health Sociology Review, 18*(4), 399-411.
- Rossow, I., Ystgaard, M., Hawton, K., Madge, N., Van Heeringen, K., De Wilde, E. J., . . . Behavior, L.-T. (2007). Cross-national comparisons of the association between alcohol consumption and deliberate self-harm in adolescents. *37*(6), 605-615.
- Rowe, S. L., French, R. S., Henderson, C., Ougrin, D., Slade, M., & Moran, P. (2014). Help-seeking behaviour and adolescent self-harm: a systematic review. *Australian & New Zealand Journal of Psychiatry, 48*(12), 1083-1095.
- Rungreangkulkij, S., Kotnara, I., & Chirawatkul, S. (2012). It is easy to start drinking.... But too difficult to stop (เริ่ม ดื่ม สุรา เป็น เรื่อง ง่าย... แต่ แส่น ล้า มาก ใน การ เลิก ดื่ม สุรา). *Journal of Nursing Science and Health, 35*(2), 1-14.
- Rusticus, S. A., & Lovato, C. Y. (2014). Impact of sample size and variability on the power and type I error rates of equivalence tests: A simulation study. *Practical Assessment, Research & Evaluation, 19*(11), 2.
- Salerno, M., Argenziano, A., Di Maio, S., Gasparini, N., Formicola, S., De Filippo, G., & Tenore, A. J. D. c. (1997). Pubertal growth, sexual maturation, and final height in children with IDDM: effects of age at onset and metabolic control. *20*(5), 721-724.
- Samuel, D. B., & Widiger, T. A. (2008). A meta-analytic review of the relationships between the five-factor model and DSM-IV-TR personality disorders: A facet level analysis. *Clinical psychology review, 28*(8), 1326-1342.
- Saulsman, L. M., & Page, A. C. (2004). The five-factor model and personality disorder empirical literature: A meta-analytic review. *Clin Psychol Rev, 23*(8), 1055-1085. doi:10.1016/j.cpr.2002.09.001
- Scoliers, G., Portzky, G., Madge, N., Hewitt, A., Hawton, K., De Wilde, E. J., . . . Fekete, S. (2009). Reasons for adolescent deliberate self-harm: a cry of pain and/or a cry for help? *Social psychiatry and psychiatric epidemiology, 44*(8), 601-607.
- Selby, E. A., & Joiner Jr, T. E. (2009). Cascades of emotion: The emergence of borderline personality disorder from emotional and behavioral dysregulation. *Review of General Psychology, 13*(3), 219.
- Shaw, H., Ellis, D. A., Kendrick, L.-R., Ziegler, F., & Wiseman, R. (2016). Predicting smartphone operating system from personality and individual differences. *Cyberpsychology, Behavior, and Social Networking, 19*(12), 727-732.
- Silva, S. A., Colucci, E., Mendis, J., Kelly, C. M., Jorm, A. F., & Minas, H. (2016). Suicide first aid guidelines for Sri Lanka: a Delphi consensus study. *International journal of mental health systems, 10*(1), 53.
- Singhal, A., Ross, J., Seminog, O., Hawton, K., & Goldacre, M. J. (2014). Risk of self-harm and suicide in people with specific psychiatric and physical disorders: comparisons between disorders using English national record linkage. *J R Soc Med, 107*(5), 194-204. doi:10.1177/0141076814522033
- Skegg, K. (2005). Self-harm. *The Lancet, 366*(9495), 1471-1483.
- Skulmoski, G. J., Hartman, F. T., & Krahn, J. (2007). The Delphi method for graduate research. *Journal of information technology education, 6*, 1.

- Skulmoski, G. J., Hartman, F. T., & Krahn, J. (2007). The Delphi method for graduate research. *Journal of Information Technology Education: Research*, 6, 1-21.
- Spangenberg, L., Zenger, M., Garcia-Torres, F., Mueller, V., Reck, M., Mehnert, A., . . . management, s. (2016). Dimensionality, Stability, and Validity of the Beck Hopelessness Scale in Cancer Patients Receiving Curative and Palliative Treatment. *51*(3), 615-622.
- Staples, J. (2012). Introduction: suicide in South Asia: ethnographic perspectives. In: SAGE Publications Sage India: New Delhi, India.
- Steeg, S., Haigh, M., Webb, R. T., Kapur, N., Awenat, Y., Gooding, P., . . . Cooper, J. (2016). The exacerbating influence of hopelessness on other known risk factors for repeat self-harm and suicide. *Journal of affective disorders*, 190, 522-528.
- Stewart, S. M., Felice, E., Claassen, C., Kennard, B. D., Lee, P. W., & Emslie, G. J. (2006). Adolescent suicide attempters in Hong Kong and the United States. *Social Science & Medicine*, 63(2), 296-306.
- Storey, P., Hurry, J., Jowitt, S., Owens, D., & House, A. (2005). Supporting young people who repeatedly self-harm. *The journal of the Royal Society for the Promotion of Health*, 125(2), 71-75.
- Streiner, D. (2003). Starting at the beginning: an introduction to coefficient alpha and internal consistency. *Journal of personality assessment*, 80(1), 99-103.
- Su, M. H., Chen, H. C., Lu, M. L., Feng, J., Chen, I. M., Wu, C. S., . . . Kuo, P. H. (2018). Risk profiles of personality traits for suicidality among mood disorder patients and community controls. *Acta Psychiatrica Scandinavica*, 137(1), 30-38.
- Suh, E., Diener, E., Oishi, S., & Triandis, H. C. (1998). The shifting basis of life satisfaction judgments across cultures: Emotions versus norms. *Journal of personality and social psychology*, 74(2), 482.
- Sukhatunga, K. (2011). A History of Clinical Psychology in Thailand. *Clinical Psychology Journal*, 40(1).
- Swannell, S. V., Martin, G. E., Page, A., Hasking, P., & St John, N. J. (2014). Prevalence of nonsuicidal self-injury in nonclinical samples: systematic review, meta-analysis and meta-regression. *Suicide Life Threat Behav*, 44(3), 273-303. doi:10.1111/sltb.12070
- Swannell, S. V., Martin, G. E., Page, A., Hasking, P., & St John, N. J. (2014). Prevalence of nonsuicidal self - injury in nonclinical samples: Systematic review, meta - analysis and meta - regression. *Suicide and Life - Threatening Behavior*, 44(3), 273-303.
- Swenson, C. R., & Choi-Kain, L. W. J. A. J. o. P. (2015). Mentalization and dialectical behavior therapy. *69*(2), 199-217.
- Taber, K. S. (2017). The use of cronbach's alpha when developing and reporting research instruments in science education. *Research in Science Education*, 1-24.
- Taliaferro, L. A., & Muehlenkamp, J. J. (2015). Factors associated with current versus lifetime self - injury among high school and college students. *Suicide and Life - Threatening Behavior*, 45(1), 84-97.
- Taylor, P. J., Gooding, P., Wood, A. M., & Tarrier, N. (2011). The role of defeat and entrapment in depression, anxiety, and suicide. *Psychological bulletin*, 137(3), 391.
- Terwiel, B. J. (1972). *The Five Precepts and Ritual in Rural Thailand: Siam society*.
- Thai National Statistic Office. (2007). Statictical Standard.

- Thanoi, W. (2009). *Adolescent Suicide Risk Behaviors Predictive Model: Testing a Model of Negative Life Events, Rumination, Emotional Distress, Resilience and Social Support*. Mahidol University,
- Thaweessit, S. (2004). The fluidity of Thai women's gendered and sexual subjectivities. *Culture, Health & Sexuality*, 6(3), 205-219.
- Thielmann, I., Hilbig, B. E., & Niedtfeld, I. (2014). Willing to give but not to forgive: Borderline personality features and cooperative behavior. *Journal of personality disorders*, 28(6), 778-795.
- Tonkin, R., & Income, H. (2015). The Effects of Taxes and Benefits on Household Income, Financial Year Ending 2014.
- Townsend, E., Hawton, K., Altman, D. G., Arensman, E., Gunnell, D., Hazell, P., . . . Van Heeringen, K. (2001). The efficacy of problem-solving treatments after deliberate self-harm: meta-analysis of randomized controlled trials with respect to depression, hopelessness and improvement in problems. *Psychological medicine*, 31(6), 979-988.
- Townsend, E. J. E.-b. m. h. (2014). Self-harm in young people. *Evidence-based mental health*, 17(4), 97-99.
- Treynor, W., Gonzalez, R., & Nolen-Hoeksema, S. (2003). Rumination reconsidered: A psychometric analysis. *Cognitive Therapy and Research*, 27(3), 247-259.
- Triandis, H. C. (2001). Individualism - collectivism and personality. *Journal of personality*, 69(6), 907-924.
- Triandis, H. C., Bontempo, R., Villareal, M. J., Asai, M., & Lucca, N. (1988). Individualism and collectivism: Cross-cultural perspectives on self-in-group relationships. *Journal of personality and Social Psychology*, 54(2), 323.
- Tucker, L. R. (1951). *A method for synthesis of factor analysis studies*. Retrieved from
- Ukosakul, M. (2005). *The significance of 'face' and politeness in social interaction as revealed through Thai 'face' idioms* (Vol. 139).
- Vatcheva, K. P., Lee, M., McCormick, J. B., & Rahbar, M. H. J. E. (2016). Multicollinearity in regression analyses conducted in epidemiologic studies. 6(2).
- Vize, C. E., Miller, J. D., & Lynam, D. R. (2018). FFM facets and their relations with different forms of antisocial behavior: An expanded meta-analysis. *Journal of Criminal Justice*, 57, 67-75.
- Völlm, B. A., & Dolan, M. C. (2009). Self-harm among UK female prisoners: A cross-sectional study. *The journal of forensic psychiatry & psychology*, 20(5), 741-751.
- Warapornmongkholkul, A., Howteerakul, N., Suwannapong, N., & Soparattanapaisarn, N. J. J. o. H. R. (2018). Self-efficacy, social support, and quality of life among primary family-member caregivers of patients with cancer in Thailand. 32(2), 111-122.
- Webb, R. T., Kontopantelis, E., Doran, T., Qin, P., Creed, F., & Kapur, N. J. J. o. p. r. (2012). Risk of self-harm in physically ill patients in UK primary care. 73(2), 92-97.
- Wei, S., Li, H., Hou, J., Chen, W., Tan, S., Chen, X., & Qin, X. (2018). Comparing characteristics of suicide attempters with suicidal ideation and those without suicidal ideation treated in the emergency departments of general hospitals in China. *Psychiatry research*, 262, 78-83.

- Weller, J. A., & Tikir, A. (2011). Predicting domain - specific risk taking with the HEXACO personality structure. *Journal of Behavioral Decision Making*, 24(2), 180-201.
- Whiteside, S. P., & Lynam, D. R. (2001). The Five Factor Model and impulsivity: using a structural model of personality to understand impulsivity. *Personality and Individual Differences*, 30(4), 669-689. doi:10.1016/S0191-8869(00)00064-7
- Wild, L. G., Flisher, A. J., & Lombard, C. (2004). Suicidal ideation and attempts in adolescents: associations with depression and six domains of self-esteem. *Journal of adolescence*, 27(6), 611-624.
- Williams, J. M. G., Hassanyeh, F. J. P., & Differences, I. (1983). Deliberate self-harm, clinical history and extreme scoring on the EPQ. 4(3), 347-350.
- Williams, J. M. G., & Pollock, L. R. (2000). The psychology of suicidal behaviour. *The international handbook of suicide and attempted suicide*, 79-93.
- Williams, J. M. G., & Williams, M. (2002). *Suicide and attempted suicide: Understanding the cry of pain*: Mark Williams.
- Williams, L., & Guest, M. P. (2005). Attitudes toward marriage among the urban middle-class in Vietnam, Thailand, and the Philippines. *Journal of Comparative Family Studies*, 163-186.
- Williams, S. C., Schmaltz, S. P., Castro, G. M., Baker, D. W. J. T. J. C. J. o. Q., & Safety, P. (2018). Incidence and method of suicide in hospitals in the United States. 44(11), 643-650.
- Winzer, L., & Gray, R. S. (2018). The Role of Buddhist Practices in Happiness and Health in Thailand: A Structural Equation Model. *Journal of Happiness Studies*, 1-15.
- Wolz, I., Agüera, Z., Granero, R., Jiménez-Murcia, S., Gratz, K., Menchon, J. M., & Fernandez-Aranda, F. (2015). Emotion regulation in disordered eating: Psychometric properties of the Difficulties in Emotion Regulation Scale among Spanish adults and its interrelations with personality and clinical severity. *Frontiers in psychology*, 6, 907.
- Wongtongkam, N., Ward, P. R., Day, A., & Winefield, A. H. (2014). The influence of protective and risk factors in individual, peer and school domains on Thai adolescents' alcohol and illicit drug use: A survey. *Addictive Behaviors*, 39(10), 1447-1451.
- Woolf, S. H., Grol, R., Hutchinson, A., Eccles, M., & Grimshaw, J. (1999). Potential benefits, limitations, and harms of clinical guidelines. *British Medical Journal*, 318(7182), 527.
- Woolf, S. H., Grol, R., Hutchinson, A., Eccles, M., & Grimshaw, J. J. B. (1999). Potential benefits, limitations, and harms of clinical guidelines. 318(7182), 527-530.
- World Health Organization. (2007). WHO-AIMS report on mental health system in Thailand.
- World Health Organization. (2014). *Preventing suicide: a global imperative*: World Health Organization.
- World Health Organization. (2017). Primary health care systems (PRIMASYS): case study from Thailand, abridged version.
- Wright, K. B. J. J. o. c.-m. c. (2005). Researching Internet-based populations: Advantages and disadvantages of online survey research, online questionnaire authoring software packages, and web survey services. 10(3), JCMC1034.
- Wuensch, K. (2016). Comparing two groups' factor structures: Pearson r and the coefficient of congruence. In.

- Yeung, W.-J. J., Desai, S., & Jones, G. W. (2018). Families in southeast and South Asia. *Annual Review of Sociology*(0).
- Yiengprugsawan, V., Seubsman, S.-a., Khamman, S., Lim, L.-Y., Sleight, A. C., & Team, T. C. S. (2010). Personal wellbeing index in a national cohort of 87,134 Thai adults. *Social Indicators Research*, 98(2), 201-215.
- Yiengprugsawan, V., Seubsman, S.-a., Sleight, A. C., & Team, T. C. S. (2012). Health, well-being, and social indicators among monks, prisoners, and other adult members of an open university cohort in Thailand. *Journal of religion and health*, 51(3), 925-933.
- You, J., Lin, M.-P., & Leung, F. J. J. o. a. (2013). Functions of nonsuicidal self-injury among Chinese community adolescents. 36(4), 737-745.
- Yu, M., & Clark, M. (2015). Investigating Mindfulness, Borderline Personality Traits, and Well-Being in a Nonclinical Population. *Psychology*, 6(10), 1232.
- Yusainy, C. (2013). *Overcoming aggression: musing on mindfulness and self-control*. University of Nottingham,
- Yusainy, C., & Lawrence, C. (2014). Relating mindfulness and self-control to harm to the self and to others. *Personality and Individual Differences*, 64, 78-83.

Appendices

Appendix 1: Participant Information for Quantitative Studies

PARTICIPANT INFORMATION

Project Title: Coping with upsetting feelings: An examination of personality, impulsivity, rumination, mindfulness, and emotional regulation influences on deliberate self-harm in Thailand and the UK.

Researcher: Rungarun Anupansupsai

Room 14, B floor, Yang Fujia Building, Jubilee Campus, The University of Nottingham. E-mail msxra8@nottingham.ac.uk Telephone 07751690666

Supervisor: Vincent Egan

E-mail vincent.egan@nottingham.ac.uk Telephone 0115 846 6627
6627vincent.egan@nottingham.ac.uk Telephone 0115 846 6627

Ethics Reference Number: 206

This is an invitation to take part in a research study examining distress management in the UK and Thailand. This information is designed to tell you what it will involve.

Your participation is voluntary, and you may change your mind about being involved, or decline to answer a particular question without giving a reason. You are free to withdraw at any point before or during the study. Please note that as these are anonymous questionnaires, once you have finished the questionnaire and submitted your answers, it is not possible to withdraw the data.

What is the project studying?

This is a cross-cultural study examining how people cope with their upsetting feelings, comparing the UK and Thailand. The study focuses on individual differences like personality, impulsivity, rumination, mindfulness, and emotional regulation as possible influences on deliberate self-harm (DSH).

“Mindfulness” means paying attention in a particular way on purpose, in the present moment, and nonjudgmentally.

“Emotion regulation” means processes involved in monitoring, evaluating, and modulating emotional reactions in order to accomplish one’s goals.

The aim of this research is to examine the characteristics and risk factors for DSH, and to analyse possible associations and differences between psychological models of DSH for the UK and Thailand.

Who is being asked to take part, and why?

This research focuses on DSH, which has a high incidence in adolescents and young adults. Anyone who has had distressing feelings at some point, is 18-40 years old, and responds to the online or poster advertising the study is eligible to participate.

In order to better understand the risk factors of DSH we will compare persons from the UK and Thailand. Persons with a history of DSH will be identified and compared to those who do not have such a history. Comparing distinctly different countries (i.e. the UK and Thailand) will allow us to examine if the psychological models assumed to underlie DSH apply to both societies or not, and will also inform a better understanding of risk factors and protective factors for DSH in developed and developing countries.

There is small incentive for participation; participants will be entered into a random draw to win £5 where the chances of winning the lottery are approximately 1 in 5.

What will I be asked to do?

You will be asked to complete an online survey that will take 20-25 minutes. If you defer finishing the survey, the research allows you to pause answering questions and return to finish them later. Some questions are personal, but you do not have to answer them if you do not want to. The study is completely anonymous: we do not gather information which enables us to identify who you are from your responses.

Will the research be of any personal benefit to me?

The research will not directly benefit you. However, it may help us to understand risk and protective factors underlying self-harm, which may improve early prevention and appropriate treatment for those who suffer from DSH.

What will happen to the information I provide?

We gather information for many aspects of DSH, but intentionally do not gather information that can specifically identify you by your demographic data. All information collected is necessary for the study, which is collected via the Bristol Online Survey (BOS). The BOS uses a high security system to protect this information, access to which is strictly limited to the researchers. All information will also be stored on a database behind a firewall, password

protected, and strictly confidential. Data will not be released to a third party, and will be stored in a format which is password-protected, on the university network. After the project has been written-up, the anonymous electronic data will be kept in the university archive. This is a model of the best current IT security.

What will you do with the data?

The results of this study will help us understand how different people manage difficult feelings, and what the risk factors for DSH are. Testing associations between psychological models (personality, impulsivity, rumination, emotion regulation and mindfulness) and DSH will indicate if risky characteristics and protective factors that mediate DSH in the UK are also similar influences in Thailand. These will allow us to research appropriate psychological treatment for individuals who have difficult feelings or self-harm in the next study.

This research is part of a PhD, and will be published in an anonymous form in the thesis and scientific publications arising from the work.

If you desire to know the result of this research, you can contact the researcher to receive the result when they become available (msxra8@nottingham.com).

If you have any questions or concerns, please don't hesitate to ask. We can be contacted before and after your participation at the above address.

What should I do if participating in this study generates upsetting feelings?

If you have any personal, emotional, behavioral, or self-harm problems, you can contact the NSH website (<http://www.nhs.uk/Conditions/Self-injury/Pages/Treatment.aspx>) and the Samaritan's 24-hour helpline (116 123, free to call) to access to the advice and support.

THANK YOU FOR YOUR PARTICIPATION

If you have any queries or complaints about this study, please contact the student's supervisor (Dr Vincent Egan, Vincent.egan@nottingham.ac.uk) in the first instance. If this does not resolve the query to your satisfaction, please write to the Administrator to the Division of Psychiatry & Applied Psychology's Research Ethics Committee (MS-DPAPEthics@nottingham.ac.uk, +44 (0)115 8232214) who will pass your query to the Chair of the Committee

We believe there are no known risks associated with this research study; however, as with any online related activity, the risk of a breach is always possible. We will do everything possible to ensure your answers in this study will remain anonymous. We minimize risks via the strong on-line security used by the University of Nottingham.

Appendix 2: Participant Consent for Quantitative Studies

Participant Consent

	Yes	No
Have you read and understood the Participant Information?	☐	☐
I agree to answer a questionnaire	☐	☐
Do you know how to contact the researcher if you have questions about this study?	☐	☐
Do you understand that you are free to withdraw from the study without giving a reason?	☐	☐
Do you understand that for anonymous questionnaire studies, once you have completed the study and submitted your questionnaire, the data cannot be withdrawn?	☐	☐
Do you give permission for your data from this study to be shared with other researchers in the future provided that your anonymity is protected?	☐	☐
Do you understand that non-identifiable data from this study might be used in academic research reports or publications?	☐	☐

By clicking the button below I indicate that I understand what the study involves and that my answers are anonymous. I agree to take part and I understand that once I click 'submit' at the end of the questionnaire it will not be possible to withdraw the data.

☐ I agree

Appendix 3: Questionnaires for Quantitative Studies

Demographics Questions

1. How old are you? _____
 2. You are _____
 - Native of the UK
 - Native of Thailand
 - Other
 3. What is the highest degree or level of education you have completed?
 - No schooling completed
 - Primary Education
 - Secondary Education (GCSE/O- Levels)
 - Post-Secondary Education (College, A-Levels, NVQ3 or below, or similar)
 - Vocational Qualification (Diploma, Certificate, BTEC, NVQ 4 and above, or similar)
 - Bachelor's Degree
 - Master's degree
 - Professional/doctorate Degree
 - Others, please specify _____
 4. What is your marital status?
 - Single, never married
 - Married
 - Domestic partnership
 - Widowed
 - Divorced
 - Separated
 - Remarried
 - Others, please specify _____
 5. Employment Status: Are you currently...?
 - Self-employed
 - Employed
 - Unemployed
 - A student
 - A homemaker
 - Others, please specify _____
- In case you're employed, please specify your occupation
- Professional occupations e.g. university academic staff, medical or dental practitioners, economists, lawyer, architect, self-employed professional
 - Managerial and technical occupations e.g. nurse, medical technicians, dental auxiliaries, physiotherapists, police officers, teachers, shop manager, computer operation
 - Skilled manual/non-manual occupations e.g. clerks, cashiers, retail staff, office worker, electricians, vehicle mechanics, self-employed non professional

- Partly-skilled occupations e.g. bus conductor, postmen, machine operators, security guards and trawler men
 - Unskilled occupation e.g. road sweepers, cleaners , porter, labourers
 - Others, please specify_____
6. What is your monthly household income? (for those in the U.K.)
- less than £ 801
 - £1601 - £2700
 - £2701 - £5100
 - More than £ 5100
- What is your monthly household income? (for those in Thailand)*
- 11,000 baht or less
 - 11,001 baht - 17,000 baht
 - 17,001 baht - 23,000 baht
 - 23,001 baht - 43,000 baht
 - 43,001 baht or more
7. You consider yourself to be...
- Heterosexual or straight
 - Homosexual e.g. gay, lesbian
 - bisexual
 - others, please specify_____
- What is your gender?
- male
 - female
 - Transgender
 - others, please specify_____
- If you are transsexual, what is your gender at birth?
- male
 - female
 - others, please specify_____
8. Who do you live with?
- Live alone
 - Live with someone such as family, friends, girl/boyfriend
 - Friends (someone you do not have a romantic relationship with)
 - Partner (boyfriend or girl friend)
 - Husband/wife
 - Parents
 - Father
 - Mother
 - Single father
 - Single mother
 - Brother
 - Sister
 - Child/Children
 - Grandfather
 - Others, please specify_____
 - others, please specify_____

9. Where do you live? Are you consider yourself that live in.....(for UK)

- urbanized province centers, Bangkok, Pattaya, or municipal area
- Rural area; small town & fringe, village, hamlets and isolated dwellings

Where do you live? Are you consider yourself that live in. (for Thailand)

- *Urban area; conurbation and city & town*
- *rural area, outside municipal area*

10. Have you ever seen a doctor about any personal, emotional, behavioral, or mental problems?

- Yes
- No

If no, do you think you should see a doctor about any personal, emotional, or mental problems?

- No
- Yes

11. Do you have chronic physical illness?

- No
- Yes, please specify_____

Habits

12. Have you ever been really drunk by drinking too much alcohol?

- No
- Yes

13. Have you ever used drugs or any substances ?

- No, never
- Yes, I have used more than a decade ago, please specify_____
- Yes, I have used more than a year ago, please specify_____
- Yes, I have used more than a month ago, please specify_____
- Yes, I have used more than a week ago, please specify_____
- Yes, I have used in the last day, please specify_____

14. Have you been arrested for any crime?

- No, never
- Yes, I have been cautioned, please specify _____
- Yes, I have been arrested, please specify_____
- Yes, I have been convicted, please specify_____

Self-harming behavior

Have you ever deliberately taken an overdose (e.g. of pills or other medication) or tried to harm yourself in some other way (such as cut yourself)?

- No
- Yes, please specify

	How many times did you do this?				How old were you when you first did this?	How long ago when you did this last time? (for example 3 months ago)	Did this lead you being admitted to hospital?		Did others know about this?	
	Never	Once	More than once	Many times			No	Yes	No	Yes
Take an overdosed										
Cut yourself										
Stuck yourself with pins, needles, etc.										
Punched or hit yourself										
Pulled your hair										
Banged your head, arms, or legs										
Bitten yourself										
Broken your bones										
Burned yourself (such as cigarette)										
Carved words or symbols on your skin										
Scratched your skin										
Prevented wounds from healing										
Jumped from height										
Consumed recreational drug										
Swallowed something inedible (substance or objects)										
Hanged yourself										
Suffocated yourself										
Electrocuted yourself (such as electric shock)										
Starved yourself										
Shot yourself										
Tried to drown yourself										
Drove at high speeds to have an accident										
Strangled yourself										

24. If you have intentionally hurt yourself in other ways not mentioned above, please specify

25. If you have done these, please describe what you did to yourself on that occasion. Please give as much detail as you can—for example, the name of the drug taken in an overdose

Motives for self-harming

1. I wanted to show how desperate I was
2. I wanted to die
3. I wanted to punish myself
4. I wanted to frighten someone
5. I wanted to get my own back on someone
6. I wanted to get relief from a terrible state of mind
7. I wanted to find out whether someone really loved me
8. I wanted to get some attention
9. I wanted to be a part of the group
10. I wanted to avoid doing something or being in some situation
11. If you hurt yourself by other motives not mentioned above, please specify

Do you know someone who has deliberately harmed themselves?

- No
- Yes

If yes, who is it?

- friend
- boyfriend/girlfriend
- husband/wife
- partner
- sister
- brother
- mother
- father
- The one who raised you, please specify _____
- others, please specify _____

Appendix 4: Syntax of FDR using SPSS

(see <http://www-01.ibm.com/support/docview.wss?uid=swg21476447>)

To run the syntax, put P-value for multiple tests between BEGIN DATA and END DATA.

Example for table 9 shown below:

BEGIN DATA

```
.648 .001 .181 .876 .935 .145 .634 .234 .001 .009 .001 .001 .965 .006 .643 .  
213 .684 .403 .994 .234 .035 .213
```

END DATA.

SORT CASES by p (a).

COMPUTE i=\$casenum.

SORT CASES by i (d).

COMPUTE q=.05.

COMPUTE m=max(i,lag(m)).

COMPUTE crit=q*i/m.

COMPUTE test=(p le crit).

COMPUTE test=max(test,lag(test)).

FORMATS i m test(f8.0) q (f8.2) crit(f8.6).

VALUE LABELS test 1 'Significant' 0 'Not Significant'.

SORT CASES by p (a).

LIST.

Appendix 5: Correlation between Psychological Characteristics

HEXACO	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
1. Honesty-Humility	1	-.04	.05	.30**	.18**	.11**	-.30**	-.12**	-.13**	-.09*	-.29**	-.20**	-.14**	-.25**	-.23**	-.16**	.03	.12**	.26**	.08*	.09*	-.22**	-.05	-.14**	-.15
2. Emotionality		1	-.24**	-.22**	-.02	-.08*	.33**	-.12**	.05	-.34**	.13**	.21**	.32**	.27**	.31**	.26**	-.04	-.12**	-.13**	-.12**	-.39**	.33**	.07	.24**	.30**
3. Extraversion			1	.21	.19	.15	-.35	-.13	-.20	.24	-.15	-.39	-.38	-.31	-.45	-.33	.16	.37	.32	.19	.37	-.37	-.16	-.55	-.41
4. Agreeableness				1	.07	.08*	-.42**	.004	-.20**	.01	-.24**	-.21**	-.25**	-.33**	-.28**	-.17**	.08*	.05	.18**	.04**	.34**	-.22**	-.002	-.24**	-.23**
5. Conscientiousness					1	.17**	-.22**	-.39**	-.53**	-.07	-.34**	-.17**	-.11**	-.22**	-.10**	-.05	.11**	.18**	.28**	.07	.01	-.12**	-.02	-.16**	-.11**
6. Openness						1	-.07	-.05	-.14**	.21**	-.08*	-.05	-.04	-.10**	-.05	.01	.43**	.17**	.04	-.08*	.09*	-.04	.15**	-.07	-.07*
UPPS-P																									
7. Negative urgency							1	-.02	.25**	.01	.54**	.42**	.47**	.54**	.56**	.39**	-.07	-.27**	-.48**	-.25**	-.37**	.38**	.15**	.44**	.37**
8. Lack of perseverance								1	.44**	-.04	.11**	-.04	-.01	.01	-.03	-.07	-.09*	-.10**	-.14**	.09*	-.02	-.11**	-.06	.08*	-.01
9. Lack of premeditation									1	.05	.33**	.19**	.12**	.18**	.14**	.11**	-.15**	-.21**	-.24**	-.01	-.17**	.04	-.08*	.18**	.18**
10. Sensation seeking										1	.20**	-.03	-.02	.03	-.02	-.003	.18**	.00	-.05	-.09*	.18**	-.001	.12**	-.10**	-.10*
11. Positive urgency											1	.41**	.33**	.51**	.42**	.34**	-.03	-.29**	-.40**	-.19**	-.19**	.26**	.16**	.30**	.22**
DERS-16																									
12. Clarity												1	.47**	.49**	.59**	.47**	-.03	-.41**	-.43**	-.35**	-.23**	.43**	.22**	.54**	.41**
13. Goal													1	.65**	.73**	.57**	.001	-.26**	-.42**	-.30**	-.32**	.47**	.32**	.46**	.40**
14. Impulsive														1	.67**	.55**	-.07	-.24**	-.40**	-.30**	-.28**	.47**	.27**	.42**	.36**
15. Strategies															1	.75**	-.03	-.34**	-.52**	-.39**	-.37**	.56**	.34**	.60**	.45**
16. Non-acceptance																1	-.02	-.28**	-.41**	-.42**	-.24**	.50**	.29**	.46**	.31**
FFMQ-SF																									
17. Observing																	1	.16**	.03	-.18**	.27**	.02	.18**	-.03	-.07
18. Describing																		1	.36**	.08*	.31**	-.17**	.01	-.32**	.25**
19. Awareness																			1	.31**	.18**	-.33**	-.20**	-.49**	-.34**
20. Non-judging																				1	-.07	-.46**	-.32**	-.29**	-.23**
21. Non-reactivity																					1	-.25**	.01	-.35**	-.32**
RRS																									
22. Brooding																						1	.53**	.48**	.36**
23. Reflection																							1	.26**	.18**
24. Depression																								1	.51**
25. Anxiety																									1

Appendix 6: Participant Information for Qualitative Study

PARTICIPANT INFORMATION

Project Title: Developing a clinical guideline for early intervention following self-harm: A feasibility study

Researcher: Rungarun Anupansupsai

Room 14, B floor, Yang Fujia Building, Jubilee Campus, The
University of Nottingham. E-mail msxra8@nottingham.ac.uk
Telephone 07751690666

Supervisor: Vincent Egan

E-mail vincent.egan@nottingham.ac.uk Telephone 0115 846
6627 vincent.egan@nottingham.ac.uk Telephone 0115 846 6627

Thomas Schroder

E-mail: thomas.schroder@nottingham.ac.uk Telephone 0115 846

8181

Ethics Reference Number: 245

This is an invitation to take part in a research study developing a guideline for clinicians providing early intervention for self-harm.

“Self-harm refers to intentional self-poisoning or self-injury, irrespective of type of motive or the extent of suicidal intent.”

Your participation is voluntary, and you may change your mind about being involved, or decline to answer a particular question without giving a reason. You are free to withdraw at any point before or during the study. However, once you have been interviewed it may not be technically possible to withdraw your data unless requested within 7 days from the date of the interview.

What is the project studying?

This project aims to initially develop a guideline of self-harm early intervention for clinicians and to evaluate the feasibility of this guideline.

Who is being asked to take part, and why?

In order to develop the guideline for self-harm early intervention for clinicians, it is necessary that clinicians who have expertise in psychological therapy and work with patients who self-harm to provide feedback and recommendations on the guideline as key experts. (You are in this part of the study)

It is important to evaluate whether the guideline developed is acceptable and feasible. Therefore, clinicians working with patients who self-harm will be asked

to implement this guideline and provide feedback. (You are in this part of the study)

What will I be asked to do?

All participants will be emailed the guideline evaluation sheet and the guideline (one week before the interview) and be asked for a convenient date and time.

You will be interviewed by phone call or on internet software (e.g. Skype), as agreed. The interview will be recorded. The study will be divided into two parts;

1. Guideline development (You are in this part)

Five clinicians will be also asked to provide feedback and recommendations on the guideline.

There are 2 rounds (interviews); participants will receive the guideline evaluation sheets for both rounds 7 days before the appointment date of interview session. You will be asked to rate the items on the guideline evaluation sheet and send these back to the researcher 2 days before the interviews take place.

2. Feasibility evaluation (You are in this part)

Fifteen clinicians who work with patients who self-harm will receive the developed guideline and will be asked to implement the guideline with the patients who self-harm for six weeks. You will then be asked to provide feedback whether the guideline is acceptable and feasible to implement in the work context.

The study is completely anonymous: we do not gather information which enables us to identify who you are from your feedback and recommendations.

Will the research be of any personal benefit to me?

The research does not directly benefit you. However, it may help us to improve an appropriate treatment in the early stage for those who self-harm.

What will happen to the information I provide?

The interview will take place when you are available. To help analysis, the whole interview will be recorded and transcribed. All information will also be stored on a database which is behind a firewall, password protected, and strictly confidential. Data will not be released to a third party, and will be stored in a format which is password-protected, on the university network. After the project has been written-

up, the anonymised electronic data will be kept in the university archive for 7 years. This IT security is the current optimum possible.

What will you do with the data?

The interview data will help us develop the guideline of self-harm early intervention for clinicians in Thailand.

This project is part of a PhD, and will be published in an anonymous form in the PhD thesis and scientific publications arising from the work.

This study will finish on 31st December 2017. If you are interested in knowing the results, you can contact the researcher via this email (msxra8@nottingham.com).

If you have any questions or concerns, please do not hesitate to ask. We can be contacted before and after your participation at the above address.

THANK YOU FOR YOUR PARTICIPATION

If you have any queries or complaints about this study, please contact the student's supervisor (Dr. Vincent Egan, Vincent.egan@nottingham.ac.uk and Dr. Thomas Schroder, thomas.schroder@nottingham.ac.uk) in the first instance. If this does not resolve the query to your satisfaction, please write to the Administrator to the Division of Psychiatry & Applied Psychology's Research Ethics Committee (MS-DPAPEthics@nottingham.ac.uk, +44 (0)115 8232214) who will pass your query to the Chair of the Committee

We believe there are no known risks associated with this research study; however, as with telephone and recorder related activity, the risk of a breach is always possible. We will do everything possible to ensure your answers in this study will remain anonymous.

Appendix 7: Participant Consent for Qualitative Study

PARTICIPANT CONSENT

	Yes	No
1. Have you read and understood the Participant Information?	☐	☐
2. Do you agree to take part in an interview that will be recorded	☐	☐
3. Do you know how to contact the researcher if you have questions about this study?	☐	☐
4. Do you understand that you are free to withdraw from the study without giving a reason?	☐	☐
5. Do you understand that once you have been interviewed it may not be technically possible to withdraw your data unless requested within 7 days from the date of the interview?	☐	☐
6. Do you give permission for your data from this study to be shared with other researchers in the future provided that your anonymity is protected?	☐	☐
7. Do you understand that non-identifiable data from this study might be used in academic research reports or publications?	☐	☐

By clicking the button below, I indicate that I understand what the study involves and that my interview is anonymous

☐ I agree to take part.

Signature of Participant.....

Date:

Name (in block capitals)

Appendix 8: Guideline for Round 1

Guideline of Self-harm Intervention at Early Stage for Clinicians

Self-harm is a broader term referring to intentional self-inflicted poisoning or injury, which may or may not have a fatal intent or outcome.

The guideline is divided into 2 parts:

1. The assessment is to evaluate the risk of repetitive self-harm, the severity of self-harm, and to gain understanding of self-harm characteristics in each patient.

() represents the guide for the clinicians to provide the particular intervention related to the assessed problems.*

2. The intervention is to provide treatments for patients who self-harm. Clinicians can choose the interventions follow (*) which identify the number guide at the assessment part.

Thoughts, emotions, plans, and acts of self-harm should be evaluated during initial evaluations and periodically after as needed.

Although these (*) guide the clinicians, clinicians should consider each item as appropriate for particular patients' problems or need.

Clinicians do not have to follow the guideline in order and do not have to provide all the treatments in the first session. Please prioritize the treatment that is urgently need for each patient.

Assessment

Risk of repetitive self-harm

Periodically evaluate

- Self-harm thought and plans (*1)
- Previous self-harm (characteristics: e.g. method, frequency, how long ago, motives, severity, hospitalisation)
- Current Emotion:
 - Painful/ sad/stress/anxious/anger/agitate (What make the person feel like that the most?) (What feeling bothers the patient the most?)
- Psychiatric illness and history (*8)
 - Past psychiatric history (diagnose and treatment)
 - Depression (hopeless, loss of interest, guilty, agitate, low energy, sleep problems, appetite problems)
 - Alcohol and drugs abuse
- Life problems
 - Physical illness or physical consequence of self-harm (*8)
 - Psycho-social Problems (e.g. relationship problems, self-esteems, social isolation, bereavement or other loss) (*2-*6 as appropriated)
 - Financial problems (e.g. Unemployed, being in debt) (*6)

Understanding current self-harm

- Method, severity, hospitalisation
- Planning (means, suicide note, warning sign) (*1)
- Premeditation or impulsivity (*3, *4, *5)
- Triggers (What make the patient harm her/himself?) (*6)
- Motives of self-harm (*3)
 - To relief the terrible state of mind (*4, *5)
 - To punish her/himself (*2)
 - To die (*2,*3,*4)
 - To show how distress he/she felt (*5,*7)
 - To avoid doing something or being in some situation (*6,*7)
 - To get attention (*2,*7)
- Emotions and thoughts emerging at the time harming her/himself (*2-*5)

Intervention

What does the patient want the clinician to help with? What is the patient's need?

1. Prevention of suicide/self-harm risks

- Restrict access to the means of self-harm that can be used or lead to self-harm
- Don't leave patients alone
- Identify someone to monitor the patients

2. Encourage positives

- Positive strengths (e.g. how earlier difficulties have been solved)
- Positive aspects of life

3. Awareness of reasons for living or not harming oneself

- Identify the reasons for wanting to die or harming oneself (skip if this has completely been stated in the assessment section)
- Encourage the reasons for living or not harming oneself (*4, *5)

4. Coping when patient want to harm him/herself

- Explore alternatives or activities (drawing, reading, strolling, or exercise)
- Support: talking with close persons whom can trust, e.g., family, friends, others, religion
- Seek help (e.g. hotline: 1323, 1667, and psychiatric unite contact)

5. Emotion management

- Emotion awareness
- Breathing exercise, relaxation technique, mindfulness etc.
- Get away from the situation or distract oneself.
- Reconstruct thoughts

6. Problem solving

- Identify the problems
- Identify the solutions (weight: pros and cons)
- Choose the best solution (prepare to deal with the negative consequences of the solutions)

7. Communication skill (I message for example; I feel sad because you don't listen to what I say. I want you to listen to what I say too.)

8. Consult physical medical unit or psychiatric unit or substance treatment service as necessary

9. Co-operate with family members or friends as appropriate for support and safe plans; psychoeducate them how to deal with the patient and provide emotional support to patient's family if needed

10. Discuss the need for follow-up sessions as agreed with the patient

Appendix 9: Guideline Evaluation Sheet 1

Guideline Evaluation Sheet 1 for Self-harm Intervention at Early Stage

Instruction: this evaluation aims to assess the level of necessity for each item of Guideline of Self-harm Intervention at Early Stage and the level of understanding for each item.

Please choose ☐ in the box, you think applies to how necessary and understandable is each item.

Level of Necessity

1	means	Least necessary for the Guideline of Self-harm Intervention at Early Stage
2	means	Slightly necessary for the Guideline of Self-harm Intervention at Early Stage
3	means	Moderately necessary for the Guideline of Self-harm Intervention at Early Stage
4	means	Very necessary for the Guideline of Self-harm Intervention at Early Stage
5	means	Most necessary for the Guideline of Self-harm Intervention at Early Stage

Level of Understanding

1	means	Least understandable
2	means	A little understandable
3	means	Moderately understandable
4	means	Very understandable
5	means	Most understandable

Items	Lists	Necessary					Understandable					Suggestion
		1	2	3	4	5	1	2	3	4	5	
1	Guideline of Self-harm Intervention at Early Stage for Clinicians											
2	Self-harm is a broader term referring to intentional self-inflicted poisoning or injury, which may or may not have a fatal intent or outcome.											
3	The guideline is divided into 2 parts:											
4	1. The assessment is to evaluate the risks of repetitive self-harm, the severity of self-harm, and to gain understanding of self-harm characteristics in each patient.											
5	<i>(*) represents the guide for the clinicians to provide the particular intervention related to the assessed problems.</i>											
6	2. The intervention is to provide treatments for patients who self-harm. Clinicians can choose the interventions follow (*) which identify the number guide at the assessment part.											
7	Thoughts, emotions, plans, and acts of self-harm should be evaluated during initial evaluations and periodically after as needed.											
8	Although these (*) guide the clinicians, clinicians should consider each item as appropriate for particular patients' problems or need. Clinicians do not have to follow the guideline in order and do not have to provide all the treatments in the first session. Please prioritize the treatment that is urgently need for each patient.											

Suggestions.....

.....

.....

Additional item for the assessment part.....

.....

Other suggestions.....

.....

Items	Lists	Necessary					Understandable					Suggestion
		1	2	3	4	5	1	2	3	4	5	
9	Assessment											
10	Risk of repetitive self-harm											
11	• Self-harm thought and plans (*1)											
12	• Previous self-harm (characteristics: e.g. method, frequency, how long ago, motives, severity, hospitalisation)											
13	• Current Emotion (Painful/ sad/stress/anxious/anger/agitate (What make the person feel like that the most?) (What feeling bothers the patients the most?)											
14	• Psychiatric illness and history (*8)											
15	○ Past psychiatric history (diagnose and treatment)											
16	○ Depression (hopeless, loss of interest, guilty, agitate, low energy, sleep problems, appetite problems)											
17	○ Alcohol and drugs abuse											
18	• Life event problems											
19	○ Physical illness or physical consequence of self-harm (*8)											
20	○ Psycho-social problems (e.g. relationship problems, low self-esteems, social isolation , bereavement or other loss) (*2-*6 as appropriated)											
21	○ Financial problems (e.g. unemployed, being in debt) (*6)											
22	Understanding current self-harm											
23	• Method, severity, hospitalisation											
24	• Planning (methods, suicide note, warning sign) (*1)											
25	○ Premeditation or impulsivity (*3,*4,*5)											
26	○ Triggers (What make the patient harm her/himself?) (*6)											
27	○ Motives of self-harm (*3)											
28	○ Want to relief the terrible state of mind (*4,*5)											
29	○ Want to punish her/himself (*2)											
30	○ Want to die (*2,*3,*4)											
31	• Want to show how distress he/she felt (*5,*7)											
32	• Want to avoid doing something or being in some situation (*6,*7)											
33	• Want to get attention (*2,*7)											
34	• Emotions and thoughts emerging at the time harming her/himself (*2- *5)											

Other suggestions.....

.....

Items	Lists	Necessary					Understandable					Suggestion
		1	2	3	4	5	1	2	3	4	5	
35	Intervention											
36	What does the patient want the clinician to help with? What is the patient's need?											
37	11. Prevention of self-harm risks											
38	• Restrict access to the means that can be used or lead to self-harm											
39	• Don't leave patients alone											
40	• Identify someone to monitor the patients											
41	12. Encourage positives											
42	• Positive strengths (e.g. how earlier difficulties have been solved)											
43	• Positive aspects of life											
44	13. Awareness of reasons for living or not harming oneself											
45	• Identify the reasons for wanting to die or harming oneself (skip if this has completely been stated in the assessment section)											
46	• Encourage the reasons for living or not harming oneself (*4, *5)											
47	14. Coping when patient want to harm him/herself											
48	• Explore alternatives or activities (drawing, reading, strolling, exercise)											
49	• Support: talking with close persons whom can trust, e.g., family, friends, religion.											
50	• Seek help (e.g. hotline : 1323, 1667, and psychiatric unite contact)											
51	15. Emotion management											
52	• Emotion awareness											
53	• Breathing exercise, relaxation technique, mindfulness etc.											
54	• Get away from the situation or distract oneself											
55	• Reconstruct thoughts											
56	16. Problem solving											
57	• Identify the problems											
58	• Identify the solutions (weight : pros and cons)											
59	• Choose the best solution (preparing to deal with the negative consequences of the solutions)											
60	17. Communication skill (I message for example; <u>I feel sad because</u> you don't listen to what I say. <u>I want you to listen to what I say too.</u>)											
61	18. Consult physical medical unit or psychiatric unit or substance treatment service as necessary.											
62	19. Co-operate with family members or friends as appropriate for support and safe plans; psychoeducate them how to deal with the patient and provide emotional support to patient's family if needed											
63	20. Discuss the need for follow-up sessions as agreed with the patient											

Additional item for the intervention part.....

Other suggestions.....

Appendix 10: Guideline for Round 2

Guideline of Self-harm psychological Intervention at early stage for Clinicians

Self-harm is a broader term referring to intentional self-inflicted poisoning or injury, which may or may not have a fatal intent or outcome.



The guideline is divided into 2 parts:

1. **The assessment** is to evaluate the risk of repetitive self-harm, the severity of self-harm, and to gain understanding of self-harm characteristics in each patients.
2. **The intervention** is to provide psychological intervention and to treat patients in the early stage of self-harm to protect patients from repetitive self-harm and to help them learn better ways of coping with problems.

The symbol in the interview section



Give the treatment only when the patient has emotion readiness



Give the treatment only when communication problems are found

Thoughts, emotions, plans, and acts of self-harm should be evaluated during initial evaluations and periodically after as needed.

Clinicians should consider each items as appropriate for particular patients' problems or need. Clinicians do not have to follow the guideline in order and do not have to provide all the treatments in the first session. Please prioritize the treatment that is urgently need for each patient.

Note : This guideline is suitable for psychiatrists, clinical psychologists, and psychiatric nurses or individuals that have been trained.



Assessment

Risks Of repetitive self-harm

Periodically evaluate

1

Current stage

- **Thoughts and plans of repeating self-harm**
- **Emotion** within the past week: painful/sad/stress/anxious/anger/agitate (can have many emotions) (choose only one emotion) (What make the person feel like that the most?) (What feeling bothers the patient the most?)

3

Life Problems

- **Physical illness** (e.g. cancer) or physical consequence of self-harm
- **Psycho-social problems** (e.g. relationship problems, low self-esteems, social isolation, bereavement or other losses)
- **Financial problems** (e.g. unemployed, having debt, or burden to look after family)



2

Psychiatric illness

1. **Psychiatric history and past psychiatric symptoms** (diagnose, treatment, and duration since first time illness until the date of harming themselves)
2. **Depression** within the past week (hopeless, loss of interest, guilty, agitate, low energy, sleep problems, appetite problems)
3. **Alcohol and drugs abuse**

4

Understanding self-harm Act

1. Current self-harm

- **Method, severity, frequency, hospitalization**
- **Premeditation or impulsivity**
- **Planning** (method, suicide note, warning sign)
- **Triggers** (What make the patient harm her/himself?)
- **Motives of self-harm**
 - want to escape the terrible state of mind,
 - want to die
 - want to escape doing something or being in some situation,
 - want to get revenge, punish or hurt someone
 - want to punish her/himself,
 - want to show how distress he/she felt,
 - want to get attention
- **Emotions and thoughts emerging at the time harming her/himself:** for example, the feeling that they cannot stand it anymore, that they cannot see another way out of the situation anymore.
- **Other things that enhances self-harm:** for example, contacting an online group of people that harm themselves.

2. Previous self-harm (Evaluate as above and add the topic of "How long ago")



Supporting System

Family, friend, workplace etc.

Intervention

 What are the patient's need?

1

Prevention

Action plan

of self-harm risks

1. **Restrict access to the means of self-harm that can be used or lead to self-harm** (admit in hospital if consider as high risk of repetitive self-harm)
2. **Don't leave patients alone**
3. **Identify someone to monitor the patients** (use technology to ensure the patients are visible to the clinicians, e.g. install CCTV in the case of admitting patients to inpatient wards.
4. **Remove from stressor that causes stress or increases self-harm** e.g., contact to self-harm group online

2

Hope

1. Encourage positives

- 1.1 **Positive strengths** (e.g. how earlier difficulties have been solved)
- 1.2 **Good things in life** (e.g. have high opportunities (recourse), flexible view, having good friends, having good family)

2. Awareness of reasons for living or not harming oneself-

- 2.1 **Identify the reasons for wanting to die or harming oneself** (skip if this has completely been stated in the assessment section)
- 2.2 **Encourage the reasons for living or not harming oneself**

3

Cope

1 Coping when patient want to harm him/herself

Action plan

- 1.1 **Explore alternatives or activities** (e.g., drawing, reading, strolling, exercise, or raising a pet)
- 1.2 **Support**: talking with close persons whom can trust, e.g., family, friends, religion.
- 1.3 **Seek help** (e.g. 24-hour call centres: 1323, 1667; contact psychiatric department; or go to the official mental health online services www.dmh.go.th)

2 Emotion management

- 2.1 **Emotion awareness**
- 2.2 **Manage emotions by breathing exercise**, relaxation technique, mindfulness or decreasing stress through other liked methods.
- 2.3 **Get away from the situation or distract oneself.**
- 2.4 **Reconstruct thoughts** ☺

3 Problem solving ☺

- 3.1 **Identify the problems** (prioritize the problems in terms of the importance and the possibility to solve)
- 3.2 **Identify the solutions** and compare the pros and cons of each solutions.
- 3.3 **Choose the best solution** (prepare to deal with the negative consequences of the solutions)
- 3.4 **Prepare concrete action plan** (action plan)

4 Communication skill e.g., iMessage (*I feel sad because you don't listen to what I say. I want you to listen to what I say too.*) ☺ ☹

4

Manage

1 Consult psychiatric unit in case there are problems or psychiatric symptoms or substance history

2 Co-operate with family members or close people as appropriate

- To receive support and protection from repetitive self-harm
- Psychoeducate and adjust attitude towards patient's self-harming behaviour and how to take care of the patient.
- Provide emotional support to the patients' families if needed

3 Discuss the need for following-up session with patients and appointments as agreed upon by the patient and their family.

- ☺ Give the treatment only when the patient has emotion readiness
- ☹ Give the treatment only when communication problems are found

Appendix 11: Final Guideline for Feasibility Study

1

Guideline of Self-harm psychological Intervention at early stage for Clinicians

Self-harm is a broader term referring to intentional self-inflicted poisoning or injury, which may or may not have a fatal intent or outcome.



This guideline is divided into 2 sections:

1. **The assessment** is to evaluate the risk of repetitive self-harm, the severity of self-harm, and to gain understanding of self-harm characteristics in each patients.
2. **The intervention** is to provide psychological intervention and to treat patients in the early stage of self-harm to protect patients from repetitive self-harm and to help them learn better ways of coping with problems.

The symbol in the interview section



Give the treatment only when the patient has emotion readiness



Give the treatment only when the patient has communication problems with the people around them

Thoughts, emotions, plans, and acts of self-harm should be evaluated during initial evaluations and periodically after as needed.

Clinicians should consider each items as appropriate for particular patients' problems or need. Clinicians do not have to follow the guideline in order and do not have to provide all the treatments in the first session. Please prioritize the treatment that is urgently need for each patient.

Note : This guideline is suitable for psychiatrists, clinical psychologists, and psychiatric nurses or individuals that have been especially trained to use this guideline.



Assessment

Risk of Repetitive Self-Harm



2

2 Psychiatric Illness

1. **Psychiatric history or past psychiatric symptoms** (Diagnosis, treatment, and duration since first time illness until the date of harming themselves)
2. **Depression** within the past week (hopelessness, loss of interest, guilty, agitate, loss of energy, sleep problems, or appetite problems)
3. **Alcohol consumption and drug usage**

Periodically evaluate

1 Current Status

- **Thoughts and plans of repeating self-harm**
- **Emotion** within the past week; e.g., painful, sad, stress, anxious/anger/agitate (can have many emotions) (What make the person feel like that the most?) (What feeling bothers the patient the most?)

3 Life Problems

- **Physical illness or physical consequence of self-harm**
- **Psycho-social Problems** (e.g., relationship problems, low self-esteem, social isolation, bereavement, or other losses)
- **Financial Problems** (e.g., unemployment, being in debt, etc.)

4 Understanding Self-Harm Act

1. Current act of self-harm

- **Method, severity, frequency, hospitalization**
- **Premeditation or impulsivity**
- **Planning** (method, suicide note, warning sign)
- **Triggers** (What make patients harm her/himself)

• **Motives of self-harm**

- want to escape from the terrible state of mind
- want to punish themselves
- want to die
- want to express how despair they are
- want to escape doing something or being in certain situations
- want others pay attention to them
- want revenge, punish or hurt someone

• **Emotions and thoughts emerging at the time harming him/herself;** for example, the feeling that they cannot stand it anymore, that they cannot see another way out of the situation anymore.

• **Other things that enhances self-harm:** for example, contacting an online group of people that harm themselves.

2. **History of self-harm** (Evaluate as above and add the topic of "How long ago")



People or sources that are ready to help

... Family, friends, workplace, etc.

Intervention



What is the patient's need?

1 Preventing

repetitive self-harm

Action Plan

1. Restrict access to the means that can be used or lead to self-harm
2. Don't leave patients alone
3. Identify someone to monitor the patients
4. Remove patients from triggers that causes stress or increases self-harm (e.g., contacting a self-harming group online).
5. Admit patients into the hospital if considering the high risk of repetitive self-harm by going home.



2 Hope

1. Encourage positives

- 1.1) **Strengths** (e.g., potential, past successes, or how earlier difficulties have been solved)
- 1.2) **Positive aspects of life** (e.g., having good friends, having good family, etc.)

2. Awareness of reasons for living or not harming oneself

- 2.1) **Identify reasons for wanting to die or harming oneself** (skip if this has completely been stated in the assessment section)
- 2.2) **Encourage reasons or create hope for patients to continue living or to not harm oneself.**

3 Cope

1. Coping when want to harm him/herself

Action Plan

- 1.1) **Explore alternatives or activities** to help patients not to preoccupy to the problems (e.g., drawing, reading, strolling, exercising, or raising a pet).
- 1.2) **Supports** : talking with close persons whom can trust; e.g., family, friends or religion.
- 1.3) **Seek help** (E.g. 24-hour call centers: 1323, 1667; contact psychiatric department; or go to the official mental health online services www.dmh.go.th)

2. Emotion management

- 2.1) **Emotion awareness**
- 2.2) **Practice relaxation techniques** by breathing exercise, emotional relaxation, mindfulness, or decreasing stress through other liked methods.
- 2.3) **Get away from situations or distract oneself.**
- 2.4) **Reconstruct Thoughts**

3. Problem Solving

- 3.1) **Identify the problem** (prioritize the problems in terms of the importance and the possibility to solve)
- 3.2) **Identify the solutions** and compare the pros and cons of each solutions.
- 3.3) **Choose the best solutions** (prepare to deal with the negative consequences of the solutions)
- 3.4) **Prepare concrete action plan (Action plan)**

4. Communication skills; e.g., iMessage (I feel sad because you don't listen to what I say. I want you to listen to what I say too.)

4 Cooperation

3

1. Consult physical medicine unit, psychiatric unit, or substance treatment service as appropriate.

2. Co-operate with the family member or close people

- To receive support and protection from repetitive self-harm
- Psychoeducate and adjust attitude towards patient's self-harming behaviour and how to take care of the patient.
- Provide emotion support to the patient's family and people the patient is close to.

3. Discuss the need for following-up session with patients and appointments as agreed upon by the patient and their family.

Symbols

- Give the treatment only when the patient has emotion readiness
- Give the treatment only when the patient has communication problems with the people around them

Appendix 12: Quality check for Delphi Round 1

Summaries of the experts' interviews (Ten percent of total items (63 items) were randomly selected namely item 2, 10, 12, 41, 55, and 63)

Item 2 Self-harm is a broader term referring to intentional self-inflicted poisoning or injury, which may or may not have a fatal intent or outcome.

Experts	Necessary					Understandable					Interview Content
	1	2	3	4	5	1	2	3	4	5	
Expert 1	☐	☐	☐	☐	☒	☐	☐	☐	☐	☒	The next section is about the definition of self-harm. This is very necessary, to say what self-harm is in the guideline, so that people using this guideline have the same definition of self-harm defining it allows users to have a mutual understanding of what the meaning of the word "self-harm" is in this guideline, and knows what is covered in this definition. Having a definition that is too broad is not good, it should hit the point of what is covered in this guideline.
Expert 2	☐	☐	☐	☐	☒	☐	☐	☐	☐	☒	Yes... The definition of self-harm is to intentionally consume poison... Here, I think that it is very necessary, especially because it is a definition. If it isn't written comprehensively, everything that is done after, will be wrong. This is why it is very necessary. If the definition is not written well, they will not understand what self-harm is. It is like having a definition just for this guideline.
Expert 3	☐	☐	☐	☐	☒	☐	☐	☐	☐	☒	The definition section is very necessary because it shows the scope of what self-harm is in this guideline.
Expert 4	☐	☐	☐	☐	☒	☐	☐	☐	☐	☒	Next, the definition of self-harm. I think that it is necessary because it allows us to know which group we are going to specify, etc.
Expert 5	☐	☐	☐	☐	☒	☐	☐	☐	☐	☒	In regard to the definition of self-harm, I think that it is necessary to define to have a mutual understanding of what self-harm is. It is about suicidal behavior. Having a definition allows people to have the same understanding. Some people that have a misunderstanding that it is something else. They might think that it is about hurting one's feelings or verbally harming oneself, which is not covered in this guideline.
Supervisor's Summary											All experts agreed that a definition of self-harm is necessary. None of them suggested amendments or alterations to the current definition.
Researcher's summary											All experts found the item very necessary to define the particular meaning and the scope of self-harm on this guideline in order to make sure that the users understand the definition in the same way.

Item 10 Risk of repetitive self-harm

Experts	Necessary					Understandable					Interview Content
	1	2	3	4	5	1	2	3	4	5	
Expert 1	☐	☐	☐	☐	☒	☐	☐	☐	☐	☒	Next, on the subject of assessing the risk of repetitive self-harm. This is necessary to assess. Because patients who self-harm need to be cautious about whether they will harm themselves again or not, assessing repetitive self-harm is very necessary to prevent future occurrence of self-harm.
Expert 2	☐	☐	☐	☐	☒	☐	☐	☐	☐	☒	And next, the risk of repetitive self-harm. It is very essential to assess this topic because we want to prevent them from repetitive self-harm. We need to assess it.
Expert 3	☐	☐	☐	☒	☐	☐	☒	☐	☐	☐	Next, let's look at the assessment. The risk of repetitive self-harm, is something that has to be asked to assess and further used as the intervention. This will be linked to the following part. I understand that the assessment is used to evaluate the risk and I will not argue that it is necessary to assess the risk, but the problem is that the people who read this guideline will have different interpretation of what is risky and what isn't. First, the easiest thing to do is to use a checklist that already exists and put it in this guideline. It already has some score that they use, I cannot remember if it was suicidal score or death wish or something along this line. Put these scores in. You wouldn't have to create a lot of question. If you get a certain score, it is considered risky. Scores showing high risk or low risk will allow us to consider admitting the person into the hospital or taking care of the person as an outpatient.
Expert 4	☐	☐	☐	☐	☒	☐	☐	☐	☐	☒	Risk of repetitive self-harm is a topic that can identify what the risks are. I think that it is like emphasising the need of having an assessment.
Expert 5	☐	☐	☐	☐	☒	☐	☐	☐	☐	☒	Next, on the subject of the assessment. It is necessary to assess the risk. Knowing how much risks patients have of repetitive self-harm will bring about the importance of planning, which will protect patient from harming themselves again. This allows clinicians to know how to take care of the patient or know which patients in each case are at risk of suicide.
Supervisor's Summary											All experts agreed that this item is necessary. Four out of five did not raise issues about it being understandable, but the fifth argued that guidance on how to assess the risk would be useful and suggested the inclusion of a checklist in the guideline.
Researcher's summary											All experts found the item very necessary to assess risks of repetitive self-harm and prevent the patients from harming themselves again. However one expert found it difficult to judge whether the patients have high risk of repetitive self-harm or not. This expert recommended the use of checklists which have the score to identify high or low risk patients.

Item 12 Previous self-harm (characteristics: e.g. method, frequency, how long ago, motives, severity, hospitalisation)

Experts	Necessary					Understandable					Interview Content
	1	2	3	4	5	1	2	3	4	5	
Expert 1	☐	☐	☐	☐	☒	☐	☐	☐	☐	☒	Next, looking at previous self-harm is a way of checking history, to see whether they have harmed themselves before; if so, what did they do. If there is history of self-harm, what are they, what are the characteristics? This is to understand that, okay, people that have a history of self-harm are at risk of harming themselves again.
Expert 2	☐	☐	☐	☐	☒	☐	☐	☐	☐	☒	Next, on the topic of previous self-harm. It is very necessary to look at this to tell the frequency and motivation. This is very important. It allows us to know about the history of self-harm of the person we are assessing.
Expert 3	☐	☐	☐	☐	☒	☐	☒	☐	☐	☐	Second point, previous self-harm, method, frequency. Assume, a person harms themselves once or twice, for example, by cutting their wrist, with the incentive of getting revenge or because they are angry at other people. The scar may be shallow and does not receive treatment in hospitals. How would the person that asks the questions interpret this? This creates a difficulty in understanding. Will people have the same understanding? We ask to know whether there is a risk of reoccurrence. What is considered high risk and what is considered low risk?
Expert 4	☐	☐	☐	☐	☒	☐	☐	☐	☐	☒	It is something that... I think is concise...concise...it is concise and succinct. Method, frequency is necessary. It is necessary because it is something we need to assess to find the risk of repetitive self-harm in patients.
Expert 5	☐	☐	☐	☐	☒	☐	☐	☐	☐	☒	Next, the section of previous self-harm considers how much patients are at risks of repetitive self-harm. From what I have reviewed, people that have harmed themselves before, show higher risk of repetitive self-harm. Subheadings are already good as examples in asking what questions should be asked.
Supervisor's Summary											All experts agreed that this item is necessary. Four out of five did not raise issues about it being understandable, but the fifth argued that the nature of previous self-harm (motivation, severity) needs to be taken account of.
Researcher's summary											All experts found this item necessary to assess the risk of repetitive self-harm. Language used is good as it is concise and the words are good samples of how to ask the patients. However, one expert found it difficult to make the users understand how to judge patients who have high or low risks of repetitive self-harm.

Item 41 Encourage positives

Experts	Necessary					Understandable					Interview Content
	1	2	3	4	5	1	2	3	4	5	
Expert 1	☐	☐	☐	☐	☒	☐	☐	☐	☐	☒	Encourage positive things. These patients usually already have a weakness and are often pessimistic and view themselves negatively. We have to make them see the positive sides to push up their ego.
Expert 2	☐	☐	☐	☐	☒	☐	☐	☐	☐	☒	Item 2, encourage positive things. People that died by suicide have negative thoughts, some have negative automatic thoughts. We must find out what the negative thoughts are and maybe decrease their negative thoughts, which should increase positive feelings, making how they view themselves better. Sometimes they may not always see it the positive aspects of their lives. But when we ask, it encourages them to have a more positive view of themselves. Here, I think encouraging positives is very important.
Expert 3	☐	☐	☐	☒	☐	☐	☒	☐	☐	☐	Encouraging positive attributes is very necessary. This section is the section that should help reduce the risk of having thoughts of self-harm. People that choose this method are patients who harm themselves, which show that cannot cope, they can no longer deal with the problem anymore, they don't want to live anymore or they are doing it to manipulate... But I don't really understand what encourage positives mean.
Expert 4	☐	☐	☐	☐	☒	☐	☐	☐	☐	☒	The second item, encourage positives. Okay, we prevent them from self-harm. We try to make them feel more positive. Positive encouragements are another thing that we, the people that help, must try to find. I think that we can use it. What are the patient's positive strengths? And the positive aspects in their life, I think should be something that can help patients.
Expert 5	☐	☐	☐	☐	☒	☐	☐	☐	☐	☒	Second item, encourage positives. Yes, this section is like enhancing coping and support for the patients themselves. Find their strengths or their positive aspects...so that they...oh... feel more encouraged. Most patients that come, they feel hopeless and they do not see a path ahead. This will make them feel like they have something good that they can see too.
Supervisor's Summary											All experts agreed that this item is necessary. Four out of five did not raise issues about it being understandable, but the fifth thought that the term 'positives' is unclear and may not apply to people who self-harm.
Researcher's summary											All experts found this item necessary. Patients who self-harm are weak and hopeless, have negative thoughts, and have difficulty coping with their problems. Encouraging the positives is a good way to help them think more optimistically and more encouraged, and make them feel good about themselves which may reduce the risk of repetitive self-harm.

Item 55 Reconstruct thoughts

Experts	Necessary					Understandable					Interview Content
	1	2	3	4	5	1	2	3	4	5	
Expert 1	☐	☐	☐	☐	☒	☐	☐	☐	☐	☒	Item 5.4 is the same as the previous answer (Item 5.3 is also about teaching patients to not to be stuck with stressful emotions etc. Teaching patients to look at the world from a broader point of view or look from different perspective so that they can solve the problem.)
Expert 2	☐	☐	☐	☐	☒	☐	☐	☐	☐	☒	5.4 Thought reconstruction happens in a sequence. If they are ready, the first thing is to make sure they think from a broader perspective. Change negative thoughts to positive thoughts, like CBT. (Question) They must be ready. For example, some people are satisfied with knowing who they are, they know relaxation technique or they remove themselves from the situation. But, when it comes to thoughts, some people, if they are not ready, clinicians don't have to give them this treatment. We must look at different factors to see if that person can do it. (Question) When there are intense emotions or other emotions, we must make their emotional states better. If someone is very angry, they will not be ready to change their thoughts. Change their emotions so that calm down first. You must consider whether they are emotionally prepared.
Expert 3	☐	☐	☐	☒	☐	☐	☒	☐	☐	☐	5.4 What is thought reconstruction? Is it just CBT or how to change someone's thought? (Explain) It is important because it allows patients to have more flexible thoughts, have different perspectives because their thoughts are adjustable. Their emotions will become better as well. Um, I would add... "Reconstruct thoughts and perspectives towards problems" to make this clearer.
Expert 4	☐	☐	☐	☐	☒	☐	☐	☐	☐	☒	Thought reconstruction is also okay. Thought reconstruction can change perspectives, etc., if you can do it. But it might be a little hard. I think that the thing that is possible to do in a situation that a person just harmed themselves is to be aware of their own emotions, to practice relaxation, and to remove themselves from the situation. Thought reconstruction is the hardest, but if it can be done, it is good... it will be complete... Put this "when the person's emotional state is suitable" in a bracket ... their emotion at that moment is suitable. I think the person should be very aware to be able to discuss this.
Expert 5	☐	☐	☐	☐	☒	☐	☐	☐	☐	☒	Emotional management is a way to help manage emotions. I think that it is something can happen in the long-run, this is like following the concept of CBT. You need to be aware of your own emotions, practice relaxation, distraction..... Thought reconstruction can be done right away in sessions on changing perspectives or changing one's thoughts.
Supervisor's Summary											All experts agreed that this item is necessary. Two out of five did not raise issues about it being understandable, one thought that the item was similar to item 52 (and therefore

											possibly redundant?), one argued that thought reconstruction follows a specific sequence and depends on the patient's emotional preparedness and one thought that the concept needed further explanation and might be rephrased as 'Reconstruct thoughts and perspectives towards problems'.
Researcher's summary											All experts found this item necessary to make the patients think flexibly, have many perspectives, and can change their thoughts which can improve their emotions. However, two experts suggested that when reconstructing thoughts, clinicians should also consider the patients' emotional state (ensure that the patients are ready to discuss). The other expert suggested rewording the item "Reconstructing thoughts and point of view" to make the item more understandable.

Item 63 Discuss need for follow-up sessions as agreed with the patient

Experts	Necessary					Understandable					Interview Content
	1	2	3	4	5	1	2	3	4	5	
Expert 1	☐	☐	☐	☐	☒	☐	☐	☐	☐	☒	Item 10 helps us know the extent at which patients are able to look after themselves after they received treatment and are they still at risk of harming themselves. It is a follow up on the treatment that is necessary.
Expert 2	☐	☐	☐	☐	☒	☐	☐	☐	☐	☒	The last item, discussion with patients. I think that it is necessary to see whether they will come to the follow-up sessions according to their appointment after we have given preliminary treatment. We should follow-up on how the patient is. I think it is necessary.
Expert 3	☐	☐	☐	☒	☐	☐	☐	☐	☒	☐	Discussion with patients. Item 10. In principle, people with problems should be involved. We should empower them.
Expert 4	☐	☐	☐	☐	☒	☐	☐	☐	☐	☒	Discussion with patients about the need of follow-up session is necessary because we help them, If we can have a relationship with them, it allows them to get ongoing treatment on the other problems that might need to practice intervention techniques. It is necessary, it is necessary. This could be done in the beginning.
Expert 5	☐	☐	☐	☐	☒	☐	☐	☐	☐	☒	And the last item, item 10, discussion with patients is good. I think it is necessary to have a plan of treatment with the patient. And making additional appointments with patient should be based on the agreement of the patient or their family. Sometimes we need patient's relatives to help in making an appointment or bringing the patient in, for instance.
Supervisor's Summary											All experts agreed that this item is necessary. Non raised issues about it being understandable, one thought that patients' relatives might be involved in the discussion.
Researcher's summary											All experts think this item is necessary in order to follow up the patient progress, assess the risk of repetitive self-harm, and give them more treatments. Discussing with the patient is the way to get patients' participations, which can also empower them. However, one expert suggested that this item should add "and patient's family" at the end of the sentence as sometimes the family need to help the patient regarding the appointment and taking them to the hospital.

Appendix 13: Definitions of Analysis Framework

The definitions of the conceptual framework are established as below:

1. **Quality** refers to the quality of the guideline divided into 4 parts
 - 1.1 **Clarity** refers to whether the guideline is clear and easy to understand.
 - 1.2 **Comprehensive** refers to whether the guideline covers all important aspects for clinicians working with patients who self-harm.
 - 1.3 **Succinct** refers to whether the content of guideline is clearly expressed, brief, and does not include unnecessary words.
 - 1.4 **Design satisfaction** refers to whether the clinicians like the design of guideline.
2. **Effectiveness** refers to whether the guideline is useful for the clinicians in a various ways such as for their work performance, multidisciplinary teams, patients, etc.
3. **Acceptability** refers to whether the clinicians accept that guideline is appropriate for their routine work.
4. **User-Friendly** refers to whether anything from the guideline makes it easier for clinicians to use it.
5. **Practicality** refers to whether the guideline can easily be put into the practice with the patients who self-harm.
6. **Suggestion** refers to whether the clinicians offer any advice or suggestions to improve the guideline.
 - 6.1 **Remove unnecessary items** refers to removing unnecessary items (not just the details) from the guideline.
 - 6.2 **Add additional items/points** refers to adding the other necessary items/points (not just the details) not existing on the guideline.
 - 6.3 **Remove some text details** refers to removing the text details describing each item.
 - 6.4 **Clarify some items** refers to clarification of the items by additional detailed explanations and making the item content clearer by changing the words or sentences.
 - 6.5 **Adjust the content structure of the guideline** refers to adjustment of the content structure by producing the links between assessments and the

interventions, prioritize the important items, or changing the sequence of the content, etc.

6.6 Adjust the design refers to the adjustment to add, remove or modify the design's details such as colour, picture, font, font size (not about the content).

6.7 Produce alternative versions refers to alternative formats, abbreviated versions, or manuals.

6.8 Expand the use of guideline refers to the expansion of the guideline user; who are the general doctors in the emergency unit, or the nurses in community hospitals; who are not only psychiatrists, clinical psychologist, and psychiatric nurse.

7. Additional Inquiry from Delphi

7.1 Understandable of "emotionally ready" refers to whether the clinicians find this item understandable.

7.2 Understandable of "Other things that enhance self-harm" refers to whether the clinicians find this item understandable.

7.3 Necessary of "Admit patients into the hospital" refers to whether the clinicians find this item necessary for the guideline.

7.4 Understandable of "Strength and positive aspects of life" refers to whether the clinicians find this item understandable.

7.5 Understandable of "Communication skill....." refers to whether the clinicians find this item understandable.

7.6 Necessary of "Box of symbols" refers to whether the clinicians find this item necessary for the guideline.

8. Other issues refers to any other issues not mentioned above.

9. Participant information

9.1 Implement the guideline with the patients refers to whether the clinicians implement the guideline to the patients within the six weeks from the implementation date.

9.2 Previously used guideline refers to whether the clinicians have used any other guideline before.

Appendix 14: Quality Check for Feasibility Study

Analysis by researcher

	Participant 3				Participant 9			
	Yes	Yes with conditions	No	Not applicable	Yes	Yes with conditions	No	Not applicable
1. Quality								
1.1 Clarity	☒	☐	☐	☐	☐	☒	☐	☐
1.2 Comprehensive	☒	☐	☐	☐	☒	☐	☐	☐
1.3 Succinct	☒	☐	☐	☐	☐	☐	☒	☐
1.4 Design satisfaction	☒	☐	☐	☐	☒	☐	☐	☐
2. Effectiveness	☒	☐	☐	☐	☒	☐	☐	☐
3. Acceptability	☒	☐	☐	☐	☒	☐	☐	☐
4. User-Friendly	☒	☐	☐	☐	☒	☐	☐	☐
5. Practicality	☐	☒	☐	☐	☐	☒	☐	☐
6. Suggestion								
6.1 Remove unnecessary items	☐	☐	☒	☐	☐	☒	☐	☐
6.2 Add additional Items/Points	☐	☐	☒	☐	☐	☐	☒	☐
6.3 Remove some text details	☒	☐	☐	☐	☒	☐	☐	☐
6.4 Clarify some items (by addition explanations and making the items content clearer)	☒	☐	☐	☐	☐	☐	☒	☐
6.5 Adjust the content structure of the guideline (Link, prioritize the items, change the sequences)	☐	☐	☐	☒	☐	☐	☐	☒

	Participant 3				Participant 9			
	Yes	Yes with conditions	No	Not applicable	Yes	Yes with conditions	No	Not applicable
6.6 Adjust some designs (Remove, add, modify the Picture, Symbol, Color, Font, Font size, etc.)	☐	☒	☐	☐	☒	☐	☐	☐
6.7 Produce alternative Versions (Alternative formats, Abbreviation versions, Manuals)	☐	☐	☒	☐	☒	☐	☐	☐
6.8 Expand the use of guideline	☐	☐	☐	☒	☐	☐	☐	☒
7. Inquiry from Delphi								
7.1 Understandable of "emotionally ready"	☒	☐	☐	☐	☒	☐	☐	☐
7.2 Understandable of "Other things that enhances self-harm"	☒	☐	☐	☐	☒	☐	☐	☐
7.3 Necessary of "Admit patients into the hospital"	☒	☐	☐	☐	☐	☒	☐	☐
7.4 Understandable of "Strength"	☒	☐	☐	☐	☒	☐	☐	☐
7.5 Understandable of "positive aspects of life"	☒	☐	☐	☐	☒	☐	☐	☐
7.6 Understandable of "Communication skill....."	☒	☐	☐	☐	☒	☐	☐	☐
7.7 Necessary of "Box of symbols"	☒	☐	☐	☐	☒	☐	☐	☐
7.7 Other issues	☐	☐	☐	☒	☐	☐	☐	☒
Participant information								
Implement the guideline with the patients	☒	☐	☐	☐	☒	☐	☐	☐
Previous used Guideline	☐	☒	☒	☐	☐	☐	☐	☐

Analysis by supervisor

	Participant 3				Participant 9			
	Yes	Yes with conditions	No	Not applicable	Yes	Yes with conditions	No	Not applicable
1. Quality								
1.1 Clarity	☒	☐	☐	☐	☐	☒	☐	☐
1.2 Comprehensive	☒	☐	☐	☐	☒	☐	☐	☐
1.3 Succinct	☒	☐	☐	☐	☐	☐	☒	☐
1.4 Design satisfaction	☒	☐	☐	☐	☒	☐	☐	☐
2. Effectiveness	☒	☐	☐	☐	☒	☐	☐	☐
3. Acceptability	☒	☐	☐	☐	☒	☐	☐	☐
4. User-Friendly	☒	☐	☐	☐	☒	☐	☐	☐
5. Practicality	☒	☐	☐	☐	☐	☒	☐	☐
6. Suggestion								
6.1 Remove unnecessary items	☐	☐	☒	☐	☐	☐	☒	☐
6.2 Add additional Items/Points	☐	☐	☒	☐	☐	☐	☒	☐
6.3 Remove some text details	☒	☐	☐	☐	☒	☐	☐	☐
6.4 Clarify some items (by addition explanations and making the items content clearer)	☒	☐	☐	☐	☐	☒	☐	☐
6.5 Adjust the content structure of the guideline (Link, prioritize the items, change the sequences)	☐	☐	☐	☒	☐	☐	☐	☒

		Participant 3				Participant 9			
		Yes	Yes with conditions	No	Not applicable	Yes	Yes with conditions	No	Not applicable
	6.6 Adjust some designs (Remove, add, modify the Picture, Symbol, Color, Font, Font size, etc.)	☐	☒	☐	☐	☒	☐	☐	☐
	6.7 Produce alternative Versions (Alternative formats, Abbreviation versions, Manuals)	☐	☐	☒	☐	☒	☐	☐	☐
	6.8 Expand the use of guideline	☐	☐	☐	☒	☐	☐	☐	☒
7. Inquiry from Delphi									
	7.1 Understandable of "emotionally ready"	☒	☐	☐	☐	☒	☐	☐	☐
	7.2 Understandable of "Other things that enhances self-harm"	☒	☐	☐	☐	☒	☐	☐	☐
	7.3 Necessary of "Admit patients into the hospital"	☒	☐	☐	☐	☐	☒	☐	☐
	7.4 Understandable of "Strength"	☒	☐	☐	☐	☒	☐	☐	☐
	7.5 Understandable of "positive aspects of life"	☒	☐	☐	☐	☒	☐	☐	☐
	7.6 Understandable of "Communication skill....."	☒	☐	☐	☐	☒	☐	☐	☐
	7.7 Necessary of "Box of symbols"	☒	☐	☐	☐	☒	☐	☐	☐
8. Other issues		☐	☐	☐	☒	☐	☐	☐	☒
Participant information									
	Implement the guideline with the patients	☒	☐	☐	☐	☒	☐	☐	☐
	Previous used Guideline	☐	☐	☒	☐	☐	☐	☒	☐

Appendix 15: An Example of Transcripts from Feasibility Interview categorised into Framework of Feasibility

Framework	Examples
Quality	
Clarity	Overall, the language is understandable. The language is easy. When read, it is easy to understand.
Comprehensive	cover all the content. I know what I must do, the choices there are that can help patients
Succinct	but this guideline is quite concise and can cover all the content
Design satisfaction	In terms of the design that has colour, the pictures are considered to be okay. I like the colour. It is not too bright. It is a polite colour tone.
Effectiveness	...covers most aspect like things that should be asked, which sometimes we forget. It helps remind..... It allows us not to get lost in the point or forget the point as well. It helps patients receive treatment that is extensive...
Acceptability	I think that this guideline is suitable for the work place routine
User-Friendly	Overall, the guideline is easy to use, easy to remember
Practicality	...we can use this guideline immediately. When patients come in, read it a little bit for guidance
Other issues	In terms of inappropriate attitude of clinicians, when clinician gave the treatment to patients, the patients more suffered.
Suggestion	
Remove unnecessary items	Nothing, all aspects are important
Add additional items/points	Would like to add more aspects of patients' families what they have to manage.....
Remove some text details	Maybe cut out the explanation, it is something that is already understood
Clarify some items	If possible, to add details and steps; for example, communication skills...
Adjust the content structure of the guideline	This one is important, this one is the priority....Guideline should tell what is the most important what cannot miss.
Adjust the design	Cartoon pictures are pretty, but it doesn't affect memory. What I remember is the content. Can take them out.
Produce alternative versions	I would suggest to have the manual version.
Expand the use of guideline	This guideline is good. Not only psychiatrists....but also the nurse in the community if they are trained....
Additional Inquiry from Delphi	
Understandable of "emotionally ready"	Emotional readiness. I understand
Understandable of "Other things that enhance self-harm"	Other things that enhance self-harm, here, I understand.
Necessary of "Admit patients into the hospital"	I think that, here, it is necessary. Some people that are at high risk, if we let the patient go, they may be at high risk
Understandable of "Strength "	...strength, read and understood
Understandable of "positive aspects of life"	..positive perspective. I understand
Understandable of "Communication skill....."	Communication skill, here, I understand.
Necessary of "Box of symbols"	even though, it is on the first page, I think it is necessary. Sometimes, when actually using the guideline, we may come straight to this page
Implement the guideline with the patients	I used the guideline with a total of 2 patients. With the first patient, the guideline was used three times. With the second patient, the guideline was used once.
Previously used guideline	I have not used one for helping before.

Appendix 16: Questions of Semi-structured Interviews

Delphi method

Please consider each following item,

1. How necessary and understandable each item are?
 - a. Please provide your reasons
 - b. If you find them not understandable, please provide the better alternative sentences for them.
2. Would you like to suggest more additional items or some elements useful for this guideline?
3. How do you find the sequences of the items? (Practical and clear)
4. How do you find the design of the guideline? (Practical and clear)

Feasibility study

1. How many patients did you use the guideline with? How many sessions per patient?
2. What are your overall thoughts about using the guideline over the last 6 weeks?
3. Apart from your previous comments, how helpful/unhelpful did you find the guideline to be for you to implement to patients?
4. Is the guideline easy to understand?
5. Are there any obstacles in implementing the guideline?
6. Do you have any suggestions on how we can improve the guideline?
7. Are there any items you found unnecessary for the guideline?
8. Are there any items you think should be added on the guideline?
9. What do you think about the design of this guideline?
10. Does the guideline suit your work practice routine?
11. Do you have any more comments or suggestions about the guideline?
12. Have you ever used other guidelines to help patients that self-harm?

Additional Inquiry from Delphi

Do you understand these words?

Is this part of the guideline necessary?