Cyberbullying in the workplace: factors influencing perceptions and implications for the development of an intervention

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Abstract

Computer-mediated communication (CMC) is a key ingredient of the modern workplace. Its task-oriented nature permits negative, critical, or aggressive messages to reach colleagues outside the working hours or at times when they may be most vulnerable. The nature of digital communication means allows messages to be copied broadly to peers and senior staff, be visited permanently, or soften the critical comments due to the lack of nuance in verbal communication. This dark side of CMC, which has been recognised as cyberbullying, is starting to receive a lot of attention. The severe consequences of the individual and organisational aspects of cyberbullying have been confirmed in empirical studies. Given a brief history, the potential influencing factors and effective interventions for cyberbullying remain unexplored. This project aims to explore the perceptions of workplace cyberbullying, to develop and establish a preliminary measure of perceptions of cyberbullying, to determine the influence of gender and culture on perceptions and motivations, to explore the experience of workplace cyberbullying in a university setting and to evaluate potential effective interventions for preventing and reducing cyberbullying in the workplace.

Chapter 1 provides an up-to-date review of the workplace cyberbullying literature and compares and contrasts it with traditional bullying in the workplace. The review highlighted the differences between traditional bullying and cyberbullying in terms of definitions and impacts. The need for a measure of perceptions was emphasised. The effect of gender on people's perceptions of

workplace cyberbullying has been highlighted. Evidence also showed that the influence of victimisation experiences in workplace cyberbullying remains unclear. In addition, the literature addressed the explanations of workplace cyberbullying engagement in both individual and organisational aspects. Finally, the review highlighted the urgency of developing effective preventions and interventions for workplace cyberbullying.

Chapter 2 consists of the first study that aimed to explore the perceptions of cyberbullying in the workplace using a semantic differential method. An additional aim was to develop a practical measurement to assess the perceptions of cyberbullying in the workplace. A total of 76 university students were recruited. The exploratory factor analysis resulted in a 5-item scale which was labelled as the Perceptions of Cyberbullying Scale, capturing people's appraisal of cyberbullying on five elements including 'intention to harm', 'serious action', 'psychological harm', 'difficulty to avoid' and 'difficulty to prevent'.

Chapter 3 consists of the second study that investigated victims' perceptions of workplace cyberbullying perpetration using the scale developed in the first study. Also, this study investigated the perceived motivations for cyberbullying using a vignette of cyberbullying behaviours. A quasi-experimental method was used to explore the impact of perpetrator and victim's gender on perceptions, as well as the perpetrator's motivations in the UK and China. A total of 262 faculty members were recruited. Results showed that people perceived workplace cyberbullying with a male perpetrator as being more intentional to harm, more serious, more psychologically harmful and more difficult to avoid and prevent than if the perpetrator was a female; this significant difference was mainly

accounted for by the responses from UK campus. Moreover, female victims were more likely to blame themselves and to endorse exonerated motivations for the perpetrator. This significant difference was mainly accounted for by the responses from China campus. Previous victimisation experiences did not impact the perceptions of workplace cyberbullying.

Chapter 4 consists of the third study which was a qualitative analysis of written responses to an online interview. This study aimed to explore the real-life victimisation experiences of cyberbullying in the workplace. Responses from 23 faculty members were analysed using a thematic analysis method. Five themes emerged from the transcripts. Results emphasised that significant negative impacts of workplace cyberbullying were perceived by the victims. Results also showed that when dealing with workplace cyberbullying, problem-focused strategies were favoured over emotion-focused strategies by the victims. Dissatisfaction in organisational support was highlighted by the victims.

Chapter 5 consists of the final study which was a systematic review. The initial aim was to assess the effectiveness of interventions designed to prevent or reduce cyberbullying in the workplace. A preliminary scoping exercise showed that there was insufficient evidence of workplace cyberbullying. Thus, the aim was widened to conduct a systematic review of generic interventions for workplace bullying. A search was conducted systematically in Embase, PubMed, PsycINFO, the Cochrane Library, CINAHL and ASSIA for randomised controlled trials (RCTs) published between Jan 2015 and May 2020. The primary outcomes were the number of occurrences, frequencies, and perceptions of severity of workplace bullying. The secondary outcomes included the attitude

towards workplace bullying, confidence in dealing with workplace bullying, and any stresses as a result of workplace bullying. Out of 2734 records identified, 7 studies met the inclusion criteria with 1097 individuals. All included studies measured the effectiveness of interventions at the individual-level. The results showed that the behavioural intervention (yoga practice) significantly reduced workplace aggression after treatment compared with the control group (mean difference (MD) -4.44; 95% confidence interval (CI) -7.50 to -1.38). In addition, the early psychological intervention, i.e., Eye movement desensitization and reprocessing, was associated with a significant lower post-traumatic stress disorder score than the control group at the 48-hour (MD -17.49; 95% CI -19.62 to -15.36) and 3-month (MD -21.20; 95% CI -23.98 to -18.42) follow-up. Mixed results were observed in the cognitive behavioural interventions compared to the control group. No significant effects were found in the educational/informational interventions. The review revealed a need for higher quality research in this area with longer follow-up periods, and for evaluations of interventions at the organisational-level that aimed to address and manage bullying in the workplace. The potential applicability of results in workplace cyberbullying was discussed.

Future implementations and recommendations for countering workplace cyberbullying are discussed in the final Chapter. Findings from the qualitative study emphasised that there may be a deficit of organisational support for people who have been involved in workplace cyberbullying. This highlighted an urgent need for effective cyberbullying interventions. Moreover, findings from the qualitative study and systematic review suggested a need to develop and evaluate the organisational-level interventions for workplace cyberbullying. Several

practical suggestions for developing an effective organisational-level intervention are discussed based on the results from the studies. First, the similar perception ratings suggested that workplace cyberbullying may be recognised as an extension of traditional bullying but with some unique features of its own. The reported workplace cyberbullying perceptions suggested organisations may need an agreed definition of cyberbullying in policies to inform employees with the boundary of unacceptable online behaviours. Secondly, rather than policies, various forms of preventions could be implemented to increase the staff awareness of workplace cyberbullying, such as an induction for employees that particularly emphasises a zero-tolerance of cyberbullying. Thirdly, findings indicated that victims were more likely to engage in the problem-focused strategies. This suggested that more proactive interventions, such as training and resources, might need to be implemented in organisations to help victims to act appropriately in response to cyberbullying. The reported dissatisfaction in the response from organisations and managers suggested a need for training and resources at the managerial level to better respond to the victim. Moreover, findings from the second study suggested that the gender differences might need to be taken seriously when developing interventions as the victims' perceptions of cyberbullying may vary regarding their gender and the perpetrators' gender. The multi-national organisations might need to take the cross-country effect into account based on the diverse perceptions of workplace cyberbullying between the UK and China. It might be assumed that people working in different countries hold varying perceptions of workplace cyberbullying. In addition, given the lack of research in workplace cyberbullying interventions, it might be necessary to adopt interventions from traditional bullying with modifications

considering the unique features of cyberbullying. For further research, findings from the systematic review study suggested that more well-designed studies would be needed to evaluate workplace cyberbullying interventions.

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Chapter 1 Introduction

In the digital age, information and communication technology (ICT) has intrusively entered our lives and has massively changed our lifestyles. Worldwide, there are 4.54 billion internet users, 3.80 billion social media users, and more than 5.19 billion mobile phone users in 2020 (Kemp, 2020). Internet users spend approximately 6.7 hours online every day. It is estimated that the cumulative time spent on the internet and social media will reach a new height by the end of 2022 by users worldwide. The widespread usage of ICT has brought great benefits. However, the transformation to a digitised workstyle has also brought considerable disadvantages. The use of social media provides hackers convenient opportunities to commit frauds, launch spams, or even launch companywide viruses. Yet, although less obvious negative impacts, such as cyberbullying, have been gathering increasing attentions, they are still being overlooked in practice. In the workplace, cyberbullying is usually represented as, but is not limited to, sending emails or other digital-based messages that offend, intimidate, humiliate, or upset work colleagues.

Although research on cyberbullying could be traced back to the early 2000s, the primary focus has been centred on the school-aged population. Less attention has been paid to workplace cyberbullying in adults. In addition, since workplace cyberbullying has been recognised as negative behaviours that are mediated by technologies in the workplace, traditional workplace bullying may provide a lead to help understand workplace cyberbullying.

1.1 Workplace cyberbullying versus Workplace bullying

1.1.1 What is workplace bullying?

Workplace bullying is either subtle or obviously negative behaviours that occur between employees. It has been recognised as a persistent problem or a type of interpersonal aggression in organisations that can cause either physical or psychological harm. It has been receiving increasing attentions in the last 20 years (Neuman & Baron, 2005). The term to represent the concept of negative behaviours in the workplace is controversial among 'bullying', 'mobbing' and 'harassment'. Originally, people borrowed the term 'mobbing' from the field of childhood aggression to describe aggressive behaviours in the workplace, especially in German-speaking countries. The word 'bullying' has later become the preferred term in English-speaking countries (Matthiesen & Einarsen, 2010). Likewise, the primary focus of workplace negative behaviours was narrowed to serious issues such as the racial discrimination and sexual harassment prior to the 1990s. The term 'workplace bullying' was firstly used by Andrea and Crawford in 1992 to describe a wider type of interpersonal aggression that employees could be subjected to regardless of class based on their gender, ethnicity, age, etc. (Andrea & Crawford, 1992). Evidence has shown that employees are more frequently and repeatedly exposed to bullying rather than harassment in the workplace by recognising bullying with the additional inclusion of abuse of power than harassment (Dunn, 2000a; McMahon, 2000a).

Worldwide evidence has shown that the prevalence rate of workplace bullying rapidly increased from about 3.5% in the late 1990s to about 16% in the early 2000s (Ståle Einarsen & Skogstad, 1996; Hoel, Cooper, & Faragher, 2001;

Mikkelsen & Einarsen, 2001). An even higher prevalence rate was found in the late 2000s and 2010s (Bilgel, Aytac, & Bayram, 2006; Lutgen-Sandvik, Tracy, & Alberts, 2007). In the latest 2020 studies, the prevalence rate was reported around 30% which still remains high (K. C. Brewer, Oh, Kitsantas, & Zhao, 2020; Rahman, Islam, & Kabir, 2020). Across 88 prevalence studies that were conducted in 20 countries, the prevalence rate of workplace bullying varied from 0.3% to 86.5% (Zapf, Escartín, Einarsen, Hoel, & Vartia, 2011). Possible explanations for these variations have been discussed, which include definition differences, cultural differences such as power distance, and methodological differences (Escartín, Zapf, Arrieta, & Rodríguez-Carballeira, 2011; Hofstede, 2001; Nielsen et al., 2009).

1.1.2 ICT revolution brings CMC into the workplace

In recent years, the rapid development of information communication technology (ICT) shapes the way people communicate with each other in the workplace. It does not require the user to be an expert as most of the modern ICT products are off-the-shelf and readily to use. It has been found that computers, interactive videos, and other ICTs can help employees to be aware of the organisational internal information and can help to collect employees' ideas (Wright, 1995). The ICT revolution brings the computer-mediated communication (CMC) into the workplace. Given its mediated nature, it allows the employees to have a two-way communication at work. Thus, CMC helps to improve the work efficiency and productivity by allowing employees collecting information in a more cost-effective and time-efficient manner compared to the traditional face-to-face communication (Lee, 2010).

Although CMC has been confirmed as the most frequent way for employees to communicate within their organisations, evidence suggested that it is less effective than the old-fashioned face-to-face communication. A qualitative study with 15 employees working in a service industry was conducted to measure the employees' preference for effective communication channels. Results from the interviews indicated that compared to CMC, employees perceived face-to-face communication to be more effective in terms of building relationships with managers and distributing work-related information to colleagues. Benefits of face-to-face communication may include multiple information cues, direct feedbacks, and other irreplaceable figures for good relationship maintenance (Lee, 2010). Although the small sample size of this study may reduce the representativeness of the results, the findings highlighted the shortfall of CMC in the workplace. Several theories of CMC were developed to explain these shortcomings.

The cues filtered-out theories, which in general are a group of theories suggesting a low capacity of transforming nonverbal cues with the communication medium that would damage the online relationship development, may help explain CMC's lack of effectiveness. They are composed of 13 theories, where the three main ones are the social presence theory, lack of social context cues theory and media richness theory. The social presence theory was originally defined as 'the degree of salience of the other person in the interaction and the consequent salience of the interpersonal relationships' (Short, Williams, & Christie, 1976). It suggests that nonverbal cues, as the representation of social presence, can be categorised into different classes. Various communication

media contains different capacities to transmit different classes of nonverbal cues. The fewer nonverbal cues that have been delivered by the communication media, the less warmth and involvements would be experienced by the users in the communication process. According to the theory, it is suggested that CMC lacks more socio-emotional contents than other forms of communication, such as face-to-face communication (Rice & Case, 1983). The delivery of an appropriate level of social presence can help to improve the effectiveness of communication between employees in a particular task (Short et al., 1976). Similarly, the media richness theory suggests all types of communication media differ in their ability to reproduce the information (Daft & Lengel, 1986). The term 'richness' refers to the amount of information that can be conveyed from the sender to the receiver via types of communication media. This theory has been considered to be the most appropriate model for reducing equivocality in organisational decision makings since the more richness of information received, the less likely the information could be misunderstood. For example, when the manager needs to discuss a project problem with the team members, a face-to-face meeting would be preferred rather than sending emails. The first-generation CMC has a lack of richness for reducing equivocality, including text-based emails, chats and discussions. Therefore, face-to-face has been perceived as the richest way to convey information in the communication. The other theory named the lack of social context cues suggests that compared to face-to-face communication, CMC can hardly transmit cues of demographics and personal characteristics. It also blocks cues of individuality and normative behaviours (Siegel, Dubrovsky, Kiesler, & McGuire, 1986). Therefore, it leaves more deindividualization and allows more freedoms in the communication.

In 1992, the social information processing theory was developed to criticize the cues filtered-out theories by suggesting that interpersonal relationships in CMC can be developed as equal as face-to-face relationships when more time is available for users to identify alternatives for the lost cues (Walther, 1992). The later hyperpersonal model suggests that media could make communications more attractive by giving the senders more communicative advantages over face-to-face communication (Walther, 2011). In addition, some other theories such as the social identity model of deindividuation effects and channel expansion theory were developed arguing that CMC could be effective if the compensation for the deficits of CMC is identified.

Although CMC provides conveniences to employees' daily work, these conveniences may also benefit people who are willing to bully others. The negative behaviours that are conducted via CMC, such as emails and social media, are recognised as cyberbullying in the workplace.

1.1.3 Recognition of workplace cyberbullying

Typically, there are two components to classify cyberbullying. One of which is to classify according to the type of behaviours, such as flaming that refers to sending angry messages technologically, harassment, denigration and masquerading (Bauman, 2015) or deception, malice, public humiliation, and unwanted contact (Ashley N. Doane, Pearson, & Kelley, 2014). The other component is to classify based on the technology used. Smith and colleagues categorised cyberbullying into seven types: text message, picture or video clip, phone call, email, chat-room, instant message, and website. As the primary way of communication in the workplace, email has been identified to be the most

common digital channel for workplace cyberbullying (R. Forssell, 2016). Many organisations have implemented an email policy that specifically focused on the acceptable/non-acceptable behaviours at work. Moreover, several questionnaires that designed to measure the exposure to cyberbullying in the workplace have indicated that the most frequent cyberbullying behaviours are related to emails, such as 'no response via email' in the Cyberbullying Behaviour Questionnaire (Jonsson, Forssell, Backstrom, & Muhonen, 2017) and 'been sent conflicting information' in the Workplace Cyberbullying Measurement (Samuel Farley, Coyne, Axtell, & Sprigg, 2016).

Privitera and Campbell conducted an exploratory study with 103 respondents and found that of these 34% were traditional bullied and 10.7% were cyberbullied (Privitera & Campbell, 2009). Although the prevalence rate of cyberbullying in the workplace seems to be lower than traditional bullying, it appears to be rising as a new phenomenon. A study with trainee doctors in the UK measured the prevalence rate using a self-reported method (S. Farley, Coyne, Sprigg, Axtell, & Subramanian, 2015). Participants were asked to provide the frequency of experiencing 19 bullying behaviours through eight forms of technology. Results showed that of the 158 respondents, 46.2% had experienced at least one act of cyberbullying which reflected a relatively high prevalence rate. Although the authors had argued that the low response rate (i.e., 7.9%) was expected because of the sensitiveness of the research topic, the results should be interpreted carefully as the small sample size and recruitment of trainee doctors may limit the generalisability of findings to the target population in the workplace. It has been investigated that the prevalence rate of cyberbullying has

increased from 2.8% to 17% in the workplace from 2016 to 2020 (Gardner et al., 2016; Oksanen, Oksa, Savela, Kaakinen, & Ellonen, 2020). The data tells us a general trend but should be used carefully. The reported prevalence rate may be influenced by several confounders including a variety of definitions used in the studies.

1.1.4 Similarities and differences in definitions

As a complex phenomenon, there is a debate on defining workplace cyberbullying. Some researchers consider workplace cyberbullying to be conceptually similar to traditional bullying, whereas others define it by highlighting the features that make it distinct from traditional bullying.

The Swedish National Board of Occupational Health and Safety firstly defines workplace bullying in legislation as '…recurrent reprehensible or distinctly negative actions which are directed against individual employees in an offensive manner and can result in those employees being placed outside the workplace community' (Saunders, Huynh, & Goodman-Delahunty, 2007, p342). Another frequently used definition of workplace bullying is 'Bullying at work means harassing, offending, or socially excluding someone or negatively affecting someone's work. In order for the label bullying (or mobbing) to be applied to a particular activity, interaction or process, the bullying behaviour has to occur repeatedly and regularly (e.g., weekly) and over a period of time (e.g., about six months). Bullying is an escalating process in the course of which the person confronted ends up in an inferior position and becomes the target of systematic negative social acts. A conflict cannot be called bullying if the incident is an

isolated event or if two parties of approximately equal strength are in conflict' (Ståle Einarsen, Hoel, Zapf, & Cooper, 2011, p22).

The above definitions highlight two important elements that can form workplace bullying: power imbalance, which refers to the unequal strength between the involved two parties; and repetition, which refers to the frequency and period. By recognising cyberbullying as a subtle form of workplace bullying, these essential elements have been adapted to help define cyberbullying in the workplace (C. Langos, 2012).

Power imbalance refers to the demonstration of power perceived by the perpetrator over the target and vice versa. In the traditional workplace bullying context, it is usually explained by the perpetrator and victim's organisational status. Evidence from one study showed that, contrary to 36.7% of participants who had been bullied by peers, a total of 74.7% had been bullied by a person in a managerial or supervisory capacity (Hoel et al., 2001). Another supportive study has shown that respondents are more likely to be bullied by managers than colleagues (i.e., 83.5% vs. 15.7%), which again highlighted the imbalanced power between perpetrators and victims (Unison, 1997). In the cyber context, an imbalanced power may be explained not only by the organisational status but also the level of ICT knowledge (Vandebosch & Van Cleemput, 2008) and technology opportunities (Dooley, Pyżalski, & Cross, 2009). Supportive evidence has shown that perpetrators of cyberbullying reported themselves as having better online skills than non-perpetrators (Ybarra & Mitchell, 2004). However, another argument indicates that both perpetrators and victims should have a similar level of ICT knowledge in order to communicate (Grigg, 2010,

p152). Considering this argument, the imbalanced power between the perpetrator and victim could be explained in a more subjective manner. Evidence from one study showed that individuals with a higher level of internet self-efficacy would be more likely to engage in cyberbullying behaviours (Xiao & Wong, 2013). This indicates that rather than the objectively imbalanced ICT knowledge, the subjectively imbalanced ICT knowledge perceived by perpetrators and victims may be more suitable to explain cyberbullying. Unlike traditional bullying, victims of cyberbullying are perceived to have more control in terms of terminating the negative behaviour (Wolak, Mitchell, & Finkelhor, 2007). Taking the computer-mediated nature of cyberbullying into account, victims are more able to terminate the negative content whenever they want, such as ignoring or blocking the perpetrator's contacts. However, this can only happen in a direct situation where the victim knows the identity of the perpetrator, and the perpetrator can be blocked without causing major consequences at work. If the harmful contacts or messages come from an anonymous identity or are to be repeatedly read and forwarded by other accessors, the victims would have difficulties to terminate such negative attacks. In this case, the power imbalance needs to be explained concerning another potential element, 'anonymity'. With the use of ICT, people can easily make a pseudo account or address without a contact in person. A school-aged cyberbullying study found that 18% of the 3767 participants reported that they had been cyberbullied, and of these 48% did not aware of the identity of the perpetrators (Robin M Kowalski & Limber, 2007). In the work context, it might be difficult for a perpetrator to send anonymous and aggressive emails to a victim as the email address and internet protocol address can be tracked easily by the victim and organisation. Yet, the increasing

dependence on social media in work gives the perpetrator opportunities and power to act anonymously and aggressively. For example, one can leave negative messages to the victim continuously and anonymously on Twitter. Unable to identify the perpetrator has been confirmed to increase the victim's feeling of powerlessness and helplessness (Slonje & Smith, 2008). Noteworthy, online actions always leave a digital footprint. Some studies revealed that victims could use these digital footprints as evidence to stop cyberbullying in the workplace (D'cruz & Noronha, 2013). Therefore, although 'power imbalance' has been suggested to play an important role in defining workplace cyberbullying, how the power should be recognised and understood in an online context needs to be made aware.

Another key element of workplace bullying is *Repetition*. Many definitions and measurements of traditional workplace bullying emphasise varied frequencies and periods of occurrences of negative behaviours. For example, the Negative Acts Questionnaire, which is an inventory developed to measure the perceived exposure to bullying and victimisation at work, does not consider respondents who have been treated negatively once to be a victim of workplace bullying (Ståle Einarsen, Raknes, & Matthiesen, 1994). Leymann (1996) suggests a criterion of one negative behaviour weekly over a period of six months for defining workplace bullying. Mikkelsen and Einarsen (2001) suggest a higher frequency that employees who are exposed to at least two negative behaviours per week over a period of six months can be considered workplace bullying victims. Some other researchers suggest that the exposure to workplace bullying should last for a longer period of time, such as 12 months (Rutherford & Rissel,

2004; Salin, 2001). Moreover, repetition is often considered in relation to another two elements: '*intention to harm*' and '*aggression*'. One-off acts may not be sufficient to illustrate the intention to harm. Considering the nature of face-to-face contact, traditional bullying is defined as an intentional behaviour to cause harm to the target (C. Langos, 2012; Olweus, 1993; Saunders et al., 2007, p342). If a negative behaviour is repeated by the perpetrator, the intention to harm would be more obvious. This is to say that one single negative act is more likely to be considered a joke in traditional bullying. In the cyber context, the negative act can occur in either a direct or indirect way (C. Langos, 2012). Direct cyberbullying involves only the perpetrator and victim and usually happens privately. For instance, negative phone calls or emails from the line manager to the employee can be described as direct cyberbullying. The harm to the victim only comes from the perpetrator. Whereas in a public forum, cyberbullying can be conducted indirectly when considering the increased breadth of the audience. The negative content online could be read and re-posted by anyone who has the access. Therefore, repetition in the cyber context can refer to multiple online attacks from the perpetrator directly or re-posting or viewing by other accessors indirectly (Dooley et al., 2009). However, an alternative argument suggests that a single negative act that makes huge damage to a victim's private life could also be perceived as cyberbullying (D'Souza, Forsyth, Tappin, & Catley, 2018; Vranjes, Baillien, Vandebosch, Erreygers, & De Witte, 2017). For instance, hacking private information can cause harm to the victims even when the information has not been posted in the public forum. Victims may be threatened by this persistent fear that their information would be misused and posted publicly.

Unlike the youth context, 'intention to harm' does not appear in many workplace cyberbullying definitions (Samuel Farley et al., 2016; R. Forssell, 2016; Vranjes et al., 2017). It has been argued that youth cyberbullying tends to be more explicit as the teenage perpetrators do not believe adults will read their postings; and they are not aware of or care about the consequence of their behaviours (M. A. Campbell, Slee, Spears, Butler, & Kift, 2013; Huang & Chou, 2010; Vandebosch & Van Cleemput, 2008). In the work context, cyberbullying behaviours might be more subtle because of the harder punishment, such as reprimanded or be dismissed. Individuals in the workplace hardly take such high risks to hurt their colleagues. Additionally, one may find it difficult to express and perceive emotions in working emails and hard to interpret its content since CMC does not transmit all communication cues (Samuel Farley et al., 2016). Subsequently, it is hard to say the root of cyberbullying behaviours in the workplace is to harm the victim intentionally. The target's perception of the harm often takes precedence over the intention behind the perpetrator's behaviour (D'Souza et al., 2018). Therefore, instead of focusing on adopting 'intention to harm', it might be more appropriate to focus on the victims' perceptions of harm when considering cyberbullying's definition in the workplace.

The above arguments have been reflected in current definitions of workplace cyberbullying. Forssell (2016) defined workplace cyberbullying as 'Negative acts carried out by a group or an individual using digital media. The acts are carried out repeatedly and over time against a victim who cannot easily defend him or herself. Online harassment can be expressed by offensive or rude text messages, email, or someone posting unpleasant and offensive information

(picture, videos, or text) on the Internet'. Obviously, the undefendable of the victim reflects the feature 'power imbalance' in the online context. And 'repeatedly' and 'over time' reflect the feature 'repetition'. Similarly, Farley (2016) defined workplace cyberbullying as 'a situation where over time, an individual is repeatedly subjected to perceived negative acts conducted through technology (e.g., phone, email, websites and social media) which are related to their work context. In this situation, the target of workplace cyberbullying has difficulty defending him or herself against these actions'. A difference between these two definitions is that Farley (2016)'s definition focused more on perceived negative acts, either by victims themselves or managerial staff who are supposed to deal with cyberbullying reports. A later definition by Vranjes (2017) defined workplace cyberbullying as 'all negative behaviour stemming from the work context and occurring through the use of ICTs, which is either (a) carried out repeatedly and over a period of time or (b) conducted at least once but forms an intrusion into someone's private life, (potentially) exposing it to a wide online audience. This behaviour leaves the target feeling helpless and unable to defend'. This definition highlighted the difference that, unlike traditional bullying, a single act that has been perceived with negative impacts on a victim's private life should also be conceptualised as cyberbullying.

Interestingly, some scholars argued that the negative online behaviours should be named 'cyber-aggression', as having a broader focus than 'cyberbullying' (Corcoran, Guckin, & Prentice, 2015). Cyber-aggression has been defined as 'Intentional harm delivered by the use of electronic means to a person or a group of people irrespective of their age, who perceive(s) such acts as offensive,

derogatory, harmful or unwanted' (Grigg, 2010, p152). In other words, it is argued that aggression can be either repeated or non-repeated negative acts that happen between the perpetrator and victim with equal power (Pyżalski, 2012). Such definition of cyber-aggression violates the assumptions of 'repetition' and 'power imbalance' in defining cyberbullying as a form of traditional bullying.

In general, it might be more appropriate to view workplace cyberbullying as an extension of traditional bullying. Although this argument gives consent to adopt key elements from traditional workplace bullying i.e., 'power imbalance' and 'repetition' to define cyberbullying, the nature of technology and other unique features, such as perpetrator anonymity, absence of direct face-to-face contact, exclusion from emails, copying the critical emails to multiple colleagues, and the large breadth of the audience (Casas, Del Rey, & Ortega-Ruiz, 2013; Smith et al., 2008), need to be taking into account on how we perceive power imbalance and repetition. Therefore, one of the roles of this thesis is to figure out whether people perceive cyberbullying as an extension of traditional bullying or a unique concept in the workplace. In order to resolve the debate, Study 1 was conducted to compare how people would perceive traditional bullying, cyberbullying, harassment and aggression in the workplace.

1.1.5 Similarities and differences in impacts

As a global phenomenon, workplace bullying has been proven to cause negative impacts in many aspects. A cross-sectional study that was conducted in 2004 measured the effects of workplace bullying on 150 university students who were or had been employed for a period of 12 months. Respondents were asked to complete several questionnaires measuring their experiences of workplace

bullying, physical and negative affect symptoms, and also their intentions to leave the job. Results suggested positive correlations between workplace bullying and physical symptoms including ‘upset stomach’, ‘bodily twitching’ and ‘headaches’, negative affects including ‘depression’ and ‘anxiety’, and also intentions to leave the job (Djurkovic, McCormack, & Casimir, 2003). Findings from this study suggested the physical and psychological impacts of workplace bullying. However, the results need to be critically interpreted as the low response rate (i.e., 18%) may raise the concern about the representativeness of the study. Also, the use of employed university students may raise the same issue because they are usually employed in a lower level of organisational hierarchy. They may be more likely to be in a victim status. Though the respondents were asked to report the symptoms that they attributed to workplace bullying, the cross-sectional design may not precisely illustrate a causal relationship between workplace bullying and symptoms. Another longitudinal case study with one victim and one witness was conducted in western Canada. Results from the semi-structured interviews concurred with the cross-sectional study described above and showed that workplace bullying experiences caused the reoccurrences of somatic symptoms from their chronic illnesses, psychosomatic and mental health problems including depression, sleeplessness, emotional health problems including feelings of upset and distress, negative impacts on their family life and social relations, and to resign the current job (Lovell & Lee, 2011). Although the results were collected from interviews with one self-labelled victim and one self-labelled witness which might cause biased responses that can affect the representativeness, findings from this study confirmed the physical and

psychological impacts of workplace bullying and suggested that these negative impacts are not only belonged to victims but to the witnesses as well.

Moreover, workplace bullying has been proven to cause work-related impacts as well. A cross-sectional study with 152 Australian Caucasian employees and 165 Singaporean Chinese employees (i.e., response rate = 57.64%) was conducted to measure the relationship between workplace bullying and workgroup identification and job satisfaction. All three variables were measured using questions on a survey. As a result, workplace bullying was negatively related to workgroup identification and job satisfaction (Loh, Restubog, & Zagenczyk, 2010). Another cross-sectional study with 200 doctors working in either public or private hospitals in Pakistan was conducted to investigate work-related impacts of workplace bullying as well. Results indicated that workplace bullying is a strong predictor of the lower job affective well-being and job satisfaction (Bano & Malik, 2013). It could be argued that the negative impacts of bullying exist in various professions. The use of a cross-sectional design allows researchers to investigate multiple variables concurrently, but it may not be representative enough and could be difficult to suggest a precise causal relationship between workplace bullying and its impacts. Moreover, other work-related impacts such as increased absenteeism and high turnover intentions are argued to be related to the workplace bullying experiences (Djurkovic, McCormack, & Casimir, 2008; Kivimäki, Elovainio, & Vahtera, 2000).

Compared with traditional bullying, cyberbullying has been argued to have less associations with physical harm but more with psychological harm. The psychological health problems such as depression, anxiety, low self-esteem,

paranoia, and suicide commitment (Gámez-Guadix, Orue, Smith, & Calvete, 2013; Goebert, Else, Matsu, Chung-Do, & Chang, 2011; Schenk & Fremouw, 2012; Ybarra, Mitchell, Wolak, & Finkelhor, 2006) and emotional health problems such as anger, sadness, feeling of hopelessness, defencelessness, and insecurity (Cowie, 2013) are frequently identified as the negative consequences of school-aged cyberbullying. Although there is a deficiency of evidence in workplace cyberbullying, it is found to cause psychological health problems and negative work-related impacts as well. Evidence from a cross-sectional online study with 492 employed respondents showed that workplace cyberbullying is associated with psychological health which was measured by the general health questionnaire (Ford, 2013). Another recent study with 331 UK university employees investigated the relationship between workplace cyberbullying and negative outcomes (Coyne et al., 2016). Results supported the direct relationship between workplace cyberbullying and the decreased job satisfaction. In addition, results also supported the indirect positive relationship between workplace cyberbullying and mental strain through negative affectivity, and the indirect negative relationship between workplace cyberbullying and job satisfaction through interpersonal justice. Most of the studies that were conducted to examine the relationships between workplace cyberbullying and negative outcomes were cross-sectionally designed. The one-time response may not be able to capture the actual causal relationships. In addition, the various criteria used to define workplace cyberbullying may affect the results. For example, Ford (2013) defined workplace cyberbullying as the negative behaviours that happened in the last 12 months, whereas Coyne et al. (2016) applied Leymann's (1996) criterion that defined workplace cyberbullying as the negative behaviours that happened

within a period of 6 months. Thus, the duration gaps between different criteria may cause the different categorisations of victims. Despite these confounders, these studies highlight the negative impacts of workplace cyberbullying. The severity of negative impacts of workplace cyberbullying compared to traditional off-line bullying was also investigated in some of these studies. It has been found that compared with off-line workplace bullying, cyberbullying showed a stronger negative relationship with job satisfaction (Coyne et al., 2016). However, no difference was observed in the relationship between either off-line bullying or cyberbullying with mental strain. The finding partially emphasised a more severe consequence of workplace cyberbullying than workplace bullying. In other words, workplace cyberbullying may be perceived with higher harmfulness than traditional bullying.

1.2 Why do people engage in workplace cyberbullying?

Without physical contacts with the victim, the consequences described above are usually not seen or realised by the perpetrator (M. A. Campbell et al., 2013). This may help to explain the cyberbullying perpetration. Despite the context, factors such as the personality (Goodboy & Martin, 2015; Privitera & Campbell, 2009; Workman, 2010), age (Debra J. Pepler et al., 2006; Xiao & Wong, 2013), perceived definitions (Corcoran et al., 2015; Cuadrado-Gordillo & Fernández-Antelo, 2016; West, Foster, Levin, Edmison, & Robibero, 2014), victimisation experiences (Cao & Lin, 2015; Varjas, Talley, Meyers, Parris, & Cutts, 2010; Xiao & Wong, 2013), anonymity (Ford, 2013; Huang & Chou, 2010; Suler, 2004; Varjas et al., 2010), social norm (Xiao & Wong, 2013) and cultural differences (Escartín et al., 2011; Power et al., 2013; Teagarden, 2005) are realised to be

relevant in predicting cyberbullying. Particularly work-related factors, such as the perceived organisational support (Djurkovic et al., 2008; Parzefall, 2010) and organisational environment (Bulutlar & z, 2009; Hodson, Roscigno, & Lopez, 2006) are found to have negative relationships with workplace bullying. Given the relatively brief history of cyberbullying in the workplace, possible motivations for traditional bullying in the workplace and cyberbullying in school-aged populations may help to understand workplace cyberbullying.

1.2.1 Individual motivations for perpetration

In school-aged cyberbullying literature, two factors are considered common and inter-related motivations: *anonymity* and the *online disinhibition effect* (Li, 2007). As introduced before in the definition section, anonymity has been illustrated as a unique feature of cyberbullying due to the distance provided by the computer-mediated technology. It brings the perpetrator the sense of being less responsible for their behaviours. Similarly, the online disinhibition effect summarises anonymity as a reduction of social restrictions and inhibitions when using remote electronic communications (Suler, 2004). Evidence from literature confirmed anonymity and the online disinhibition as an internal motivation for cyberbullying in the school-aged population, and it can let them feel free to do things that may never do in a face-to-face manner (Dehue, Bolman, & Völlink, 2008; R. Kowalski, Limber, & Agatston, 2008; Li, 2007; Smith et al., 2008). However, a qualitative study conducted among a small sample of 20 high-school students showed that anonymity and the online disinhibition effect were mentioned less frequently than other internal motivations in the study such as redirecting feelings, revenge, making themselves feel better, etc. (Varjas et al.,

2010). It could be argued that the small sample size reduced the power of the study and hence limited the reported frequency of anonymity and the online disinhibition effect. Moreover, the *victimisation experience* is considered to be a possible motivation in school-aged cyberbullying (Xiao & Wong, 2013). Cyberbullying has been conceptualised as a revenge for the perpetrator's victimisation experiences. This means that the victim is targeted due to their previous bullying behaviours. Whereas when the perpetrator's victimisation experiences have come from someone else rather than the victim, cyberbullying is then conceptualised as redirecting the feelings (Varjas et al., 2010). Additionally, many other factors are considered to be possible motivations for cyberbullying behaviours, such as gaining pleasure or satisfaction from hurting victims, seeking attentions (Wilton & Campbell, 2011), being jealous of the victim (R. Kowalski et al., 2008), protecting self from being picked on by others (Varjas et al., 2010), simply disliking the victim (Hinduja & Patchin, 2007), or even just for fun (Slonje & Smith, 2008). Recently, researchers also tried to explain cyberbullying perpetration by existing theories, such as the general theory of crime, the general strain theory, the theory of reasoned action, the theory of planned behaviour, and the neutralisation theory (Ashley N. Doane et al., 2014; Lianos & McGrath, 2018; Pabian & Vandebosch, 2014; Paez, 2018; Zhang & Leidner, 2014). Despite the age differences between adolescents and working employees, the motivations described above may be applicable to workplace cyberbullying.

Investigations for workplace bullying argued that the rent-seeking behaviour theory may play a motivational role in the perpetration (Salin, 2003). As being

explained as a rent-seeking behaviour, the perpetration of workplace bullying aims to enlarge the existing proportion of profits without making extra efforts or contributions. In other words, if the perpetrators feel that they can benefit from bullying under some favourable circumstances, such as a low perceived cost, they may engage in workplace bullying. According to such explanation, several factors can be considered possible motivations or antecedents, such as higher internal competitions. It has been found that with the *higher internal competition*, organisations usually have a tolerated and politicised climate with a reward system that somehow encourages employees to do whatever they can to win the competition. Employees may conduct perpetration to win the competition for the reward. Also, organisations' attitudes may contribute to the employees' perpetration as well. For example, if the organisation provides promotions or increases salaries for those who have succeeded by bullying colleagues, other employees may learn to do the same to get the reward. In addition, individuals may bully or punish team members who they believe are pulling back their ranking if the reward is based on it. Such instance is categorised as *bureaucracy and difficulties to lay off employees* (Salin, 2003). These motivations for workplace bullying may also be applicable to workplace cyberbullying. For example, a perpetrator may engage in cyberbullying behaviours since he/she perceives sending an offensive email can benefit him/herself with rewards from the organisation with a relatively low cost.

1.2.2 Effect of gender

As a common factor in a variety of fields, gender has been argued to play an important role in the victimisation and perpetration of bullying. In traditional

bullying, males are found to be more aggressive or more likely to be perpetrators than females (Borsa, Damásio, Bandeira, & Gremigni, 2013; Debra J. Pepler et al., 2006). In the context of workplace bullying, it had been reported by Zapf (1999) that within the 209 identified bullying cases, 26% of victims reported that they were bullied by male perpetrators, 11% reported that they were bullied by female perpetrators, and the remaining 63% victims reported that they were bullied by both male and female perpetrators (Zapf et al., 2011). It has also been reported that subordinates with male supervisors are more likely to be exposed to bullying than those with female supervisors (M.-L. Wang & Hsieh, 2016). Evidence indicates that there is a higher prevalence rate of male perpetrators of traditional workplace bullying. Explanations have been generated from both biological and developmental aspects. It has been stated that females hold the vulnerability to violence in all age ranges (Sigal & Denmark, 2013). Males are expected to be high in traits like dominance, independence, and aggressiveness (Williams & Best, 1990). Unlike the unified results from workplace traditional bullying, evidence indicates controversial results in workplace cyberbullying. Cassidy and colleagues conducted a prevalence study using a survey in four Canadian universities. Results reported among the 331 respondents which consisted of 225 female and 106 male faculty members, 27% females and 18% males were cyberbullied by colleagues and students in the last 12 months. This indicated that females are more likely to be victims of cyberbullying in the workplace than males (Cassidy, Jackson, & Faucher, 2016). However, another Swedish prevalence study with 3371 respondents reported conflicting results that males and supervisors may have higher vulnerability to workplace cyberbullying than females and non-supervisors when measured by a

cyberbullying questionnaire, but no gender difference was shown when the participants were asked to justify their victim status (R. Forssell, 2016). The heterogeneity between different evidence may be explained in multiple aspects. First, the higher vulnerability of females to cyberbullying in the workplace might be explained by the large proportion of female faculty members involved as respondents (around 68%) than male faculty members in the Canadian study, though it was expected as the respondents recruited were from a female-oriented working environment. The Swedish study conducted with employees working in a public research company consisted of a balanced proportion of the respondents' gender (i.e., 49% female and 51% male). Therefore, a imbalanced distribution of respondents' gender may bias the actual prevalence of male victims from being extrapolated and amplify the detection of the prevalence of female victims. Secondly, the use of different criteria for cyberbullying may cause conflicting results. The Canadian study defined cyberbullying as 'cyberbullying uses language that can defame, threaten, harass, bully, exclude, discriminate, demean, humiliate, stalk, disclose personal information, or contain offensive, vulgar or derogatory comments. Cyberbullying is intended to harm or hurt the recipient'. Such definition emphasised the misusing of language and the intention to harm or hurt the recipients. However, the Swedish study defined cyberbullying as 'negative acts carried out by a group or an individual using digital media. The acts are carried out repeatedly and over time against a victim who cannot easily defend him or herself. Online harassment can be expressed by offensive or rude text messages, emails, or someone posting unpleasant and offensive information (picture, videos, or text) on the Internet', by adapting from Leyman's criteria for bullying in 1996. Obviously, the definition used in the

Swedish study consisted of more elements from traditional bullying and a broader description of different mediations such as pictures and videos. These definitions may lead to different answers when asking to report cyberbullying victimisations. Thirdly, respondents in the Canadian study were asked to recall the victimisation experiences in the last 12 months; whereas those in the Swedish study were asked to recall the experiences in the last 6 months. The different recall periods may also affect the results.

On the other hand, the gender of the perpetrator has been abundantly investigated in cyberbullying. Inconsistent results were observed in research centred on youths and adolescents. Results from youngsters may guide the anticipation of adults in the workplace where the information is insufficient. The results can be classified into three types. Same as traditional bullying, gender has been argued to play the same role in cyberbullying where males are more likely to engage in the perpetration. An anonymous survey study that was conducted with 545 Taiwan school-aged students indicated that males were more likely to engage in cyberbullying behaviours compared to females (Huang & Chou, 2010). A similar result was found in a Canadian survey study with 177 school-aged participants that over half of the cyberbullies were males (Li, 2007). Another school-aged survey Swedish study reported that males cyberbullied others more frequently than females, though the significance was found only for text message bullying (Slonje & Smith, 2008). Such result was confirmed by a meta-analysis conducted in 2016. The authors reviewed 39 articles and confirmed that males were more likely to be involved in the cyberbullying perpetration than females (Sun, Fan, & Du, 2016). Gender socialisation, referring to the process of learning

social expectations and attitudes associated with one's sex (Wade & Beran, 2011), may provide an explanation. Females are expected to conform to social rules due to the society's dominant patriarchal nature (Akbulut & Eristi, 2011). Moreover, in the workplace context, males have been found holding stereotypes of not seeing themselves as a victim (Privitera & Campbell, 2009). They have shown higher acceptance of cyberbullying than females, which reflects the different perceptions of cyberbullying between genders (Agatston, Kowalski, & Limber, 2007). In addition, school-aged cyberbullying investigations with consistent results suggest that the higher perpetration rate in males may be explained by the more frequent and more skilfully use of ICT (Huang & Chou, 2010).

Conflicting findings from a large US study with 1139 university and college respondents showed that females were more likely to post gossip online to hurt others, which suggest that females have a greater tendency to engage in cyberbullying than males (Marcum, Higgins, Freiburger, & Ricketts, 2012; Xiao & Wong, 2013). It could be explained by evidence from traditional bullying that females tend to choose indirect, relational, psychological and emotional harassment and aggression (Owens, Shute, & Slee, 2000; Smith et al., 2008). In addition, the disinhibition associated with cyberbullying can overcome the lack of strength and power of females when there are less face-to-face contacts. This indirectly reflects that males in the workplace may have a higher vulnerability to cyberbullying. Females might perpetrate online but never do the same offline as the cyberspace could provide them with an ideal platform to perpetrate indirectly (Crick, Casas, & Nelson, 2002; Hinduja & Patchin, 2008).

Theoretically, it can be suggested that when cyberbullying is considered an extension of traditional bullying, males are expected to be more likely to perpetrate than females. When considering cyberbullying as a form of relational or indirect aggression, females are expected to be more likely to perpetrate. In contrast, a group of studies suggests that there is no gender effect on cyberbullying. An American research that was conducted with 439 college students reported that gender did not play a predominant role in any of the cyberbullying behaviours regarding the victimisation and perpetration (MacDonald & Roberts-Pittman, 2010). Similar results were found in young adults aged between 17 and 30 years old where a Malaysia study reported that there was no gender difference in the prevalence rate of cyberbullying perpetration after the schooling years (Balakrishnan, 2015). It could be argued that the online disinhibition nature helps people to consider themselves to have equal opportunities to engage in a bullying behaviour using technology (Robson & Witenberg, 2013).

The findings highlight the importance of understanding the definition of cyberbullying and the perceived motivations of the perpetrators. Although there is not much evidence from workplace cyberbullying given the sensitive nature of the topic, findings from the school- and university- field may provide some guidance where gender differences in the victimisation and perpetration of cyberbullying remain unclear. These contradictory results of gender differences in cyberbullying of younger participants may be explained by the age differences among the participants. A higher prevalence rate of the male perpetrator was found in school-aged children and adolescents (Huang & Chou, 2010; Li, 2007;

Smith et al., 2008); whereas a higher tendency of being perpetrators for females and insignificant gender differences were more likely to be reported in university and college students who are considered to be young adults (MacDonald & Roberts-Pittman, 2010; Marcum et al., 2012). Another explanation could be the various measurements and definitions used in the prevalence studies. Some studies used relatively qualitative methods, such as focus groups, to measure the perpetration prevalence because there is a lack of standardised definition for cyberbullying; some used surveys with closed-ended questions that were modified from prior research (MacDonald & Roberts-Pittman, 2010; Selkie, Kota, & Moreno, 2016; Xiao & Wong, 2013).

Despite the use of various methods and definitions and other potential confounders, it is also argued that some factors may potentially mediate or moderate the relationship between gender and cyberbullying perpetration, such as victimisation experiences (Zsila, Urbán, Griffiths, & Demetrovics, 2019).

1.2.3 Effect of victimisation experiences

Given that there are substantial overlaps between traditional bullying and cyberbullying experiences, it has been suggested that cyberbullying should not be treated and understood as a separate phenomenon (Khong et al., 2020; Robin M. Kowalski & Limber, 2013; Waasdorp & Bradshaw, 2015). As the anonymous nature of cyberbullying allows people to engage in perpetration by hiding behind the devices, it may be considered a safe form of revenge (i.e., to cyberbully the previous perpetrator) or redirecting feelings (i.e. to cyberbully others, not the previous perpetrator) by individuals with previous bullying experiences (Dooley et al., 2009; Li, 2007; Smith et al., 2008; Varjas et al., 2010).

A study with 1500 Hungarian adolescents and adults confirmed the moderating role of victimisation experiences in the relationship between gender differences and cyberbullying. Results showed that males were more likely to engage in cyberbullying than females when they had previous cyberbullying victimisation experiences; females with repeated traditional bullying experiences showed an increased risk of the cyberbullying perpetration (Zsila et al., 2019).

The relatively little evidence in the workplace and the unclear role of gender and victimisation experiences again underline the importance of understanding workplace cyberbullying motivations.

1.2.4 Organisational explanations for workplace cyberbullying

Additionally, theoretical-based explanations for workplace bullying may also be applicable to explain workplace cyberbullying. For example, based on social exchange theory (SET), employees who perceive the work environment as unfavourable will repay with negative performance, attitudes, and behaviours (Parzefall, 2010). The SET predicts and explains people's perceptions and reactions of workplace bullying in terms of three components: organisational justice, psychological contract, and perceived organisational support (POS).

First, the perceived organisational injustice plays as a mediator between workplace bullying and negative reactions, such as fighting back (Tepper, 2000). A cross-sectional study with 271 employees was conducted to examine the relationships between perceived organisational injustice with the perceptions of job stress and cyberbullying. Three questionnaires were used to measure these factors. Results revealed a positive relationship between the perceived organisational injustice and cyberbullying with the perception of job stress as a

mediator. The perceived organisational injustice firstly increased the perception of job stress, and then the higher job stress increased the level of cyberbullying (Mehdad & Nezhad, 2014). Because the exposure to workplace bullying has been widely confirmed as a job stressor (Hauge, Skogstad, & Einarsen, 2010), such mediation relationship may also provide an explanation for the exchange of identity between victims and bullies. Employees who have been bullied with a perception of organisational injustice may experience work-related stress, and thus engage in cyberbullying as an action of revenge or redirecting feelings. This is consistent with findings from the school-field cyberbullying evidence where people with victimisation experiences showed an increased risk of cyberbullying perpetration (Zsila et al., 2019).

Evidence from a study with trainee doctors suggested that there is a negative relationship between workplace cyberbullying and job satisfaction with the interactional justice playing a mediating role in-between (S. Farley et al., 2015). According to the attribution model of workplace harassment, the attributions of blame by victims could influence their well-being, perceived fairness, work attitudes and behaviours (Bowling & Beehr, 2006). In addition, results also found that blaming the perpetrator of cyberbullying mediated the relationship between cyberbullying and interactional justice. This indicated that the attribution of blames for cyberbullying in the workplace can influence the victims' perceptions of their organisations, such as organisational justice.

However, these mediation relationships need to be used carefully because of the cross-sectional design. It is difficult to establish causal relationships between factors using a cross-sectional study (Setia, 2016). Moreover, the examined

factors were measured through self-reporting questionnaires, thus the answers may be biased.

Secondly, bullying is found to have increased the violation of psychological contract. As one of the three components, psychological contract refers to the expectations, beliefs, commitments and obligations that are exchanged between employees and employers without a written contract. It is usually developed over time from the daily interactions in the workplace and plays an important role in maintaining a positive employment relationship (Coyle - Shapiro & Kessler, 2000). Thus, the violation of psychological contract refers to a perceived failure to fulfil expectations and obligations. Victims who are bullied in the workplace may negatively evaluate the employment relationship by blaming the organisation instead of the perpetrator (Kakarika, González-Gómez, & Dimitriades, 2017). Kakarika and colleagues firstly conducted a study with 69 business students and found that workplace bullying can cause the violation of psychological contract. In the second study with 275 employees, the authors revealed a mediating role of psychological contract violation in the relationship between workplace bullying and job and life satisfaction. Again, although the findings were confirmed by a second field study, they should still be interpreted carefully due to the use of the cross-sectional design. Answers were collected through an online survey. It would be hard to reveal the causal relationship from the one-time responses. Moreover, the moderating and mediating role of psychological contract violation has been found in the relationships between workplace bullying and other negative outcomes, such as the increased turnover

intention, reduced organisational commitment, and reduced work engagement ((Malik, Sattar, & Yaqub, 2018; Rai & Agarwal, 2017; Salin & Notelaers, 2017).

Thirdly, the perceived organisational support (POS) has been argued to show a buffering effect on occupational violence (Leather, Lawrence, Beale, Cox, & Dickson, 1998). As employees judge their employment relationship based on the resources given by the organisation, victims with coping resources provided by the organisation will perceive themselves to be less vulnerable and perceive the situation to be less stressful (Folkman, 2013). On the other hand, employees who have experienced bullying in the organisation will believe that the organisation tolerates such behaviour and cares less about employees' health and well-being. Thus, the organisational support will not be perceived by the victims where bullying exists. Supportive evidence from a survey study with three real-life employee samples measured the association between workplace bullying and the POS. Results showed that there was a negative correlation between workplace bullying and the POS, where workplace bullying was represented as an abusive supervision; and this negative correlation was moderated by the supervisor's organisational embodiment. Accordingly, the decreased POS was correlated with increased counterproductive work behaviours of employees towards organisations. Findings from the study concurred with the argument of the POS described above that employees partly blamed the organisation when experiencing bullying because they identify their supervisors as a representation of the organisation (Shoss, Eisenberger, Restubog, & Zagenczyk, 2013). In other words, it could be assumed that employees who were bullied by their supervisors would have a reduced POS. When considering the counterproductive work

behaviour as an outcome of workplace bullying or cyberbullying, they would be more likely to engage in bullying or cyberbullying to against the organisation as they identified their supervisors representing the negative valuation of the organisation (Keskin, Akgün, Ayar, & Kayman, 2016). Although this study examined the relationship by survey with the third sample one year after, more complex experimental and longitudinal designs would be needed to produce robust causal relationships. Evidence from another qualitative study with 35 employees explored victims' experiences based on semi-structured interviews. Results suggested that employees with workplace bullying victimisation experiences would reduce the level of commitment and loyalty to organisations and make the minimum effort at work if they perceived a lack of organisational support or higher tolerance of negative behaviours by their organisations (Keashly, 2001). Moreover, the mediating effect of POS on the relationships between workplace cyberbullying and its outcomes has been revealed by most of the studies in the field. A cross-sectional study with 183 employees working in industries in Serbia was conducted to examine the effect of POS on the relationship between workplace cyberbullying and employee emotional well-being. Results showed that workplace cyberbullying was negatively correlated with emotional well-being and POS was positively correlated with emotional well-being, which indicated that POS moderated the effect of workplace cyberbullying on employees' well-being (Nikolić et al., 2017). Another cross-sectional study with 3371 employees working in a research company found that the indirect relationships between workplace cyberbullying and outcomes, including health, well-being, work engagement and intention to quit, was mediated by POS which was represented as the support from colleagues and

supervisors (Muhonen, Jönsson, & Bäckström, 2017). Given the use of a cross-sectional survey design in most of these studies, the mediating effect of POS should be interpreted with caution. This highlights the importance of well-designed and longitudinal studies to confirm the role of POS in work relationships.

1.3 Individual reactions and organisational preventions

Due to the widespread negative impacts and behaviours in the workplace, attentions have been drawn to looking for coping strategies. Though less is known about the victims' experiences of cyberbullying in the workplace, the findings from traditional workplace bullying may be applicable by considering cyberbullying as a form of traditional bullying. In the context of traditional bullying, victim reactions can be classified into three categories: seeking help, avoidance, and assertiveness (Jóhannsdóttir & Ólafsson, 2004). Evidence revealed that avoidance is the most common reaction, followed by assertiveness and seeking formal help (Djurkovic, McCormack, & Casimir, 2005; Leck & Galperin, 2006). In school-aged cyberbullying, evidence suggests that deleting the message is the most frequent reaction in college students' experiences, followed by talking to others, bullying the perpetrator, and ignoring the perpetrator (Zacchilli & Valerio, 2011). These findings may also be applicable to cyberbullying in the workplace by considering its nature, such as anonymity.

Moreover, prevention or reduction interventions that have been specifically designed for workplace cyberbullying are hardly found when searching for published literature. The current interventions in the workplace are primarily designed for traditional bullying (Gillen, Sinclair, Kernohan, Begley, & Luyben,

2017; Hodgins, Maccurtain, & Mannix McNamara, 2014; Stagg & Sheridan, 2010). It has been argued that interventions aiming to address the underlying relationship issues between victims and perpetrators of workplace bullying should also be applicable to reduce cyberbullying (Vranjes, Farley, & Baillien, 2020). Interventions targeting workplace bullying have been recognised in three stages (Vartia & Leka, 2011). In general, the primary intervention stage is aiming to proactively prevent the occurrence of bullying by reducing risks; the secondary intervention stage is aiming to reduce bullying from recurring and increase employees' coping skills when being involved in bullying; the tertiary intervention stage is aiming to minimise the negative impacts that would have been caused by bullying and rehabilitate employees' health and well-being. Additionally, the interventions could also be classified into different levels: policy/societal, organisational, task/job, and individual-levels. Apparently, interventions at the policy-level are aiming to lower the prevalence of workplace bullying by making national and global changes, such as the Framework Agreement on Harassment and Violence at Work (Partners, 2007). Interventions at the organisational-level are aiming to improve employees' attitudes and organisational culture towards antibullying by introducing and updating relevant policies within individual organisations (Caponecchia & Wyatt, 2011). The job-level interventions are aiming to prevent bullying by making changes to the job itself and work environments, such as incorporating a risk assessment that measures potential antecedents of bullying to aid intervention developments (Hoel, Giga, & Faragher, 2006). The interventions at the individual-level are the most easily understood out of all of the above. These interventions refer to the specific training such as educational and cognitive behavioural interventions.

The aim is to improve employees' knowledge, perceptions, and attitudes towards workplace bullying and reduce its occurrence (Baby, Gale, & Swain, 2019; Kang, Kim, & Yun, 2017). Some individual-level interventions are also aiming to increase employees' confidence in dealing with bullying (Glass et al., 2017; Ming et al., 2019). The current interventions for workplace bullying are mostly developed at the individual and organisational-levels. There is a lack of interventions at the policy and job-levels (Tricco et al., 2018). The effectiveness of interventions varies between different levels and even between different types within the same level (Gillen et al., 2017; Hodgins et al., 2014; Stagg & Sheridan, 2010).

In literature, it is found that current prevention and reduction interventions for cyberbullying are primarily targeted at school-based populations. Many of the interventions are newly developed. For example, Jacobs and colleagues developed an over 3-month period web-based intervention to counter and prevent cyberbullying (Jacobs, Dehue, Völlink, & Lechner, 2016). By considering cyberbullying as an extension or subtype of traditional bullying, previous programmes designed to counter traditional bullying have been adapted to counter cyberbullying. Sapouna and colleagues in 2016 recommended using the adapted anti-bullying programme, 'FearNot!', to counter cyberbullying in the school field (Sapouna, Enz, Samaras, & Wolke, 2016). To achieve that, the uniqueness of cyberbullying is considered for adaptation. Similarly, the adaptation was provided to the programme called 'Let's Not Fall into the Trap' which was firstly designed as an anti-traditional bullying intervention. The adapted programmes were reviewed with positive effects on countering both

traditional bullying and cyberbullying, as well as promoting the positive usage of technology (Menesini, Palladino, & Nocentini, 2016). The newly developed and adapted anti-cyberbullying interventions are both reviewed to be effective in school- and university-aged populations (Cleemput et al., 2014; Gaffney, Farrington, Espelage, & Ttofi, 2019; Tanrikulu, 2018).

In summary, there has been a large amount of literature and evidence regarding traditional bullying in the workplace and cyberbullying in the school-based environments. However, there has been a lack of evidence on how to deal with cyberbullying in the workplace. This highlights a need for exploring effective interventions for countering workplace cyberbullying.

1.4 Overarching aim

The overall aim of this thesis is to explore factors influencing people's perceptions of workplace cyberbullying and the implications of the development of effective interventions from a social-ecological perspective. Specially, the overarching aim is achieved in four studies. As stated in the above sections, there is a debate regarding whether to conceptualise cyberbullying as a unique concept or an extension of traditional bullying. Therefore, the first study of this thesis aims to explore perceptual features of workplace cyberbullying and distinguish cyberbullying from traditional bullying in the work context by considering the role of gender and victimisation experiences (i.e., Chapter 2). After solving the debate, the potential factors, including gender difference and victimisation experiences, that influence people's perceptions of workplace cyberbullying are explored in a cross-country mixed-method study (i.e., Chapter 3). Because the exploration of perceptions in the second study is lacking in-depth details, the

third study is conducted to explore people's in-depth perceptual understanding of workplace cyberbullying and their perceived needs from the real-life experiences using a qualitative method (i.e., Chapter 4). The last study is conducted to systematically summarise the current situation of workplace cyberbullying interventions (i.e., Chapter 5). Findings from these four studies would provide constructive suggestions for further developments of effective interventions for workplace cyberbullying.

1.5 Theoretical framework

As already outlined in the above sections, workplace cyberbullying has been recognised as a complex phenomenon that can hardly be explained by any single theory. Although workplace cyberbullying has rarely been conceptualised theoretically in literature, it may be feasible to borrow theoretical considerations from the youth context. As a theory of child development, the Ecological Systems Theory initiated by Bronfenbrenner in 1997 has been applied to conceptualise youth bullying (Espelage, 2014). This approach suggests that human behaviours are influenced by the immediate and indirect environments we live in (Bronfenbrenner, 1977). In this theory, five overlapping systems are identified to explain the relationship between individuals and environments (Figure 1). The most immediate level (microsystem) argues the direct interactions with the immediate environment groups, including family, friends, and organisations, influence an individual's behaviour. The second level (mesosystem) suggests the interactions between these groups have an impact on one's behaviour. The next exosystem includes indirect factors that affect one's life. For example, a parent's workplace could influence on a child's development.

Next, the macrosystem contains broader factors that can shape one's behaviour, such as cultural, societal, and political factors. Finally, the chronosystem refers to the stage of life or environmental changes that occur over a lifetime, such as the impact of the Covid-19 pandemic on one's behaviour.

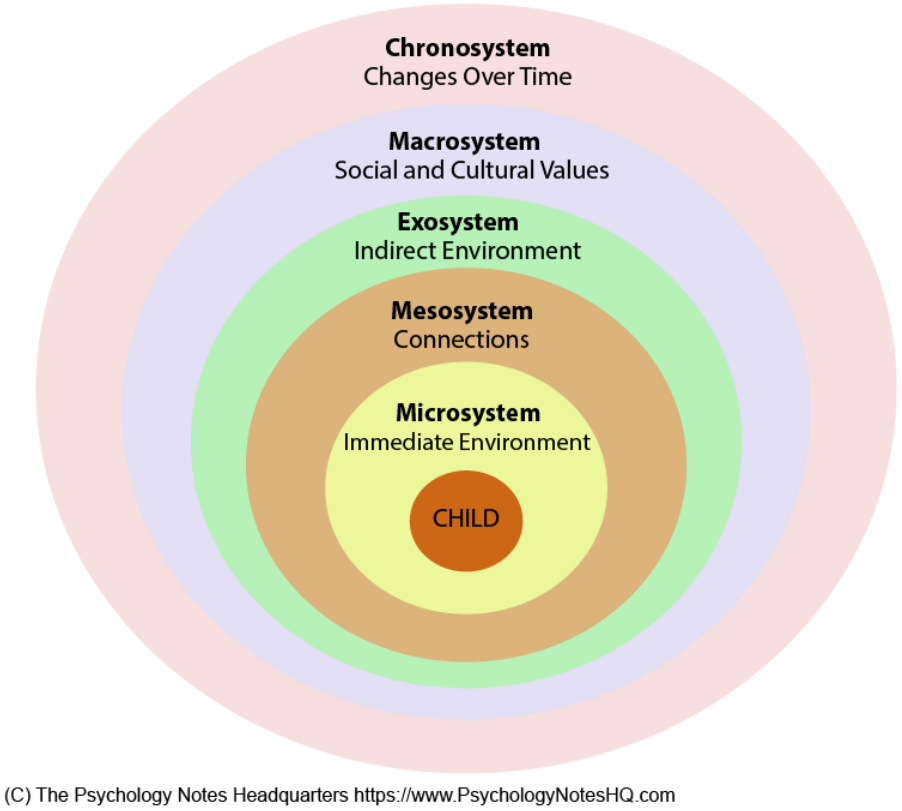


Figure 1 Bronfenbrenner's Ecological Systems Theory

Using the ecological systems theory as the basis, Swearer and Espelage introduced a socio-ecological framework for youth bullying in 2004. Instead of the five systems, the socio-ecological framework argues that bullying should be conceptualised with factors of levels of individual, peers, family, school, community and culture (Swearer & Espelage, 2011). Given that the socio-ecological approach is successfully applied in the bullying field, Cross and colleagues proposed a social-ecological framework for understanding and reducing youth cyberbullying behaviours (Cross et al., 2015). The authors

suggest that cyberbullying perpetration is influenced by individual, family, peer, online, and community factors.

In contrast to the youth context, limited evidence is available to conceptualise cyberbullying in the workplace theoretically. By reviewing the literature, it is clear that cyberbullying in the workplace is a complex phenomenon that may be influenced by multiple factors. Therefore, a socio-ecological approach is utilised in this research to help to understand multifaceted factors that influence people's perceptions of cyberbullying in the workplace and the implications of the development of interventions. The influential factors identified from previous research are conceptualised into three levels: individual, organisational, and cultural-levels. The individual-level factors incorporate all variables that are directly associated with the employee, such as gender, age, and victimisation experiences. The organisational-level refers to the influence of the perceived organisational attitude on cyberbullying perpetration, such as the perceived organisational support and organisational climate. Finally, the cultural-level comprises more general influences such as social, political, and regional influences.

1.6 Epistemological approach

It is argued that the choice of paradigms represents one's epistemological approaches and ontological views (Guba & Lincoln, 1994). Traditionally, the qualitative paradigm is recognised to reflect constructivism and interpretivism as it aims to provide an in-depth understanding of people's experiences and the underlying meanings by collecting a wealth of information in a naturalistic method. Whereas the quantitative method is claimed to reflect positivism as it

aims to make predictions and generalisations from existing facts (Yilmaz, 2013). It was argued that these two paradigms cannot be combined due to their conflicting underpinning epistemological assumptions. However, the pragmatic approach provides an alternative view (Sale, Lohfeld, & Brazil, 2002). It suggests that the relationship between paradigms and epistemologies should not be unique and definitive but practical and according to research aims. Therefore, considering the overarching aim of this research, a pragmatic approach was adopted in this thesis.

A mixed-method approach was adopted throughout the research as it is known that people's perceptions, as a very subjective sensory information, would be difficult to understand in a solely quantitative or qualitative method. Specifically in this project, people's perceptions of the concept (i.e., workplace cyberbullying) was firstly collected using a semantic differential scale in a quantitative study. Factors that influence people's perceptions were measured in a quantitative study as well because quantitative methods aim to understand relationships or correlations between variables (Yilmaz, 2013). Further perceptual understanding of cyberbullying and attitudes towards interventions was derived from people's real-life experiences that were measured using the qualitative method as it aims to provide in-depth information. Additionally, the current status of existing interventions was evaluated using a quantitative study.

Chapter 2 An exploration of cyberbullying characteristics and development of a brief measure of perception

2.1 Introduction

Cyberbullying, as a negative outcome of the rapid development and usage of information and communication technologies (ICT), usually represents the misuse of electronic devices. People refer to the term without having a clear boundary of 'what is cyberbullying' and 'what behaviours should be considered cyberbullying'. In the literature, there is a debate on how to define workplace cyberbullying. Most of the arguments tried to link and adopt definitional features from traditional bullying to cyberbullying i.e., repetition and power imbalance. Others tried to define workplace cyberbullying by highlighting its differences to distinguish it from traditional bullying. In the youth context, Kowalski and colleagues defined cyberbullying as 'An **intentional aggressive** behaviour, which carried out **repeatedly**, occurs between a perpetrator and a victim who are **unequal in power**, and occurs **through electronic technologies**' (R. M. Kowalski, Giumetti, Schroeder, & Lattanner, 2014). In this definition, four key elements which were adapted from traditional bullying (i.e., intention to harm, aggressive, repetitive, and imbalanced power) and one unique element for

cyberbullying particularly (i.e., occurs through electronic technologies) are identified. Many existing definitions of workplace cyberbullying adopted 'repetition', 'power imbalance' and 'electronic technology' as the central elements, but not 'intent to harm' which usually appeared as a central definitional feature of traditional workplace bullying and youth cyberbullying (Samuel Farley et al., 2016; R. Forssell, 2016; Vranjes et al., 2017).

Besides, other elements from traditional bullying may also be adapted to cyberbullying, such as the difficulty of detection. Subtle bullying has often been identified as an unnoticed phenomenon in the workplace because it is a slow process of emotional and psychological manipulation which is hard to prove and detect (ERC, 2013). Findings from the vast majority of research supported that most workplace bullying behaviours are relatively subtle and hard to detect (Escartín et al., 2011). It has been found that subtle bullying might be more harmful than less-subtle bullying behaviours (Samnani, 2013). In the cyber context, it has been argued that cyberbullying can be hard to detect and prevent since neither victims nor bystanders tend to speak it out (Huang & Chou, 2010; Slonje & Smith, 2008). These similarities and differences allow researchers to have various focuses when defining workplace cyberbullying.

In addition, the researchers addressed cyber-aggression and cyber-harassment to represent negative online behaviours as well (Corcoran et al., 2015; Flanagan, 2014). Cyber-aggression has been suggested involving a broader range of negative online behaviours than cyberbullying (Grigg, 2010, p152). It has been defined as '**Intentional harm** delivered by the **use of electronic means** to a person or a group of people **irrespective of their age**, who perceive(s) such acts

as offensive, derogatory, harmful or unwanted' (Grigg, 2010, p152). Whereas cyber-harassment has been argued as a sub-type of cyberbullying since harassment conveys more about sexually lewd or inappropriate behaviours independently (Ståle Einarsen et al., 2011, p22; Flanagan, 2014). Therefore, it would also be necessary to see whether people perceive cyberbullying conceptually similar to these terms.

Moreover, factors influencing the understanding of workplace cyberbullying should also be made aware when measuring people's perceptions. In a mixed-method study, female faculty members were more likely to disagree with the statement 'cyberbullying is a normal part of the online world; it can't be stopped' as opposed to male faculty members; they were more engaged with the problem and expressed a greater level of concern for the potential impacts (Cassidy et al., 2016). Furthermore, those who have been cyberbullied were less likely to disagree with the same statement than non-victims. Similarly, a more recent survey study found that female victims were more likely to report greater perceived stress and dissatisfactions in their job (Loh & Snyman, 2020). These results may reflect that people's perceptions and understanding of workplace cyberbullying might be influenced by gender and victimisation experiences.

The overall objective of the present study was to explore people's perceptions of the elements of workplace cyberbullying by considering the role of gender and victimisation experiences (Chapter 1).

2.2 Aim

To explore features of workplace cyberbullying and distinguish the differences between cyberbullying and similar concepts; to explore effects of gender and victimisation experiences in people's perceptions of cyberbullying; to create a brief semantic differential scale to assess the perceptions of workplace cyberbullying.

2.3 Method

2.3.1 Participants and Procedure

University students were recruited through email advertisements from one East Midlands university (Appendix 1). Participants were directed to the web pages containing brief information and the consent form by the link in the email. After signing off the consent form, participants were asked to provide demographic information including age, gender, and job. Participants were then asked to complete four semantic differential questionnaires that asked how they would rate cyberbullying, aggression, harassment, and face-to-face bullying in the workplace in terms of fourteen pairs of elements. After completing the questionnaires, participants were presented with a thank page to end the survey.

2.3.2 Design

This was a cross-sectional online survey study that contained four semantic differential questionnaires. In each questionnaire, participants were asked to rate one concept in the workplace in terms of the same 14 pairs of elements. The experiment used a 4 x 2 mixed design. The within-subject factor was the concepts used in each questionnaire: cyberbullying, aggression, harassment, and

face-to-face bullying. The between-subject factor was respondents' gender: male and female.

2.3.3 Ethical approval

This study was reviewed and approved by the University of Nottingham Medical School Division of Psychiatry and Applied Psychology Research Ethics Committee (Reference No. 212, see Appendix 2 for full letter). Consent to participate in the study was asserted through a tick box on the first page of the online survey.

2.3.4 Materials

2.3.4.1 Demographic information

Participants were asked to provide age, gender, and job before rating on the semantic differential questionnaires. In addition, respondents' victimisation experiences of cyberbullying were measured with a single polar question. Three choices were provided to the respondents: 'YES' for those who had had cyberbullying victimisation experiences previously; 'NO' for those who had no cyberbullying victimisation experiences previously; and 'DON'T KNOW' for those who were unsure about their experiences.

2.3.4.2 Cyberbullying Rating Scale

Initially, a 15-item semantic differential scale was constructed for the study to evaluate perceptions of workplace negative behaviours (i.e., cyberbullying, aggression, harassment and face-to-face bullying). The 15 elements were selected from the previous literature to represent different potential evaluations of workplace bullying and aggression. Elements were presented with polar-

opposite descriptors, e.g., Direct/Indirect. For each pair, respondents were asked how they would rate the property (i.e., element) for the concept provided in the question on a 7-point scale from -3 to 3. These bipolar ratings were designed to represent the opposites of the adjectives. Element ‘computer-mediated’ was removed from the scale before running the experiment since it might cause confusion if the respondents experienced through devices other than a computer. Therefore, the final scale remained 14 pairs of elements, as shown in Table 1.

Table 1 Fourteen pairs of elements on Cyberbullying rating scale.

Lower score (min. -3)	*Higher score (max. 3)*
Not repeated	Repeated
Imbalanced power	Balanced power
No intention to harm	Intention to harm
Indirect	Direct
Not anonymous	Anonymous
Private	Public
No sexual harm	Sexual harm
Not serious action	Serious action
No physical harm	Physical harm
No psychological harm	Psychological harm
Easy to detect	Difficult to detect
Easy to prevent as a 3rd party	Hard to prevent as a 3rd party
Easy to avoid as a victim	Hard to avoid as a victim
Not acceptable	Acceptable

2.3.5 Analysis

For analysis convenience, the original rating for elements, -3 to 3, was coded to 1 to 7. Therefore, the highest score for one element would be 7 and the lowest score would be 1.

Since the data were collected from 76 participants (smaller than 2000), the Shapiro-Wilk test was used to check the data's normality. For all 14 elements, the Shapiro-Wilk test showed statistically significant results ($p < 0.05$), which meant that all 14 elements were not normally distributed. Therefore, Kruskal-Wallis H tests were used to determine if there are statistically significant differences between 4 different concepts (i.e., cyberbullying, face-to-face bullying, aggression, and harassment) on the 14 elements. Post hoc tests were conducted followed by the Kruskal-Willis test to test pairwise comparisons. Mann-Whitney tests were performed to determine how people of different genders and with different victimisation experiences perceive the concepts in terms of the 14 elements.

Next, an exploratory factor analysis (EFA) was conducted to develop a brief semantic differential scale that assesses the perceptions of workplace cyberbullying. Because the data were not normally distributed, a principal axis method was used for the EFA to reduce the number of items. A reliability test was followed to assess the quality of items on the developed scale. After that, a non-parametric test, as a validation check of previous results, was employed to assess the difference between cyberbullying and face-to-face bullying, aggression, and harassment in terms of the developed scale. The Mann-Whitney test and the Kruskal-Wallis test, as validation checks, were performed as well to

examine the effects of gender and victimisation experiences on the developed scale. For all tests, a *p* value less than 0.05 indicated a significant difference between the comparison groups.

2.4 Result

2.4.1 Demographic information

This study was repeated measure designed. Of the total 76 respondents, 59 were female and 17 were male, who aged between 18 to 63 years old (mean age = 26.5, SD = 9.1). Countries of respondents included: the UK (n = 34), China (n = 11), Europe (n = 8), America (n = 4), Australia (n = 3) and other Asia countries (n = 16). Among the 76 respondents, 53 (69.7%) of them chose NO as an answer of whether have been cyberbullied before, 12 (15.8%) of them chose YES, and 11 (14.5%) of them chose DON'T KNOW.

2.4.2 Perceptions between different concepts

A Kruskal-Wallis H test showed that there was a statistically significant difference in 9 elements between the 4 different concepts ($p < 0.05$, see Table 2 for mean scores). Results from the post hoc tests showed that people perceived cyberbullying as being significantly more imbalanced powerful ($p = 0.008$), more indirect ($p < 0.001$), more anonymous ($p < 0.001$), more difficult to detect by victim ($p < 0.001$), harder to prevent as a 3rd party ($p < 0.001$), less intentional to harm ($p = 0.024$), less serious ($p = 0.004$), and less physically harmful ($p < 0.001$) compared to face-to-face bullying. No significant difference was observed on whether it was repeated, private or public, sexually harmful, psychologically harmful, difficult to avoid or difficult to accept ($p > 0.05$).

Compared to aggression, cyberbullying was perceived as being significantly more indirect ($p = 0.002$), more anonymous ($p < 0.001$), more difficult to detect ($p < 0.001$), harder to prevent as a 3rd party ($p < 0.001$), and less physically harmful ($p < 0.001$). Compared to harassment, cyberbullying was perceived as being significantly more indirect ($p = 0.008$), more anonymous ($p = 0.031$), less repeated ($p = 0.038$), less sexually harmful (p = 0.002), less serious ($p = 0.037$) and less physically harmful ($p = 0.003$).

Table 2 Mean scores of participants' ratings on 14 individual elements for cyberbullying, face-to-face bullying, aggression, and harassment

Elements	Cyberbullying	Face-to-face bullying	Aggression	Harassment
Repeat‡	5.18	5.68	4.86	5.63
Power*	3.32	2.54	3.18	2.78
Intention*	5.37	5.95	5.32	5.22
Direct*†‡	4.55	6.41	5.45	5.46
Anonymous*†‡	4.49	1.93	2.96	3.63
Public	4.07	4.70	4.46	3.99
Sexual‡	4.57	4.38	4.47	5.30
Serious*‡	5.32	6.05	5.55	5.88
Physical*†‡	3.67	5.25	5.17	4.78
Psychological	6.17	6.16	5.78	6.11
Detect*†	5.01	3.47	3.63	4.38
Prevent*†	5.25	3.92	4.07	4.71
Avoid	5.01	5.29	5.21	5.42
Acceptable	1.49	1.58	1.91	1.63

Note: the score for each element ranges from 1 to 7.

**Significant difference (p < 0.05) between cyberbullying and face-to-face bullying.*

†Significant difference (p < 0.05) between cyberbullying and aggression;

‡*Significant difference (p < 0.05) between cyberbullying and harassment.*

2.4.3 Perceptions between genders and victimisation experiences

A Mann-Whitney U test showed that female respondents perceived workplace cyberbullying as being more anonymous (U = 281.00, z = -2.815, $p = 0.005$, with a mean rank score of 42.24 for female and 25.53 for male) and more physically harmful (U = 332.50, z = -2.138, $p = 0.033$, with a mean rank score of 41.36 for female and 28.56 for male) than male respondents. Likewise, the results also showed that respondents without experiences perceived workplace cyberbullying as being more anonymous (U = 149.50, z = -2.926, $p = 0.003$, with a mean rank of 36.18 for respondents answered NO and 18.96 for respondents answered YES) compared to respondents with experiences. Mean scores for individual 14 elements by genders and victimisation experiences are shown in Table 3.

Table 3 Mean scores of participants' rating on 14 elements for cyberbullying between different genders and victimisation experiences

Elements	Gender		Victimisation experiences	
	Female (n = 59)	Male (n = 17)	Victim (n = 12)	Non-victim (n = 53)
Repeat	5.12	5.41	5.83	5.08
Power	3.37	3.12	3.58	3.15
Intention	5.49	4.94	5.33	5.51
Direct	4.59	4.41	5.08	4.40
Anonymous*†	4.78	3.47	3.33	4.74
Public	4.02	4.24	4.33	3.91
Sexual harm	4.68	4.18	4.83	4.40
Serious Action	5.41	5.00	5.50	5.34

Physical harm*	3.92	2.82	3.92	3.42
Psychological harm	6.19	6.12	6.17	6.28
Detect	5.14	4.59	5.00	5.06
Prevent	5.32	5.00	4.83	5.32
Avoid	5.20	4.35	5.17	5.00
Acceptable	1.51	1.41	1.75	1.36

Note: the score for each element ranges from 1 to 7. Only 65 respondents were analysed for victimisation experiences because 11 out of 76 respondents chose DON'T KNOW as an answer of whether have been cyberbullied before.

**Significant difference ($p < 0.05$) between different genders.*

†*Significant difference ($p < 0.05$) between different victimisation experiences.*

A Mann-Whitney U test showed that female respondents perceived workplace face-to-face bullying as being more difficult to detect (U = 310.50, z = -2.416, p = 0.016, with a mean rank of 41.74 for female and 27.26 for male) than male respondents. Victimisation experiences did not show a significant effect on people's perception of workplace face-to-face bullying. Mean scores for individual 14 elements by genders and victimisation experiences are shown in Table 4.

Table 4 Mean scores of participants' rating on 14 elements for face-to-face bullying between different genders and victimisation experiences

Elements	**Gender**		**Victimisation experiences**	
	Female (n = 59)	Male (n = 17)	Victim (n = 12)	Non-victim (n = 53)
Repeat	5.69	5.65	5.83	5.70
Power	2.63	2.24	2.67	2.21
Intention	6.05	5.59	5.92	6.06
Direct	6.47	6.18	6.75	6.45
Anonymous	1.95	1.88	1.75	1.77

Public	4.81	4.29	4.58	4.79
Sexual harm	4.49	4.00	4.58	4.49
Serious Action	6.10	5.88	6.42	6.08
Physical harm	5.37	4.82	5.33	5.28
Psychological harm	6.31	5.65	5.75	6.30
Detect*	3.75	2.53	3.08	3.38
Prevent	4.00	3.65	3.25	4.00
Avoid	5.31	5.24	5.00	5.28
Acceptable	1.46	2.00	1.83	1.45

Note: the score for each element ranges from 1 to 7. Only 65 respondents were analysed for victimisation experiences because 11 out of 76 respondents chose DON'T KNOW as an answer of whether have been cyberbullied before.

**Significant difference ($p < 0.05$) between different genders.*

A Mann-Whitney U test showed that female respondents perceived workplace aggression as being more sexually harmful (U = 348.00, z = -1.979, p = 0.048, with a mean rank score of 41.10 for female and 29.47 for male), more physically harmful (U = 310.50, z = -2.444, p = 0.015, with a mean rank score of 41.74 for female and 27.26 for male), and more difficult to detect (U = 265.50, z = -2.987, p = 0.003, with a mean rank score of 42.50 for female and 24.62 for male) than male respondents. Victimisation experiences did not show a significant effect on people's perception of workplace aggression. Mean scores for individual 14 elements by genders and victimisation experiences are shown in Table 5.

Table 5 Mean scores of participants' rating on 14 elements for aggression between different genders and victimisation experiences

Elements	**Gender**		**Victimisation experiences**	
	Female (n = 59)	Male (n = 17)	Victim (n = 12)	Non-victim (n = 53)

Repeat	4.88	4.76	4.83	4.92
Power	3.12	3.41	3.08	2.94
Intention	5.41	5.00	5.92	5.32
Direct	5.61	4.88	6.08	5.43
Anonymous	3.12	2.41	3.33	.2.70
Public	4.56	4.12	4.33	4.53
Sexual harm*	4.68	3.76	4.67	4.42
Serious Action	5.64	5.24	5.83	5.55
Physical harm*	5.39	4.41	5.33	5.25
Psychological harm	5.88	5.41	5.67	5.91
Detect*	3.95	2.53	3.25	3.64
Prevent	3.98	4.35	3.50	4.06
Avoid	5.29	4.94	5.00	5.32
Acceptable	1.75	2.47	2.00	1.79

Note: the score for each element ranges from 1 to 7. Only 65 respondents were analysed for victimisation experiences because 11 out of 76 respondents chose DON'T KNOW as an answer of whether have been cyberbullied before.

**Significant difference ($p < 0.05$) between different genders.*

A Mann-Whitney U test showed that female respondents perceived workplace harassment as being less anonymous (U = 344.50, z = -2.047, p = 041, with a mean rank score of 35.84 for female and 47.74 for male) than male respondents. Victimisation experiences did not show a significant effect on people's perception of workplace harassment. Mean scores for individual 14 elements by genders and victimisation experiences are shown in Table 6.

Table 6 Mean scores of participants' rating on 14 elements for harassment between different genders and victimisation experiences

Elements	**Gender**	**Victimisation experiences**

	Female (n = 59)	Male (n = 17)	Victim (n = 12)	Non-victim (n = 53)
Repeat	5.59	5.76	5.92	5.51
Power	2.59	3.41	2.75	2.77
Intention	5.25	5.12	5.33	5.15
Direct	5.34	5.88	5.75	5.32
Anonymous*	3.49	4.12	3.42	3.77
Public	4.05	3.76	4.00	4.09
Sexual harm	5.29	5.35	5.50	5.15
Serious Action	5.88	5.88	5.92	5.77
Physical harm	4.80	4.71	5.33	4.53
Psychological harm	6.17	5.88	6.08	6.04
Detect	4.49	4.00	4.25	4.57
Prevent	4.80	4.41	4.50	4.74
Avoid	5.42	5.41	5.75	5.34
Acceptable	1.59	1.76	1.25	1.66

Note: the score for each element ranges from 1 to 7. Only 65 respondents were analysed for victimisation experiences because 11 out of 76 respondents chose DON'T KNOW as an answer of whether have been cyberbullied before.

**Significant difference ($p < 0.05$) between different genders.*

2.4.4 Perceptions of Cyberbullying Scale

To develop a brief measurement of perceptions, a EFA with principal axis method was performed. Before conducting the principal axis factor (PAF) analysis, examinations of the Kaiser – Meyer Olkin (KMO) measure of Sample adequacy suggested that the sample was factorable (see Table 7).

Table 7 KMO and Bartlett's test for 14 individual elements.

Kaiser–Meyer–Olkin Measure of Sampling Adequacy		.676
Bartlett's Test of Sphericity	Approx. Chi–Square	200.379
	df	91
	Sig.	< .001

The parallel analysis suggested that factors with an eigenvalue higher than 0.86 should be extracted. Therefore, 3 out of 8 factors were extracted (see Figure 2).

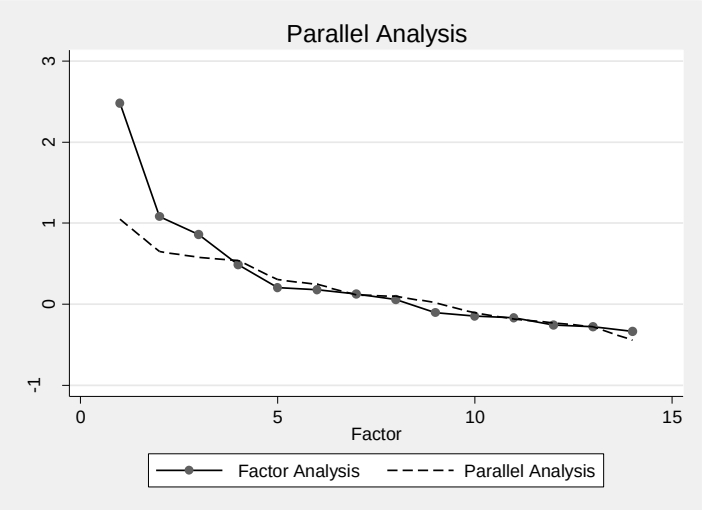


Figure 2 Parallel analysis plot for Principal Axis Factor analysis with oblique rotation.

First, the factor analysis was conducted with an oblique rotation, and 3 factors were extracted. However, the correlations between factors were all less than 0.50 (Appendix 3). Therefore, an orthogonal rotation (i.e., equamax rotation) was taken instead of the oblique rotation. The analysis yielded a 3–factor solution with a simple structure. Loadings less than 0.40 (absolute value) were excluded. Factor 1 had 6 items, Factor 2 had 3 items, and Factor 3 had only 2 items (see Table 8).

Table 8 Three-factor model with items, factor loadings, eigenvalues and percentage of variance explained (N = 76).

Items	**Factor 1**	**Factor 2**	**Factor 3**
Intention to Harm	.707		
Serious Action	.578		
Psychological Harm	.693		
Difficulty to Prevent	.495		
Difficulty to Avoid	.523		
Sexual Harm	.509	.445	
Physical Harm		.609	
Acceptable		.496	
Direct			.491
Difficulty to Detect			-.427
Eigenvalue	3.101	1.811	1.60
% of variance explained	22.15%	12.93%	11.45%

Based on the general guidance (Osborne & Costello, 2009; Tabachnick, Fidell, & Osterlind, 2001; Yong & Pearce, 2013), a factor should have at least 3 items to be labelled. Rotated factors that have 2 or fewer items should be interpreted with caution. Factors with 2 items are only considered reliable when the items are highly correlated ($r > 0.70$) with each other but fairly uncorrelated with other items (Tabachnick & Fidell, 2007). According to the Factor 3 in this solution, the two items, 'Direct' (loading = 0.491) and 'Detect' (loading = -0.427), held a relatively low correlation (r = -0.11) (Table 8). Therefore, Factor 3 with the item

'Direct' and 'Detect' was deleted from the model. Also, the cross-loading items should be considered carefully or deleted. In this case, item 'Sexual harm' showed a cross-loading on both Factor 1 (loading = 0.509) and Factor 2 (loading = 0.445). So, item 'Sexual harm' was deleted. Factor 2 was deleted as it held only 2 items after deleting item 'Sexual harm'.

So far, the PAF analysis resulted in a single-factor model with 5 items. Factor loading ranged between 0.495 and 0.707. This single-factor model explained 22.15% of the variance in the data set. The factors were labelled based on the meaning of prominent variables. By taking the shared meaning of the 5 items into account (i.e., Intention to harm, Serious Action, Psychological Harm, Difficulty to Prevent and Difficulty to Avoid), Factor 1 was labelled as 'Perceptions of Cyberbullying' which captured people's appraisal of cyberbullying on these five elements. Higher scores represent a more negative or threatening appraisal i.e., more intention to harm, a more serious action, more psychological harm, more difficult to prevent and more difficulty to avoid. Internal consistency for the scale was examined using Cronbach's alpha: $\alpha = 0.723$, which was above the general cut-off point ($\alpha = 0.70$) for an acceptable internal consistency (George, 2003).

As the sample size was less than 2000, the normality of the total mean of Factor 1 for the 4 concepts and the factor score of Factor 1 for cyberbullying was checked using the Shapiro-Wilk test. The results were significant ($p < 0.05$), which meant that the total mean of Factor 1 for the 4 concepts, and factor score of Factor 1 for cyberbullying were not normally distributed. Therefore, non-parametric tests were conducted as a validation check in order to determine the

difference between cyberbullying and the other three concepts on the Perceptions of Cyberbullying scale. Friedman test showed that there was a statistically significant difference between the total mean of cyberbullying, aggression, harassment, and face-to-face bullying (χ^2 (3) = 10.502, p = 0.015). The means, medians and standard deviations for the 4 concepts are presented in Table 9.

Table 9 Total means, medians and standard deviations of the Perceptions of Cyberbullying Scale.

Concepts	**Mean**	**Median**	**SD**
Cyberbullying	27.12	28.00	4.89
Aggression	25.92	27.00	4.64
Harassment	27.34	28.00	4.28
Face-to-face bullying	27.37	28.00	4.06

A Wilcoxon signed-rank test showed that the Perceptions of Cyberbullying scale elicited a statistically significant difference between cyberbullying and aggression (Z = -2.073, p = 0.038). But no significant difference was observed between cyberbullying and harassment (Z = -0.188, p = 0.851) and face-to-face bullying (Z = -0.114, p = 0.910).

2.4.4.1 Gender effect

A Mann-Whitney test was conducted to perform a validation check to see if there was a gender difference in perceptions of workplace cyberbullying as measured by the Perceptions of Cyberbullying scale. Results showed that there was no significant gender effect on people's perceptions of cyberbullying using the

factor score of the scale (p = 0.106). In addition, by using the sum score of the scale, no significant gender effect was observed (p = 0.078).

2.4.4.2 Victimisation experiences

A Mann-Whitney test and Kruskal-Wallis test were conducted to perform a validation check to see if there was an effect of the previous victimisation experiences on people's perceptions of cyberbullying as measured by the Perceptions of Cyberbullying scale. Results showed no significant effect of victimisation experiences either on the factor score of the scale by considering people with unsured answer (i.e., choose DON'T KNOW as an answer of whether have been cyberbullied before) as a separate group (p = 0.40) or together with no victimisation experiences (p = 0.20). In addition, no significant effect of victimisation experiences was observed on the sum score of the scale (p > 0.05).

2.5 Discussion

The present study was set out to assess the key descriptors of cyberbullying in the workplace. To my knowledge, this is the first study to examine the elements of cyberbullying in the workplace. This is also the first attempt to use the semantic differential method in investigating workplace cyberbullying. In summary, this study compared cyberbullying and the other 3 similar concepts in terms of 14 elements. The Perceptions of Cyberbullying scale, that captured people's appraisal of cyberbullying, was yielded from the 14 elements. Five out of 14 elements were remained in the scale including 'intention to harm', 'psychological harm', 'serious action', 'difficult to avoid as a victim', and 'difficult to prevent as a 3rd party'. In addition, the influence of gender and

victimisation experiences on people's perceptions of cyberbullying in the workplace was examined using ratings of the individual 14 elements and the Perceptions of Cyberbullying scale.

One of the main contributions of this study is that it compared cyberbullying with traditional bullying in the workplace in terms of the 14 individual elements. Results showed that people perceived workplace cyberbullying as being similar to traditional bullying on whether it is repeated, private or public, sexually harmful, psychologically harmful, difficult to avoid or accept. Regarding the ratings on the Perceptions of Cyberbullying scale, no significant difference was observed between cyberbullying and traditional bullying. These similarities may suggest perceiving cyberbullying as an extension of traditional bullying in the workplace.

However, results also showed significant differences between cyberbullying and traditional bullying in the workplace. Ratings indicated that people perceived cyberbullying as being more power imbalanced, more indirect, more anonymous, more difficult to be detected by victims, more difficult to be prevented by a 3rd party, and less physically harmful. These differences could be explained by the computer-mediated nature of cyberbullying. For example, because the perpetrator of cyberbullying could attack without face-to-face interactions, respondents may perceive that the victim can hardly detect the identity of the perpetrator. The constant possibility of threats and potential large audience may leave the respondents perceiving the victim to be less powerful to stop or reduce the attacks (Dordolo, 2014). In addition, cyberbullying was perceived as being less intentional to harm than traditional bullying according to the ratings in this

study. This is consistent with previous research that reporting ‘intention to harm’ might not be an essential definitional element for workplace cyberbullying (Samuel Farley et al., 2016). Cyberbullying allows indirect attacks through CMC, such as retweeting hostile messages or forwarding emails. These actions may cause harm to the recipients even though the senders may not intend to harm anyone. Interestingly, the significant lower ratings on ‘serious action’ for cyberbullying compared to face-to-face bullying indicated that people might not take cyberbullying as seriously as traditional bullying in the workplace. It is contrary to the findings from previous research reporting cyberbullying may have more severe outcomes or be more damaging than traditional bullying in the workplace (Coyne et al., 2016; D'Souza et al., 2018). One possible explanation may be that 70% of the respondents in the present study did not have real-life cyberbullying experiences. The absence of real-life experiences may lead to a skewed perceptual understanding of workplace cyberbullying compared with the real victims. This may suggest the need for further research to popularise people’s recognition of workplace cyberbullying.

Surprisingly, ratings regarding the other concepts showed inconsistent results compared with previous research. In literature, aggression is believed to have no restrictions on ‘repetition’ and ‘power imbalance’ compared to cyberbullying. However, the expected differences between cyberbullying and aggression in terms of the above two elements were not observed. Interestingly, the observed difference between cyberbullying and aggression was very similar to the difference between cyberbullying and traditional bullying. The observed difference could be explained as being more cyber-specific. This might indicate

that people perceived aggression and traditional bullying similarly in these 14 examined elements. Results from the Perceptions of Cyberbullying scale showed that apart from aggression, the ratings of cyberbullying did not significantly differ from harassment and face-to-face bullying. Such findings might be explained by the broader criteria of aggression compared to the other three concepts (Grigg, 2010, p152). The unspecific nature of aggression might cause people hardly to conceptualise the term accurately for comparison, thus resulting in a slightly different perception. However, this finding should be interpreted very carefully because the ratings of aggression were just slightly lower than the ratings of the other three concepts.

Another main contribution of this study is that it may help to understand how gender and victimisation experiences influence people's perceptions of cyberbullying. Among the 14 examined elements, female respondents perceived workplace cyberbullying as being more anonymous and more physically harmful. One explanation could be that compared to male employees, females might feel more difficult or less able to detect the perpetrator's identity once being cyberbullied and are more sensitive to its negative impacts. This indirectly supported previous literature that female was more likely to report greater stress caused by cyberbullying (Loh & Snyman, 2020). No significant difference was observed in other elements. As gender did not play a predominant role in cyberbullying (Tokunaga, 2010), perceptions might be identical regardless of gender. Results from the Perceptions of Cyberbullying scale confirmed the lack of influence of gender. Yet, among the 76 respondents, 59 were female and only

17 were male, the imbalanced distribution of participants' gender might influence the results as well.

Regarding the effect of victimisation experiences on people's perceptions of cyberbullying in the workplace, results showed that non-victims perceived cyberbullying as being more anonymous than victims. Victims with experiences might be more familiar with the coping strategies, methods of identifying the perpetrators, and available supports within their organisations.

One of the main limitations is that the recruited participants were all university students. Although university students are considered young adults and would likely be working in the future, they are not real employees yet. This might cause a lack of ecological validity. On the other hand, the results of the present study could be generalised to university students as well. In addition, there were only 76 respondents. The sample size might be relatively small to generalise results to the target population. Another limitation is the use of the self-reported method in the cross-sectional online questionnaire. Although this method has been recommended in gaining responses in observational studies and experiments with the benefit of time and cost, the reliability and validity of self-reported data are criticised (Demetriou, Ozer, & Essau, 2014). Participants' understanding or interpretation of questions might vary; the answers are heavily relying on the honesty of participants. In this present study, participants might answer questions in a manner that will be seemed favourable, which is also called the social desirability bias. As a result, answers with such bias could lower the accuracy and generalisability of results. However, it might be argued that self-reporting might be the most appropriate method to measure people's perceptions

of such sensitive topics. It would be difficult to gather perceptions of cyberbullying using a objective method.

Additionally, the use of the semantic differential method may be another limitation. The semantic differential method is aiming at measuring the connotative meaning of concepts (Aros & Aros, 2009). In other words, it is to measure the suggestive significance of the concept, apart from its explicit and recognised meaning. It requires respondents with a good knowledge of the language, who are willing and able to make fine distinctions. As cyberbullying holds a rather brief history, it might be possible that not all of the respondents know the denotative meaning of cyberbullying. Also, there were many non-native English speakers who participated as respondents where language proficiency could be one of the barriers. Moreover, the selection of the fourteen elements for the semantic differential questionnaires could be criticised in terms of the inclusion criteria where some may be missed out. The rationale was twofold. First, except for traditional bullying, there was not much literature debating elemental differences between cyberbullying and other concepts in depth. Secondly, even within the existing debates, the contents were limited to a more general description. For example, cyber-aggression has been debated as having a 'broader' definition than cyberbullying.

2.6 Conclusion

In general, findings from the present study suggested that cyberbullying may be seen as an extension of traditional bullying in the workplace in terms of particular elements. However, it does contain unique characteristics considering its computer-mediated nature. Also, the results highlighted the importance of

developing or updating a universal definition of workplace cyberbullying for organisations. Regarding the effect of gender and victimisation experiences on people's perceptions of workplace cyberbullying, this study has not been able to explore significant differences. A further study was conducted in Chapter 3 by recruiting real-life employees as participants.

Chapter 3 An exploration of perceived motivations and perceptions of cyberbullying in the workplace

3.1 Introduction

To prevent workplace cyberbullying from occurring, it is important to understand why people engage in such negative behaviours in their working life. Besides the personal motivations that have been discussed in Chapter 1, workplace cyberbullying has been explained by theoretical-based motivations. Neutralisation theory (Sykes & Matza, 1957) from criminology has been used to explain the engagement of perpetrations in cyberbullying. It suggests that offenders feel the same moral obligation as non-offenders to avoid illegitimate acts; they will employ unique justifications to rationalise their illegitimate acts and thus conform to their moral code. The concept of neutralisation theory has been confirmed to capture the same cognitive processes with another two concepts (Ribeaud & Eisner, 2010): moral disengagement, which is the process of individuals convincing themselves that ethical standards do not apply to themselves in particular situations (Bandura, Barbaranelli, Caprara, & Pastorelli, 1996); and secondary self-serving cognitive distortions, which has been applied as a coping mechanism that allows individuals with antisocial behaviours to

manage the related psychological stresses and continue their antisocial acts (Barriga & Gibbs, 1996). In the cyber context, although the perpetrators may realise bullying behaviours violate social orders, they still engage in because they can employ unique justifications to allow them to rationalise cyberbullying behaviours to be acceptable and suitable. These unique justifications are used as a weapon by perpetrators to defend and exonerate themselves against the dominant social orders. The positive relationship between cyberbullying perpetration and moral disengagement has been confirmed by a systematic review that has been published lately (Lo Cricchio, García-Poole, te Brinke, Bianchi, & Menesini, 2020).

Results from Chapter 2 found that people perceived cyberbullying as being more power imbalanced than face-to-face bullying. Such imbalanced power may be gender-related (Eagly & Carli, 2018). This has somehow been supported by the study in Chapter 2 that results showed females perceived cyberbullying differently from males in terms of anonymous and physical harmfulness. Previous studies suggested that males as opposed to females have a higher score on moral disengagement (Detert, Treviño, & Sweitzer, 2008; Samnani, Salamon, & Singh, 2014). Thus, it could be assumed that male is more likely to engage in a cyberbullying behaviour or to give such behaviour an exonerated reason than female. Although previous literature found that men are more likely to enact the direct aggression, whereas women are more likely to enact the indirect or relational aggression (Zapf et al., 2011), few research has been conducted investigating the gender of cyberbullying perpetrators in the workplace. Empirical studies in workplace cyberbullying seem to focus more on the victim

gender rather than the perpetrator gender and resulted in mixed outcomes. Some argued that female is more vulnerable to be cyberbullied than male (Cassidy et al., 2016); some argued the opposite (R. Forssell, 2016); some argued gender should have no influence on victimisation (Gardner et al., 2016). In addition, recent studies found that compared to male cyber-victims, females experienced more severe emotional and physical harm. These mixed results suggest that gender differences should be considered when understanding cyberbullying in the workplace.

As a complicated phenomenon, cyberbullying is rarely affected by one factor alone, but is rather explained by multiple influencers (Zapf, 1999). Results from Chapter 2 found people with cyberbullying victimisation experiences perceived cyberbullying as being less anonymous than people without experiences. Prior empirical research on workplace bullying suggested that people without experiences would be more likely to underestimate its severity (Branch & Murray, 2015). A qualitative study conducted by Cassidy and colleagues (2016) evidenced that higher education faculty members with cyberbullying victimisation experiences were more likely to believe that cyberbullying is abnormal (Cassidy et al., 2016). Thus, it is expected that real-life cyberbullying victimisation experiences in the workplace might play a role in people's perceptions of workplace cyberbullying. An empirical study with both adolescents and adults confirmed the moderating role of victimisation experiences in the relationship between gender and cyberbullying. Results showed that males were more likely to engage in cyberbullying than females when they had previous cyberbullying victimisation experiences. Hence, these

findings may suggest an influence of victimisation experiences, or even an interaction between experiences and gender on people's perceptions of workplace cyberbullying.

Besides the potential effects of gender and victimisation experiences on cyberbullying that has been investigated in Chapter 2, an exploration of cultural effects between countries may contribute to the understanding of cyberbullying. Since few cross-cultural research has been found on workplace cyberbullying, findings from workplace bullying might be borrowed to provide guidance. The first cross-cultural study on workplace bullying definition was conducted in Central America and Southern Europe (Escartín et al., 2011). Respondents from these two different world regions gave both differences and similarities when asking to provide their definitions of workplace bullying. For example, the differences showed that respondents in Central America focused more on physical aspects of workplace bullying; but the results also showed that respondents in both regions commonly agreed the behaviour of workplace bullying is engaged in by supervisors. Another study was conducted to assess the acceptability of work-related bullying across a wide range of 14 countries which were categorised into six country clusters: Southern Asia, Anglo, Confucian, Latin America, Sub-Saharan Africa, and Eastern Europe (Power et al., 2013). A total of 1484 alumni and MBA students with a mean age of 32.68 years and a mean work period of 4.9 years volunteered themselves and completed the questionnaire. The findings showed that countries with a high performance-oriented culture (i.e., Singapore, Hong Kong and Taiwan) found bullying to be more acceptable than those in high future-oriented and high

humane-oriented countries (i.e., the UK and the US). Despite the acceptability, people's attitudes towards workplace bullying has been reported differently among countries of varied cultures. A cross-cultural investigation examined the relationship between workplace bullying and attitudes among employees from Australia and Singapore (Loh et al., 2010). Results showed that the cultural differences influenced the negative relationships between bullying and job satisfaction and workgroup identification, i.e., Australians reported a stronger negative relationship than Singaporeans. Based on the findings from workplace bullying, it could be assumed that the cultural differences may also show an influence on people's perceptions of workplace cyberbullying.

3.2 Aims and hypotheses

In summary, this present study aims to investigate the impact of the perpetrator and victim gender, victimisation experiences, and cultures (China/UK) on victims' perceptions of workplace cyberbullying. The following three hypotheses were examined for perceptions of workplace cyberbullying that were measured by motivation and blaming scales:

H_{1a}: Participants would rate the male perpetrator vignette differently on the motivation and blaming scales compared to ratings on the female perpetrator vignette.

H_{1b}: Male participants would rate vignettes significantly differently on motivation and blaming scales compared to female participants.

H_2: Previous cyberbullied participants would rate vignettes significantly differently on motivation and blaming scales compared to those who have no cyberbullying victimisation experiences.

H_3: Participants from the UK campus would rate the vignettes significantly differently on motivation and blaming scales compared to participants from the China campus.

3.3 Method

3.3.1 Participants and recruitment

Participants were eligible if they were a staff member at one East Midlands university (UK or China campus). Staff members were invited to take part in a study investigating people's perceptions of receiving negative feedback via email in the workplace. As the study participants were hypothetical recipients of the email, they would be referred to as victims.

3.3.2 Design

An experimental, quasi-randomised design was used to examine the effect of vignette gender on people's perceptions of workplace cyberbullying across the UK and China. Male and female participants (victims) viewed a cyberbullying vignette of a male perpetrator or a female perpetrator and were asked to imagine themselves as the victim. Randomisation was on their day of birth with an even day of birth (2^{nd}, 4^{th}, etc) allocated to the female perpetrator vignette and an odd day of birth (1^{st}, 3^{rd}, etc) allocated to the male perpetrator vignette. Allocation to condition was concealed from the researcher. This resulted in four Participant (victim) Gender by Perpetrator Gender conditions: 1) Male victim * Male

perpetrator vignette; 2) Male victim * Female perpetrator vignette; 3) Female victim * Female perpetrator vignette; 4) Female victim * Male perpetrator vignette (Table 10). The study was administered and the data was collected through the Bristol Online Survey system. The sample size was calculated based on the power to detect a moderate effect size difference between groups assuming a normal distribution of outcome variables. As a minimum sample size of 64 in each condition is required to detect a 0.5 SD difference between scores with $p \leq .05$ and 90% power, the minimum sample size for the study was set to 256 participants.

Table 10 Vignette conditions by perpetrator and victim genders

Vignette scenario	Male victim	Female victim
Male perpetrator	1	4
Female perpetrator	2	3

3.3.3 Ethical approval

This study was reviewed and approved by the University of Nottingham Medical School Division of Psychiatry and Applied Psychology Research Ethics Committee (Reference No. 228, Appendix 4). A consent to participate in the study was asserted through a tick box on the first page of the online survey. The study was anonymous where data were not able to be traced back since participants were not asked to provide their identity details.

3.3.4 Study materials

3.3.4.1 Vignette conditions

A vignette describing a cyberbullying scenario was constructed based on common cyberbullying behaviours as described in previous research and policies (Samuel Farley et al., 2016; Jonsson et al., 2017). The vignette asked the participant to imagine they had been a victim, via email, of a number of cyberbullying behaviours that impact the performance or emotional wellbeing: 1) information necessary for successful completion of work has been withheld; 2) received emails with hostile wording or aggressive tone; 3) lack of response to emails; 4) received emails with conflicting information; 5) received critical and misleading comments to others. The term 'receiving negative feedback by email in the workplace' was used instead of workplace cyberbullying in the vignette (see Appendix 5 for example vignette). Participants (victims) viewed an email of either a male vignette (MV) where the sender of the email was a male, or a female vignette (FV) where the sender of the email was a female.

The scenarios were delivered in a second-person narrative, which meant that participants would rate dependent variables as the vignette victim. These vignette scenarios were made into two versions with identical contents but different senders' names, which represented different genders. For ecological validity, John and Jane were selected as they both started with J, were of similar lengths and were easily recognisable as a male and female. John and Jane were also selected because they are typically used to represent their gender. For example, in the legal system, an unidentified female is referred to as ***Jane Doe*** and an unidentified male as ***John Doe***. In the Chinese version, two common

names were chosen: the male sender was named '***Ming (明)***' and the female sender was named '***Hong (红)***'. Ming and Hong were selected as they were of similar lengths and were easily recognisable as a male and female. These are the names that are typically used in national textbooks to represent male and female characters (see Appendix 5).

3.3.4.2 Measures

Socio-demographic variables

Information about participants' gender, age, the broad area of work (academic or administrative), campus (the UK or China) and whether they are native English speakers, were collected. The date of birth was collected to randomly allocate participants into different vignette conditions.

Perceptions of Cyberbullying scale

The 5-item perception scale developed in Chapter 2 was used to check people's appraisal of the cyberbullying behaviour in the vignette on five elements: intention to harm, serious action, difficult to prevent, difficult to avoid, and psychological harm (Appendix 6). The content was related to antonyms and rated on 7-point Likert scales from -3 to 3. The total sum rating of these 5 items was measured as a perception score. The ratings were coded from 1 to 7 for analysis convenience. This produced a score ranging from 5 to 35. A higher score indicated a more negative or threatening appraisal of the cyberbullying behaviour in the vignette, i.e., more intentional to harm, more serious, more psychologically harmful, more difficult to prevent and more difficult to avoid.

Cronbach's alpha for the scale was calculated in Chapter 2, which was 0.723 indicating a good internal consistency.

Perpetrator Motivation Scales

The measure comprised two subscales assessing participants' (i.e., vignette victim) perceived motivations for the cyberbullying behaviour: the Negative Motivation Scale and Exoneration Motivation Scale.

Negative Motivation Scale

The Negative Motivation Scale measured the extent to which the participant (victim) sought to explain the perpetrator's bullying behaviour by attributing personal, negative or less acceptable motivations to them. Because there was no existing scale to be referenced, the content was developed by researcher SD and CG regarding previous qualitative literature (Salin, 2003; Varjas et al., 2010; Xiao & Wong, 2013). The scale contained 12 items that represented 7 negative motivations towards the victim: jealousy, disinhibition effect, protection, make feel better, power, acceptance, and attention (see items and sources in Appendix 7). The score was measured by the total sum of ratings of the 12 items. This produced a score ranging from 12 to 84. Higher scores indicated the victim perceived the perpetrator with a more negative motivation for workplace cyberbullying. An example item of this scale is shown below:

Example item: Sending the email makes John feel better.

Exoneration Motivation Scale

The Exoneration Motivation Scale measured the extent to which the participant (victim) sought to exonerate or justify the perpetrator's bullying behaviour by

attributing understandable or acceptable motivations to the perpetrator. The content of the scale was based on Neutralisation theory which is usually used in criminology (Siponen & Vance, 2010; Xiao & Wong, 2013; Zhang & Leidner, 2014) to explain criminal (offender) or offending behaviour. Totally six justifications were proposed by Syke and Matza (1957) and Siponen and Vance (2010): denial of responsibility, denial of injury, denial of the victim, condemnation of the condemners, appeal to higher loyalties, and the metaphor of the ledger (Siponen & Vance, 2010; Sykes & Matza, 1957). Zhang and Leidner (2014) argued that the justification 'condemnation of the condemners' should be omitted when explaining cyberbullying behaviours because it allows the perpetrators to justify their cyberbullying behaviour by blaming the anti-cyberbullying policies in companies are unreasonable, which is illogical (Zhang & Leidner, 2014). Therefore, only five justifications were used in this present study. These five justifications were described below followed by example items.

Denial of responsibility

According to this justification, offenders see themselves as the victim of the environment (Cromwell & Thurman, 2003). Samnani & Singh (2016) proposed that a poor social climate at work and power imbalance will increase workplace bullying among employees (Samnani & Singh, 2016). The proposition might be able to apply in the cyber context as well. The perpetrators might justify their cyberbullying behaviours as a result of poor policies, practices, and procedures of the organisations. They might also explain their cyberbullying behaviours by claiming that the organisation cannot provide fair or supportive leadership. According to social norms motivation, the perpetrator might attribute their

negative behaviours as accepted by whom they respect, i.e., organisation leaders and colleagues. These motivations thus reflect the 'denial of responsibility' where the perpetrators shift accountability to their organisations.

Example item: No clear guidelines about online communication in the organisation.

Denial of injury

The practice of 'denial of injury' allows offenders to underestimate the harmfulness of their actions and overestimate the tolerance of victims (Cromwell & Thurman, 2003; Sykes & Matza, 1957). For workplace cyberbullying behaviour, the perpetrators may engage in the behaviour because they believe their actions are not harmful to either the victims or organisations. This might be facilitated by the phenomenon of the online disinhibition effect where people feel less responsible due to the invisibility of the victim's psychological and physical reactions. In addition, cyber-victims usually stay silent and choose not to report what they have suffered. Such kinds of responses may lead to a pseudo signal for the perpetrators that their actions did not cause any harm. Therefore, the cyberbullying behaviours may continue.

Example item: John believes his email is not harmful.

Denial of victim

Another justification is the 'denial of victim' where the offenders justify their actions as retaliations aiming at a deserving target. In other words, individuals bully back when they have been bullied or cyberbullied by others, and they will not consider such cyberbullying behaviour as a wrong-doing. This is similar to the motivation that people fight back for revenge (specific target) or redirect

feelings (non-specific target) (Varjas et al., 2010). In addition, some individuals bully others just because they think the target is different or the target's behaviour deserves to be bullied. They minimise their feeling of shame or guilt. It has been argued that employees with poor conflict management skills are more likely to consider their victims as someone who 'had it coming' (Baillien, Neyens, De Witte, & De Cuyper, 2009). Therefore, they justify their victim as a deserving target.

Example item: John feels you have been unfair to him in the past.

Appeal to higher loyalties

This justification suggests that offenders conduct criminal or offending behaviours to find a solution to a current problem. Although the offenders share the same social norms with non-offenders, they endow other norms with precedence. In the cyber context, perpetrators may justify their cyberbullying behaviour in order to solve a work problem. Power and colleagues found that people in a high performance-oriented culture have a higher acceptance of bullying in the workplace than those with a high future-oriented culture (Power et al., 2013). In other words, employees in a performance-oriented cultural company might feel cyberbullying behaviour more acceptable when the purpose is to get the job done. Moreover, people conduct cyberbullying behaviour to please their supervisors or bosses, since they consider this is more important than maintaining good working relations with peers.

Example item: John wanted to get the job done better.

The metaphor of the ledger

This argues that offenders justify their harmful behaviours as compensating for previous good performance (Siponen & Vance, 2010). For example, evidence suggests that employees can legitimise their use of the internet for personal purposes during work time (cyberloafing) by previous good job performance or high demands (Lim, 2002).

Example item: John feels his good job performance compensates for occasionally sending an email like this.

The exoneration motivation scale contained 14 items that represented 5 neutralisation techniques: denial of responsibility (3 items), denial of injury (2 items), denial of the victim (3 items), appeal to higher loyalties (3 items), and the metaphor of the ledger (3 items) (Appendix 7). Scores were summed ranging from 14 to 98. Higher scores indicated that victims perceived the perpetrators to be more justified in their behaviour and had more excusable motivations.

All 26 items of both motivation scales were rated by 7-point Likert scales (1=very unlikely, 7=very likely). The internal consistency was examined using Cronbach's alpha (α). An acceptable criterion of $\alpha > 0.6$ was used (Hume, Ball, & Salmon, 2006). Items in all subscales were addressed from literature and grouped thematically.

Blaming items

Two items that were addressed from the literature were used to assess the participant's (victim's) perceptions of whom to blame in this cyberbullying scenario (S. Farley et al., 2015). One of the items represented perpetrator blaming ('John/Jane is wholly to blame for sending the email') and the other

item represented partial victim blaming ('you are partly to blame for John/Jane sending the email') (Appendix 7). These two items were scored separately. Each of them produced a score ranging from 1 to 7. A higher score on 'perpetrator blaming item' indicated the vignette victims would be more likely to blame the perpetrator in the vignette. A higher score on the 'victim blaming item' indicated the vignette victims would be more likely to blame themselves.

Victimisation Experiences

Three items were used to assess participants' real-life victimisation experiences. One YES/NO question assessed the participant's similar victimisation experiences ('do you have the experience of receiving a similar type of email?'). If the participant gave an answer of 'YES' to the first question, the participants would be able to continue with a single-choice question asking the real-life perpetrator's gender ('If YES, please specify the sender's gender'). Participants had options of 'MALE', 'FEMALE' or 'DO NOT KNOW'. An open-ended question assessed the details of the victimisation experience ('if YES, please add any comments you would like to share about this experience'). A textbox was provided for participants to type in their answers (O'Donnell & MacIntosh, 2016; Smith et al., 2008). If the answer to the first question is 'NO', the follow-up questions on the perpetrator gender and details of the victimisation experience would not be applicable (Appendix 8).

For participants' convenience, the study materials and outcome measures were provided in both English and Chinese on the China campus. The translation from English to Chinese was conducted by researcher SD. A back translation was performed by another Chinese-English bilingual and checked by researcher CG.

3.3.5 Procedure

All aspects of the study were conducted online through the Bristol Online Survey system. The advertisement was distributed via an email circulation (Appendix 9). Participants accessed the study through the invitation email that contained the online survey's URL. The invitation email for the UK campus contained a URL that linked to the English version, whereas the invitation email for the China campus contained URLs that linked to both the English and Chinese versions. Participants were free to choose a preferred version to complete. A Brief Study Information was provided on the first page of the online survey, which also included an embedded document with further information and a consent form. It took approximately 20 minutes to complete all aspects. Branch programming logic was used to quasi-randomly allocate participants towards either the 'male perpetrator vignette' or 'female perpetrator vignette' scenario and subsequent gender congruent questions. After completing all outcome measures, a web link to the university's advice about bullying was given in case the participants had been personally affected by the content of the survey. Figure 3 provides a flowchart detailing the participation process of the study.

3.3.6 Statistical analysis

Quantitative data were analysed using parametric analyses by SPSS V.24 depending on the data distribution. P values < 0.05 were considered statistically significant. Any missing data were excluded from analyses. Qualitative text-box responses were analysed using conventional content analysis through a systematic classification process involving coding and identifying categories and themes (Hsieh & Shannon, 2005; Krippendorff, 2004).

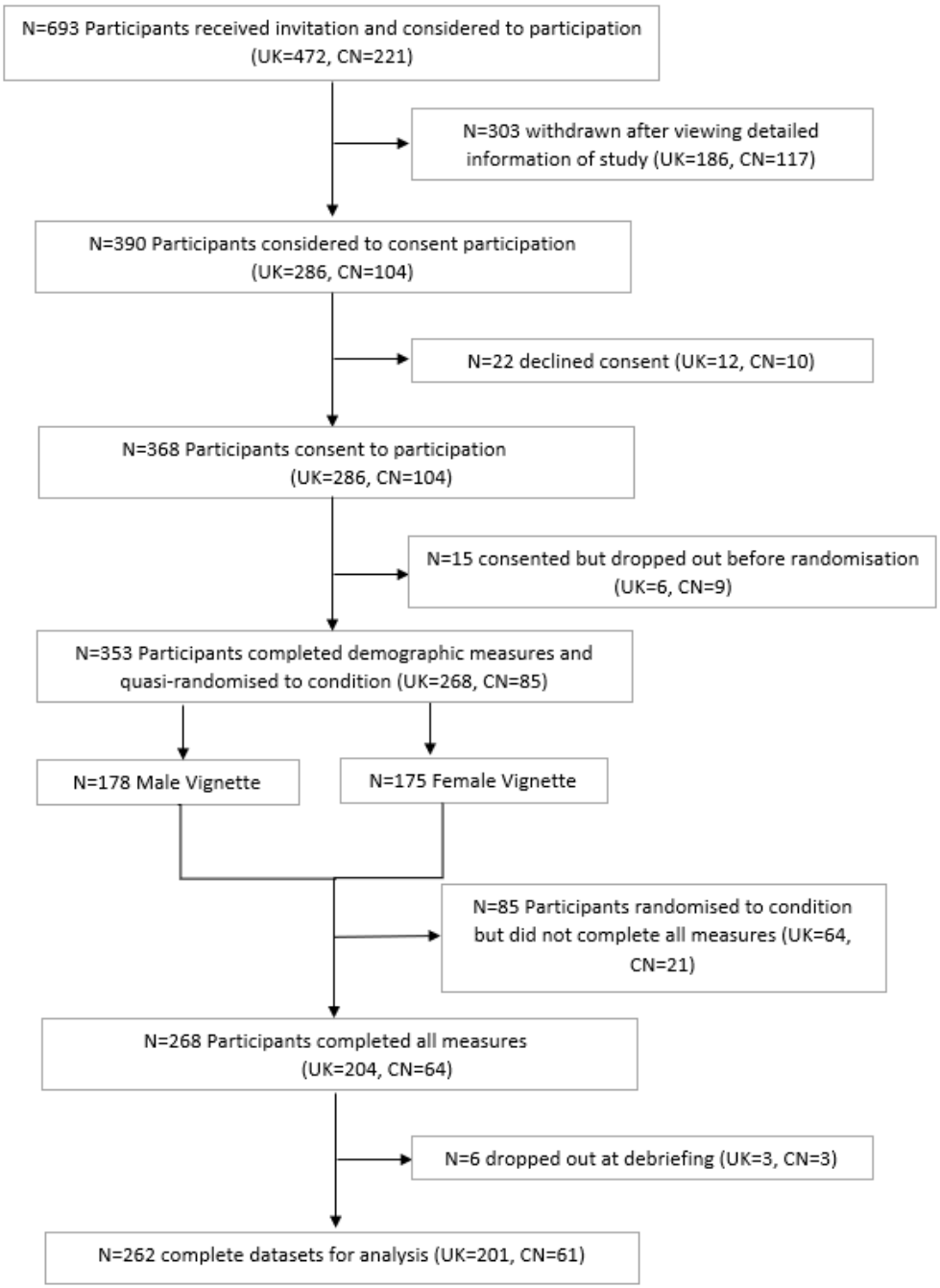


Figure 3 Participation flowchart across the UK and China.

3.4 Result

3.4.1 Reliability of Scales

The internal consistency was examined using Cronbach's alpha (α). An acceptable criterion of $\alpha > 0.6$ was used (Ramayah, 2011). Cronbach's alpha for the Perceptions of Cyberbullying scale was calculated from the previous pilot study in Chapter 2 (i.e., $\alpha = 0.728$). In this study, the values of α were 0.413 from UK campus and 0.715 from China campus. The total internal consistency of the scale in the present study was 0.483. Though the total internal consistency of the scale did not meet the criterion ($\alpha > 0.6$), the previous pilot study and China campus of the present study provided acceptable values. In addition, the scale was used as a perception check in the present study, hence the 5 items remained unchanged.

For the Exoneration Motivation Scale, the values of α were 0.70 from UK campus and 0.66 from China campus, which met the acceptable criterion. Thus, 14 items remained in the Exoneration Motivation Scale.

Moreover, calculations showed the internal consistencies of the Negative Motivation Scale from UK campus and China campus were 0.75 and 0.72, respectively. Though the value met the acceptable criterion, two items (item 1 and item 12) were removed from the scale due to their lower correlations with the scale ($r < 0.1$). Thus, the analysis was carried out with the remaining 10 items (UK campus: $\alpha = 0.80$; China campus: $\alpha = 0.77$).

3.4.2 Sample characteristics

A total of 262 staff consented to participate and completed all the measures. The sample's age ranged between 19 and 69 years old (mean age = 41.16, SD = 10.83, median = 40). Table 11 shows detailed characteristics of the sample.

Table 11 Number of participants in male and female perpetrator conditions according to country, gender, victimisation experiences, age, broad area of work, and gender of perpetrator of own experience.

Characteristics		**Male perpetrator, n (%)**	**Female perpetrator, n (%)**	**Total, n (%)**
Country	*UK*	99 (75.6)	102 (77.9)	201 (76.8)
	China	32 (24.4)	29 (22.1)	61 (23.3)
Victim Gender	*Male*	34 (26)	47 (35.9)	81 (30.9)
	Female	97 (74)	84 (64.1)	181 (69.1)
Victimisation experiences	*YES*	56 (42.7)	41 (31.3)	97 (37)
	NO	75 (57.3)	90 (68.7)	165 (63)
Age	*≤30*	24 (18.3)	28 (21.4)	51 (19.5)
	≤40	45 (34.4)	37 (28.2)	83 (31.7)
	≤50	35 (26.7)	33 (25.2)	68 (26)
	>50	27 (20.6)	33 (25.2)	60 (22.9)
Broad area of work	*Administration*	41 (31.3)	41 (31.3)	82 (31.3)
	Academic	90 (68.7)	90 (68.7)	180 (68.7)
Victimisation experience gender	*Male*	30 (22.9)	16 (12.2)	46 (38)
	Female	26 (19.8)	23 (17.6)	49 (40.5)
	Do Not Know	12 (9.2)	14 (10.7)	26 (21.5)

Note: n = number of participants, % = proportion of participants in each perpetrator gender condition.

3.4.3 Perpetrator (vignette) Gender Effect

The distribution of scales was checked by kurtosis and skewness. All scales showed values within ±2, which were considered acceptable for normal distribution. To explore the overall effect of perpetrator gender, t-tests were performed on the total means of scales (see Table 12). The only significant effect for perpetrator gender was observed in the Perceptions of Cyberbullying scale ($t(260) = 5.46$, $p < 0.001$). This indicated that overall victims perceived the male perpetrator scenario as being more negative or threatening than the female perpetrator scenario, i.e., more intentional to harm, more serious, more psychologically harmful, more difficult to prevent and more difficult to avoid.

Table 12 Means and SDs of scale ratings in different perpetrator gender conditions.

Scales	**Male Perpetrator**		**Female Perpetrator**	
	Mean	*SD*	*Mean*	*SD*
Perceptions of Cyberbullying Scale*	28.23	4.07	25.32	4.53
Exoneration Motivation Scale	54.75	8.89	55.85	10.72
Negative Motivation Scale	49.03	8.88	50.02	8.76
Perpetrator Blaming item	5.32	1.60	5.11	1.51
Victim Blaming item	3.31	1.84	3.15	1.68

*Note: *p < 0.001, SD = standard deviation*

3.4.4 Cross-country Effect, Victim Gender Effect and Perpetrator Gender Effect on scales

3.4.4.1 Perceptions of Cyberbullying Scale

To assess the effect of victim gender, perpetrator gender and workplace country on ratings of the Perceptions of Cyberbullying scale, a three-way ANOVA was performed. The scale showed a mean of 26.77 (SD = 4.54), a median of 27, ranging from 11 to 35.

Main effects were significantly observed for workplace country (F (1, 254) = 4.79, p = 0.029, partial η^2 = .019, Cohen's d = 0.33) and perpetrator gender (F (1, 254) = 11.47, p = 0.001, partial η^2 = 0.006, Cohen's d = 0.68), but not for victim gender (F (1, 254) =1.539, p = 0.216, partial η^2 = 0.019, Cohen's d = 0.22). According to the cross-country effect, staff working in China rated the vignette more negative and threatening than those in the UK with a higher rating on the scale (mean ± SD = 27.95 ± 4.87 vs. 26.42 ± 4.38). According to the perpetrator gender effect, male perpetrators were rated as being more negative and threatening than female perpetrators (mean ± SD = 28.23 ± 4.07 vs. 25.32 ± 4.53) (see Figure 4).

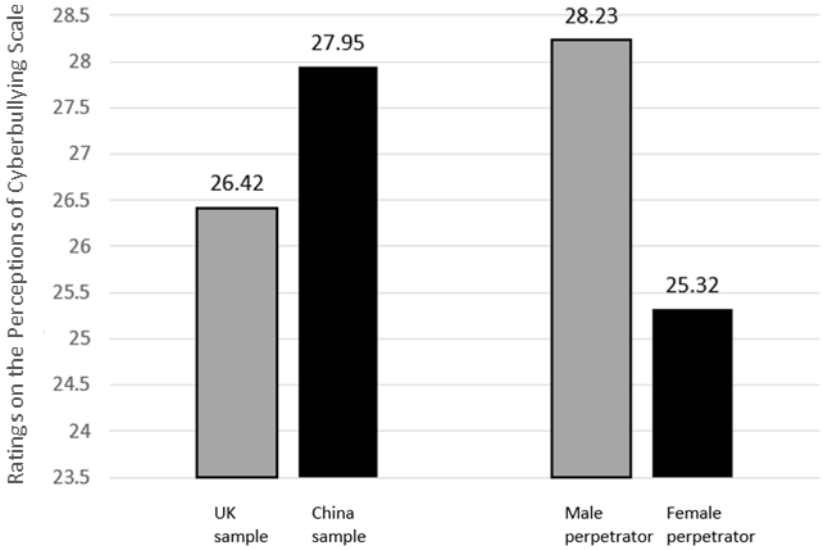


Figure 4 Mean ratings on the Perceptions of Cyberbullying Scale in countries and perpetrator gender conditions.

A significant interaction between workplace country and perpetrator gender was observed on the ratings of the perception scale (F (1, 254) = 7.52, p = 0.007, partial η^2 = 0.029) (see Figure 5). For staff working in the UK, male perpetrator scenario led to higher ratings than female perpetrator scenario (mean ± SD = 28.26 ± 4.08 vs. 24.63 ± 3.92, F (1, 254) = 33.71, p < 0.001, partial η^2 = .117). For staff working in China, perpetrator gender had no significant effect (mean ± SD = 28.13 ± 4.10 vs. 27.76 ± 5.67, F (1, 254) = 144, p = 0.705, partial η^2 = 0.001). This indicated that staff working in the UK perceived male perpetrators as being more negative and threatening than female perpetrators, i.e., more intentional to harm, more serious, more psychologically harmful, more difficult to prevent and more difficult to avoid.

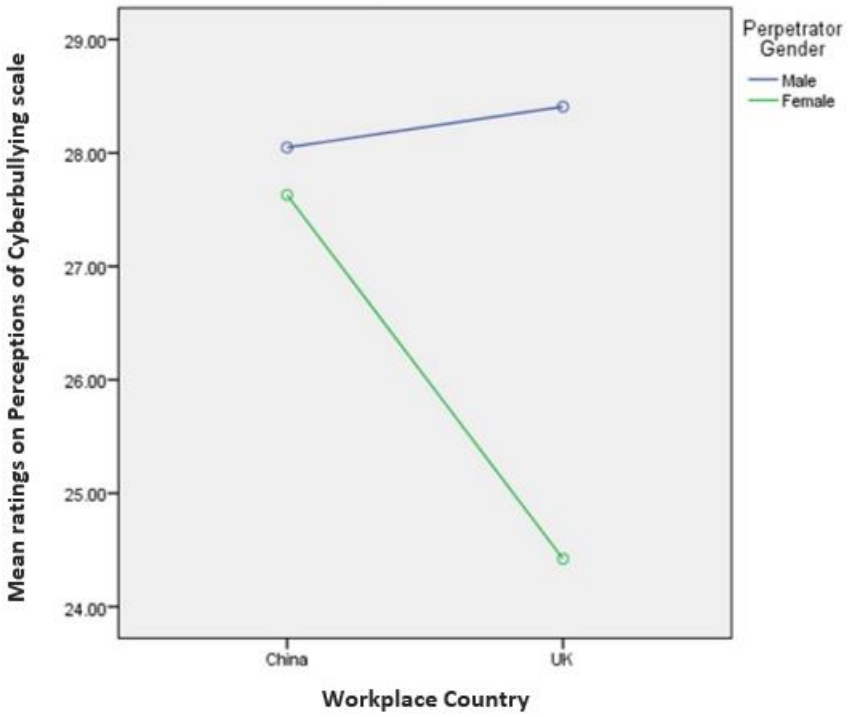


Figure 5 Interaction between workplace country and perpetrator gender on the Perceptions of Cyberbullying scale.

The t-tests were performed to assess the effect of age and broad area of work on ratings of the perception scale. Results showed a significant effect for the broad area of work (t (260) = 2.60, p = 0.01), but not for age groups (p > 0.05). Administrative participants (mean ± SD = 27.84 ± 3.91) rated higher than academic participants (mean ± SD = 26.29 ± 4.73), which indicated that administrative staff perceived the cyberbullying vignette as being more negative and threatening. Although the p-value indicated a statistically significant higher rating from administrative staff, the effect size (Cohen's d = 0.27) was argued to be relatively small.

3.4.4.2 Perpetrator Motivation Scales

To explore whether there were any interactions between victim gender, perpetrator gender and workplace country, three-way ANOVAs were performed. Ratings of scales were included as dependent variables.

Negative Motivation Scale

The descriptive statistics information of the Negative Motivation Scale showed that the mean of the scale was 49.53 (SD = 8.81), and the median was 51, ranging from 17 to 70. A main effect was found for workplace country ($F (1, 254) = 5.594$, $p = 0.019$, partial $\eta^2 = 0.022$, Cohen's $d = 0.37$). Staff working in the UK rated significantly higher than those who work in China (mean ± SD = 50.29 ± 8.70 vs. 47.02 ± 8.79). This indicated that staff working in the UK perceived the perpetrator had a more negative motivation. There was no significant main effect for victim gender or perpetrator gender. There was no interaction between any independent variables.

Exoneration Motivation Scale

The descriptive statistics information of the Exoneration Motivation Scale showed that the mean of the scale was 55.30 (SD = 9.84), and the median was 55, ranging from 23 to 80. No main effect was found for any of the independent variables. But there was a significant interaction between workplace country and victim gender ($F (1, 254) = 4.683$, $p = 0.03$, partial $\eta^2 = 0.02$) (see Figure 6). For staff working in China, female victims gave more exonerated motivations to the perpetrator than male victims with a higher rating on the Exoneration Motivation Scale (mean ± SD = 59.56 ± 9.43 vs. 53.56 ± 8.10, $F (1, 254) = 5.628$, $p = 0.02$,

partial $\eta^2 = 0.02$). For staff working in the UK, victim gender had no significant effect (mean ± SD = 55.32 ± 8.70 vs. 54.53 ± 10.42, F (1, 254) = 0.080, p = 0.778, partial $\eta^2 < 0.001$). In addition, the simple main effect for victim gender showed that the ratings from females working in China were significantly higher than ratings from females working in the UK (F (1, 254) =7.436, p=.007, partial η^2= .028), but no significant difference was shown on ratings from male victims between workplace countries. Thus, the interaction result was mainly accounted for by female staff's rating on China campus.

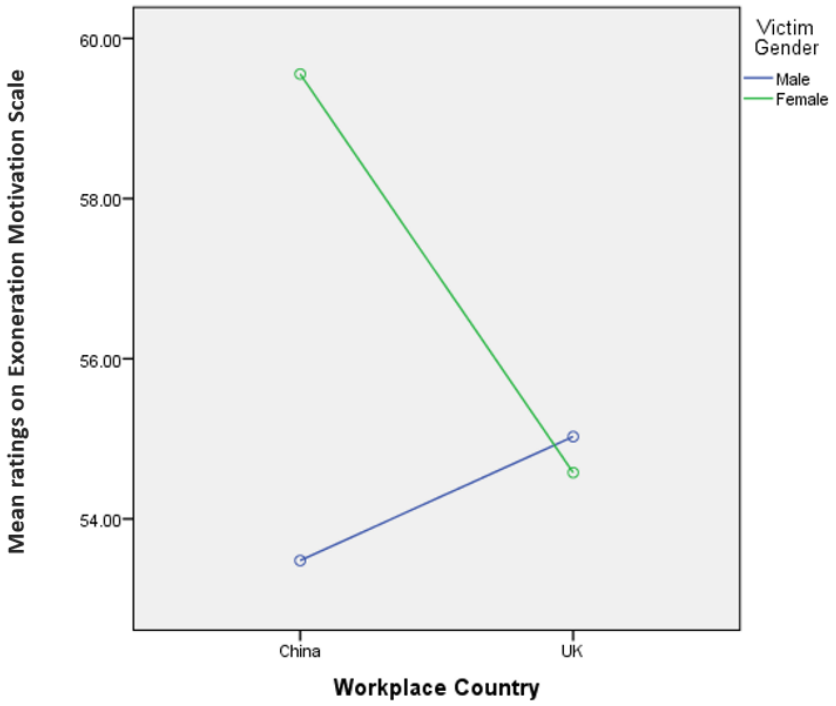


Figure 6 Interaction between workplace country and victim gender on Exoneration Motivation Scale.

3.4.5 Blaming Items

3.4.5.1 Perpetrator Blaming Item

A main effect on Perpetrator Blaming item was found for workplace country (F (1, 254) = 5.50, p = 0.020, partial η^2 = 0.021, Cohen's d = 0.42). Staff working

in the UK attributed more blame to the perpetrator than those in China (mean ± SD = 5.37 ± 1.53 vs. 4.72 ± 1.56). No main effect was observed for victim gender or perpetrator gender. However, a significant interaction between workplace country and victim gender was observed (F (1, 254) = 4.26, p = 0.04, partial η^2 = 0.017) (see Figure 7). For staff working in China, male victims attributed more blame to the perpetrator by rating higher on the item than female victims (mean ± SD = 5.24 ± 1.47 vs. 4.36 ± 1.53, F (1, 254) = 4.96, p = 0.027, partial η^2 = 0.019). For staff working in the UK, victim gender had no significant effect (mean ± SD = 5.26 ± 1.69 vs. 5.41 ± 1.47). In addition, female staff working in the UK attributed more blame to the perpetrator than those in China (F (1, 254) = 13.27, p < 0.000, partial η^2 = 0.050). Male staff showed no significant difference on the ratings between workplace countries. Thus, the interaction was mainly accounted for by the low ratings from female staff working in China.

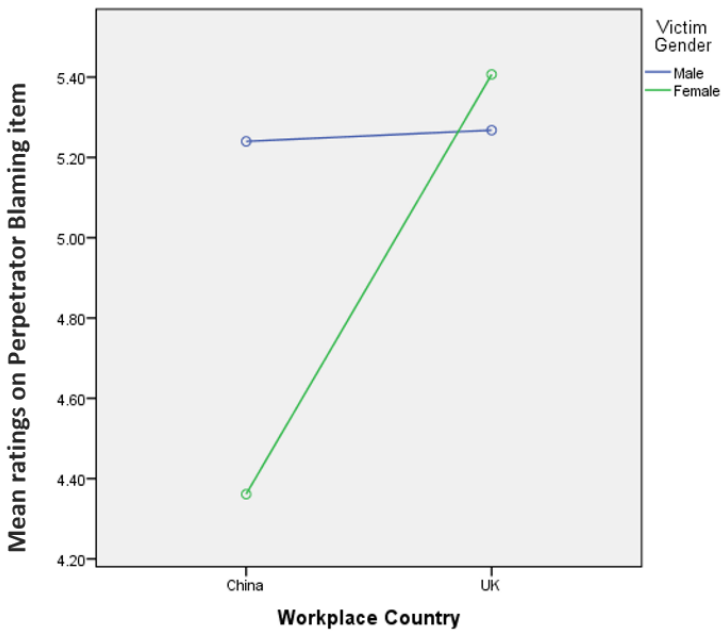


Figure 7 Interaction between workplace country and victim gender on Perpetrator Blaming Item.

3.4.5.2 Victim Blaming Item

A main effect on Victim Blaming Item was found for workplace country (F (1, 254) = 13.49, $p < 0.001$, partial $\eta^2 = 0.050$, Cohen's d = 0.67). Contrary to the result from Perpetrator Blaming item, staff working in China were more likely to feel self-responsibility for cyberbullying by rating higher on Victim Blaming Item than those in the UK (mean ± SD = 4.09 ± 1.62 vs. 2.97 ± 1.71). No main effect was observed for victim gender or perpetrator gender. However, there was a significant interaction between workplace country and victim gender (F (1, 254) = 6.39, $p = 0.012$, partial $\eta^2 = 0.025$) (see Figure 8). For staff working in China, female victims rated higher than male victims (mean ± SD = 4.47 ± 1.54 vs. 3.56 ± 1.61, F (1, 254) = 4.12, $p = 0.043$, partial $\eta^2 = 0.016$). For staff working in the UK, victim gender had no significant effect. In addition, female victims working in China rated higher than those in the UK (F (1, 254) = 26.22, $p < 0.000$, partial $\eta^2 = 0.094$). No significant difference was observed from male staff between different workplace countries. Thus, the interaction was mainly accounted for by ratings from female staff working in China.

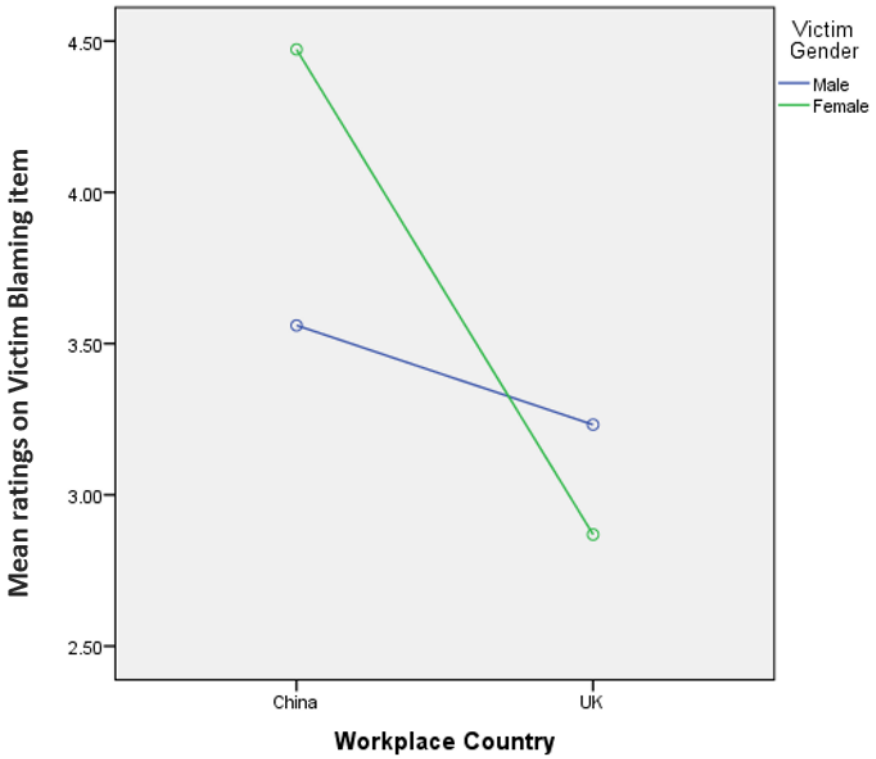


Figure 8 Interaction between workplace country and victim gender on Victim Blaming Item.

3.4.6 Relationship between Perceptions of Cyberbullying Scale, Perpetrator Motivation Scales and Blaming Items

To assess the potential relationship between perceptions and perceived motivations of the perpetrator, Pearson's r correlation tests were performed (Appendix 10). The result showed that there was a significant, but weak, positive correlation between the Perceptions of Cyberbullying Scale and the Negative Motivation Scale ($r = 0.18$, $p = 0.005$). This indicated that staff who believed the cyberbullying scenario as being more intentional to harm, more serious, more psychologically harmful, more difficult to prevent and more difficult to avoid might have a higher tendency to perceive the perpetrator with a more negative and personal motivation. No significant correlations were observed between the

Perceptions of Cyberbullying Scale and Exoneration Motivation scale, Perpetrator Blaming Item and Victim Blaming Item ($p > 0.05$).

In addition, a significant positive correlation was observed between the Exoneration Motivation Scale and the Negative Motivation Scale ($r = 0.45$, $p < 0.001$), which indicated that staff who perceived more exoneration motives for perpetrators would perceive more negative personal motives as well. Results also showed a significant positive correlation between the Exoneration Motivation Scale and Victim Blaming item ($r = 0.17$, $p = 0.005$), which indicated that staff who perceived more exonerated motives for perpetrator were more likely to blame the victim. The significant positive correlation between the Negative Motivation Scale and Perpetrator Blaming item ($r = 0.21$, $p = 0.001$), indicated that staff who perceived more negative personal motives were more likely to blame the perpetrator. However, by checking the effect of workplace country, it was found that the correlation between the Negative Motivation Scale and Perpetrator Blaming item was mainly accounted for by China ($r = 0.37$, $p = 0.004$) (Appendix 11; Appendix 12). In addition, there was no significant correlation either between the Exoneration Motivation Scale and Perpetrator Blaming item or the Negative Motivation Scale and Victim Blaming item.

3.4.6.1 Balance of Blaming

To check the relationships between blaming items, the perpetrator blaming item and victim blaming item were recoded into one balanced blaming scale. The 1 to 7 points of victim blaming item were recoded into 0 to -6; the 1 to 7 points of perpetrator blaming item were recoded into 0 to 7. Therefore, a higher score indicated more blame attributed to the perpetrator. ANOVAs were conducted to

assess perceived blaming balance in terms of the workplace country, perpetrator gender, participant (victim) gender and victimisation experiences. Results showed that there was a main effect for workplace country (F (1, 254) = 13.39, $p < 0.001$). Staff working in the UK were more likely to blame the perpetrator than staff working in China (mean ± SD = 2.4 ± 2.7 vs. 0.62 ± 2.63). There was also an interaction between workplace country and victim gender (F (1, 254) = 7.702, $p < 0.001$) (see Figure 9). For staff working in China, female staff rated significantly lower than male staff (mean ± SD = -0.11 ± 2.38 vs. 1.68 ± 2.67, F (1, 254) = 6.527, $p = 0.011$, partial $\eta^2 = 0.025$). For staff working in the UK, the participant (victim) gender had no significant effect. In addition, female staff working in China rated relatively lower than those in the UK (mean ± SD = -0.11 ± 2.38 vs. 2.53 ± 2.58, F (1, 254) = 28.235, $p < 0.001$, partial $\eta^2 = 0.1$). Results from the Balance of Blaming Scale were consistent with results from separate blaming items.

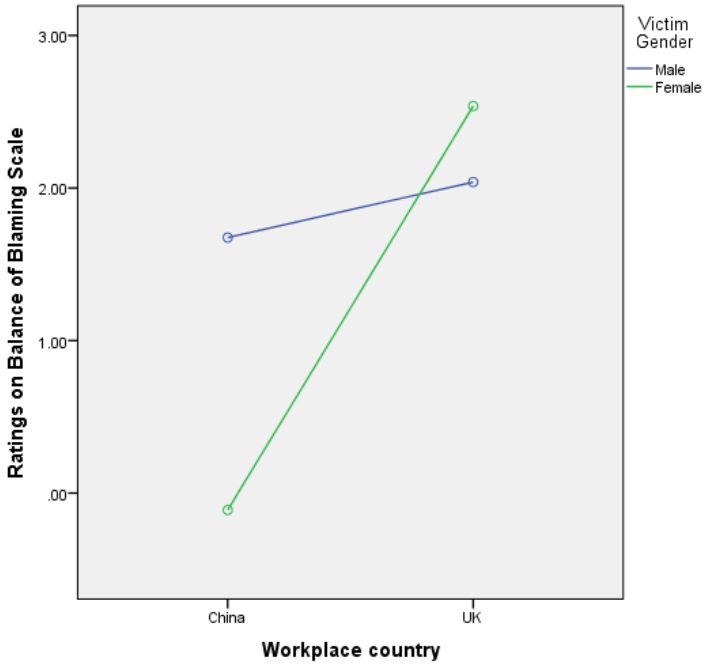


Figure 9 Interaction between workplace country and victim gender on Balance of Blaming Scale.

The Balance of Blaming Scale also showed a significant positive relationship with the Negative Motivation Scale, which reflected the positive correlation between the Perpetrator Blaming Item and the Negative Motivation Scale. This indicated that victims tended to blame the perpetrator more when they believe the cyberbullying behaviour was due to the perpetrator's negative personal motivations.

3.4.7 Victimisation Experience Effect on scales

A total of 97 staff reported that they had a similar experience of cyberbullying in real-life and 165 staff reported they had no similar experiences. The proportion showed balanced participant distributions in terms of workplace countries, perpetrator gender, and participant gender (see Table 13).

Table 13 Numbers and proportions of participants with and without victimisation experiences in workplace country, perpetrator gender and participant gender.

Independent variables		**Victimisation Experiences n (%)**		
		YES	NO	Total
Workplace Country	UK	76 (37.9)	125 (62.2)	201
	China	21 (34.4)	40 (65.6)	61
Perpetrator Gender	Female	67 (37)	114 (63)	181
	Male	30 (37)	51 (63)	81
Participant Gender	Female	41 (31.3)	90 (68.7)	131
	Male	56 (42.7)	75 (57.3)	131
Total		97 (37)	165 (63)	262

Note: n = number of participants, % = proportion of participants in each group.

To explore the effect of victimisation experiences on the Perceptions of Cyberbullying scale, Perpetrator Motivation Scales, and Blaming Items, a MANOVA was performed. A significant effect was observed for victimisation experiences on the Exoneration Motivation Scale ($F(1, 260) = 4.11$, $p = 0.04$, partial $\eta^2 = 0.016$). Staff with self-reported experiences of cyberbullying rated higher for exonerated motivations than those without experiences (mean ± SD = 56.90 ± 9.67 vs. 54.36 ± 9.85). This indicated that people with victimisation experiences perceived the perpetrator had a more justifiable motivation. Another significant effect was found for victimisation experiences on the Negative Motivation Scale ($F(1, 260) = 4.24$, $p = 0.04$, partial $\eta^2 = 0.016$). Staff with victimisation experiences rated higher for negative motivations than those without experiences (mean ± SD = 50.98 ± 9.07 vs. 48.67 ± 8.57), which indicated that people with victimisation experiences perceived the perpetrator had a more negative motivation. No significant effect was observed for victimisation experiences on either blaming items or the Perceptions of Cyberbullying Scale. The mean ratings on scales for victimisation experiences were shown in Table 14.

Table 14 Mean scores of ratings from respondents with and without victimisation experiences on scales.

Scales	**Victimisation Experiences (YES) (n = 97)**		**Victimisation Experiences (NO) (n = 165)**	
	Mean	SD	Mean	SD
Exoneration Motivation Scale*	56.90	9.67	54.36	9.85
Negative Motivation Scale*	50.98	9.07	48.67	8.57

Perpetrator Blaming item	5.46	1.51	5.07	1.57
Victim Blaming item	3.16	1.71	3.27	1.79
Perceptions of Cyberbullying Scale	27.47	4.03	26.36	4.78

Note: SD = standard deviation; n = number of participants.

**Significant effect ($p < 0.05$) between people with and without victimisation experiences.*

3.4.8 Exploring Real-life Workplace Cyberbullying Victimisation Experiences

At the end of the survey, participants were asked whether they had received an email that was similar to the vignette, and to provide any details about their experience optionally. To explore the reported victimisation experience of workplace cyberbullying, a content analysis was conducted. The number of quotes for each coding was calculated. Data were manually coded by researcher SD using a line-by-line technique (Chenail, 2012). In summary, there were 80 participants answered the open-ended question, with age ranged between 28 and 65 years old (mean age = 43.6) (Table 15).

Table 15 Numbers and proportions of participants with reported real-life victimisation experiences from different countries, genders, and broad areas of work.

Demographic Groups		**n (%)**
Workplace country	UK	61 (76%)
	China	19 (24%)
Gender	Male	29 (36%)
	Female	51 (64%)
Broad area of work	Academic	62 (78%)

	Administrative	18 (22%)

Note: n = number of participants in each group, % = proportion of participants in each group

The content analysis resulted in 5 categories. Details that contained the name of the category, coding under each category, the concept of coding, example quote and the frequencies of coding were shown in Table 16. A total of 13 coding showed that the real-life victimisation experiences were reported in 5 categories: types of email received, victim feelings, cyberbullying behaviour impact, victim reaction after cyberbullying behaviour, and perceived motivations for perpetrators (Appendix 13). The most frequently mentioned experience was the negative impact of workplace cyberbullying. Fourteen victims talked about their perceived significant and sustained negative impacts, such as clinical depression, psychological impacts, and leaving jobs.

A one-way ANOVA was conducted to examine the relationship between coded categories and the Perceptions of Cyberbullying scale. The result showed that 14 participants who were coded into ‘impact’ rated significantly higher on the perception scale than those without ‘impact’ coding ($F(1, 8) = 4.85$, $p = 0.031$). The category ‘impact’ represented that the victims perceived significant and sustained negative impact of cyberbullying in the workplace. The statistical result confirmed the validity of the Perceptions of Cyberbullying scale where people with more negative and threatening appraisal of workplace cyberbullying reported more negative impacts of their real-life experiences.

Table 16 Coding and example quotes of content analysis of real-life victimisation experiences.

Coding (frequency)	Concept	Example quotes (Participant No.)
Category 1: Type of Cyberbullying Behaviour		
Copied to others (12)	The experience of bullying email that has been sent not only to the victim, but also been copied to others by either perpetrator or bystanders (e.g., other colleagues).	It was repeated and copied by other members of the team. (p22)
Aggression (13)	Victim felt the perpetrator, email content or situation being aggressive.	But the tone of her emails was very aggressive and rude on occasion. (p9)
Victim feels being humiliated (10)	The occurrence of cyberbullying made victims feel ashamed and foolish by injuring their dignity and pride.	A previous head of department who publicly chastised me and humiliated me by email. (p2)
Category 2: Victimisation Feelings		

Unfair treatment (8)	Victim perceived the cyberbullying as an unfair treatment.	The sender had not checked her facts and was unjustified in sending it. (p35)
Negative emotional response (12)	Victim's negative feeling due to the occurrence of cyberbullying.	It was also very upsetting... (p20)
Category 3: Impact of Cyberbullying Behaviour		
Impact on Victim (14)	Cyberbullying has significant and sustained negative impact on victim.	I think it would have a psychological impact on me. (p28)
Impact on Perpetrator (5)	Victim believed cyberbullying email reflected on sender rather than themselves.	I can only say the email backfired and she end up embarrassing herself. (p36)
Category 4: Victimisation Reaction		
Lack of support (6)	The lack of support for victim when experiencing cyberbullying from organisation.	The organisation appears to have no intention to deal seriously with repeated emails of this kind. (p34)

Needs face-to-face communication (6)	Victim decided to solve the problem face-to-face.	I tackled the person face to face. (p50)
Needs email response (7)	Victim decided to discuss, explain and reply through email.	Wrote clarifying email to whole recipient list. (p31)
Involving colleagues for support (8)	Victim involved colleagues to get organisational or general support.	I ensured out boss was copied into all email communications. (p40)
Category 5: Perceived Motivations		
Sender's unawareness of CB harm (6)	Victim believed perpetrators did not aware that their behaviour is harmful.	He said he didn't realise that it would cause upset! (p43)
Sender is under pressure (8)	Victim believed that the perpetration might due to high pressure.	The sender has been frustrated but under a lot of time pressures of this own. (p66)

3.5 Discussion

3.5.1 Summary of the present study

This present study assessed the impact of the perpetrator and victim gender on employees' perceptions of hypothetical workplace cyberbullying between the UK and China using quantitative scales and qualitative text boxes. As the participants were asked to imagine themselves as the victim of the vignette scenario, the participants' gender was evaluated as the hypothetical victim gender.

3.5.1.1 Perpetrator gender effect

The vignette scenario with a male perpetrator was perceived as being more negative or threatening than a female perpetrator as measured by the Perceptions of Cyberbullying scale i.e., more intentional to harm, more serious, more psychologically harmful, more difficult to prevent and more difficult to avoid. However, when taking countries into account, the perpetrator gender effect was only observed in the UK. Victims from China perceived both male and female perpetrator scenarios as being equally negative and threatening. Attributions about perpetrator motivations or the balance of blame were not influenced by the perpetrator gender. However, analysis of free-text response found that the male perpetrator elicited more frequent feelings of anger, unfairness, confusion, and embarrassment.

3.5.1.2 Victim gender effect

Results showed that victim gender had no impact on the ratings of perception or perpetrator motivations. Taking country differences into account, hypothetical

female victims from China rated exonerated motivations higher than male victims. Both male and female victims from the UK rated the perpetrator as having relatively fewer exonerated motivations suggesting that there is a lower tolerance for the perpetrators' behaviour in the UK. Attributions about perpetrator motivations or the balance of blame were not influenced by victim gender. However, the interaction showed that female victims from China were less likely to blame the perpetrator and more likely to blame themselves in the vignette scenario. Analysis of free-text responses suggested that female victims would experience more upset and a greater sense of unfairness than male victims.

3.5.1.3 The effect of victimisation experiences

In the present study, about one-third of the study population reported that they had been cyberbullied in real life. Participants with real-life victimisation experiences rated the perpetrator as having more exonerated motivations and negative motivations. The victimisation experiences did not show an effect on the Perceptions of Cyberbullying scale. Attributions about the balance of blaming were not influenced by people's victimisation experiences either.

The majority of participants who reported a cyberbullying experience had received an aggressive email, being the recipient of a bullying email that was copied to others or received an email that made them feel humiliated. Most of the participants reported negative feelings and had a sense of unfairness after being cyberbullied. Participants reported that they resolved the problem by themselves, by communicating with the perpetrator in a face-to-face manner or by responding to the perpetrator via email. They also reported seeking help from colleagues but not from the organisation because they felt that there is a lack of

support in the organisation. Interestingly, unawareness of harm and high pressure on perpetrators were perceived as potential motivations of cyberbullying perpetration.

3.5.2 Comparison with previous research

Few studies have been conducted to investigate cyberbullying in the workplace. The findings from the present study were compared with workplace traditional bullying research and limited existing cyberbullying research.

Evidence from previous research showed that gender makes difference in the incidence of workplace bullying and school-aged cyberbullying (Campanini, Punzi, Carissimi, & Gilioli, 2006; Dehue et al., 2008; Gilbert, Raffo, & Sutarso, 2013; Robin M Kowalski & Limber, 2007; A. Ortega, Høgh, Pejtersen, & Olsen, 2009). Findings from the present study provided supportive evidence that gender may influence people's perceptions of workplace cyberbullying as well. Although most of the past research focused on the prevalence rate, both the present study and past research illustrated that gender is a considerable factor in the field of bullying.

3.5.2.1 Male perpetrator in workplace cyberbullying was perceived as being more negative or threatening.

The overrepresentation of males in the perpetrator position has been suggested by previous research. A previous meta-analysis with 57 included studies found that males acted more aggressively than females at work (Hershcovis et al., 2007). Prior research also found that males were more likely to engage in cyberbullying than females (Erdur-Baker, 2010). Differently, the present study

focused on people's perceptions rather than the prevalence of workplace cyberbullying. It suggested that the male perpetrator was perceived as being more intentional, more serious, more psychologically harmful, and more difficult to prevent and avoid than the female perpetrator in workplace cyberbullying. This is consistent with the results of a previous traditional bullying study (Krämer, Sobieraj, Feng, Trubina, & Marsella, 2018). The study used a two-by-two designed experiment with virtual environment scenarios to explore the perception of bullying perpetrators of different genders. Results from the study showed that even when the male and female perpetrator conducted the same behaviour, the male perpetrator would be perceived as being more threatening. A possible explanation of this could be the nature of the biological gender. According to the gender stereotype, people would perceive males as being biologically stronger and more aggressive, while females would be perceived as being more warmth (Cuddy, Fiske, & Glick, 2008). Atwater and colleagues (2001) also indirectly supported the result that females delivering disciplines were perceived to be less effective and less fair than males. This indicated that when having the same role in the workplace, males would be perceived as being more powerful or threatening, and females would be perceived as carrying less authority (Atwater, Carey, & Waldman, 2001). In addition, this consistency may suggest that cyberbullying could be recognised as a form of traditional bullying. Thus, the insight of cyberbullying might be able to read across from traditional bullying where a relatively more comprehensive understanding is available.

It is worth noting that the perpetrator gender effect showed an interaction with the cross-country effect. The significant differences between gender were mainly accounted for by responses from the UK. Staff working in the UK rated the female perpetrator differently from the male perpetrator, while staff working in China rated similarly for male and female perpetrators. This may be explained by the different power distances between the UK and China. Power distance is used to represent the way in which power is distributed. It has been defined as 'the extent to which the less powerful members of organisations and institutions (like the family) accept and expect that power is distributed unequally' (Hofstede, 2011). Hofstede Insight stated a huge gap in the power distance score between the UK and China (i.e., 35 vs. 80), where a higher score indicates a larger power distance ("Hofstede Insights Country Comparison," 2020). Therefore, in the present study, when acknowledged the identity of the perpetrator, staff working in China would perceive more on hierarchical status of the perpetrator rather than other variables, such as gender. This study did not manipulate the perpetrator's hierarchical status. Whereas the UK allows members to take other influences into account with its relatively low power distance score. Therefore, the effect of perpetrator gender was only observed in the UK.

Interestingly, the present study did not observe any effects of the perpetrator's gender on the blaming items. Staff attributed a similar level of blame to male and female perpetrators in the vignette scenario. This is inconsistent with the result from a recent study where a total of 176 undergraduate students were assigned to one of four pre-defined scenarios that differed between cyberbullying perpetrator and victim genders (Marr & Duell, 2020). This recent

study showed that participants attributed more blame for the victim's suicide in the scenario when the perpetrator was a male. Failure to observe the effect of perpetrator gender on blaming in the present study may be due to the limitation of design. The real-world cyberbullying incident would consist more details that might be out of scope of the current design.

3.5.2.2 Female victims in China were more likely to blame themselves and justify exonerated motivations for perpetrators

In the present study, results showed that victim gender had no effect on the perceptions of the vignette scenario. This is consistent with previous research that females and males held similar opinions on cyberbullying in the workplace (Cassidy et al., 2016; Marr & Duell, 2020). Cassidy and colleagues examined staff in four Canadian universities using online surveys and found that both male and female staff disagreed with the statement that 'cyberbullying can't hurt you; it's just words in virtual space' and 'I have the right to say anything I want online because of freedom of expression' (Cassidy et al., 2016). This indicated that members in higher education shared the same level of perceptions of cyberbullying. Evidence from a more recent study supported the result as well where the participants recommended a similar level of punishment to the perpetrator regardless of the victim's gender (Marr & Duell, 2020).

Results from the present study showed that female victims from China were more likely to blame themselves and less likely to blame the perpetrator when experiencing workplace cyberbullying. Previous research investigating gender in workplace traditional bullying and cyberbullying found that females were more likely to be targeted, more vulnerable and less capable of retaliating than

males (Gilbert et al., 2013). Males were more likely to retaliate because they perceive revenge as a traditionally masculine motivation (Magley, Gallus, & Bunk, 2010). Although no direct supportive evidence was found, the present blaming result could be argued as being consistent with previous research if we perceive the retaliation as an outcome of blaming. Present results also showed that female victims were more likely to give the perpetrator an exonerated motivation. This chimed in with the blaming result. Female victims tended to believe it was their fault after experiencing bullying in the workplace so they were more likely to find an excuse for the perpetrator.

Remarkably, the significant difference between victim genders was observed only in staff from China, but not from the UK. A possible explanation could be the cultural dimensions. According to the cultural dimensions (Hofstede, 2011), China has not only been classified as having higher power distance but also higher collectivism and masculinity compared to the UK. These dimensions suggest a higher agreement and acceptability for the perpetrator having motivations to exonerate their cyberbullying behaviour in the workplace. This was reflected in this study with a higher rating in China and a lower rating in the UK on motivation scales. Evidence from a previous workplace bullying study showed that Confucian Asia finds work-related bullying to be more acceptable than the Anglo, Latin America, and Sub-Saharan Africa countries (Power et al., 2013). Therefore, as a Confucian Asia country, the higher acceptability of workplace bullying in China may provide an explanation for the higher ratings on the victim blaming item in the present study. In addition, the significant victim gender differences may also be explained by the higher affective and

cognitive empathy of females (Ang & Goh, 2010). It has been argued that empathy and self-esteem were significant predictors of cyberbullying victimisation and perpetration. Thus, those who with low self-esteem and high empathy were more likely to be cyberbullied (G. Brewer & Kerslake, 2015). By taking the cultural dimensions into account simultaneously, females in China were more likely to view themselves as being less powerful and self-questioning when cyberbullying occurred in the workplace. Results from blaming items reflected this argument that female staff working in China were more likely to self-blame and less likely to blame the perpetrator when considering themselves as the victim than male staff.

3.5.2.3 No differences on victimisation experience effect

According to the results from previous literature (Branch & Murray, 2015; Cassidy et al., 2016), it was expected that respondents with real-life experiences from the present study should rate the vignette scenario differently on perception and motivation scales than those without experiences. Contrary to our expectations, both participants with and without real-life experiences showed similar perceptions as measured by the perception scale. It could be argued that participants did not provide actual victimisation experiences. The victimisation experiences were obtained by asking the participants whether they had received a similar type of email as the vignette. Participants who denied having victimisation may have had it but without realising, if they strictly impose the scenario in the vignette on their own experiences. Therefore, the failure of observing the effect of victimisation experiences may be due to the different interpretations of questions in the survey, which again reflects the subtleness

nature of cyberbullying. Another possible explanation could be the differences between the nature of traditional bullying and cyberbullying in the workplace. Traditional bullying in the workplace, such as being isolated or humiliated by colleagues, would give victims a more direct feeling due to the face-to-face contact. This impact range can be limited to just two persons: the perpetrator and the victim. Thus, people without victimisation experiences would not feel the same as those who were real victims. However, cyberbullying is negative behaviours using electronic devices; it is much easier to spread to a wide range of audience. People are more likely to be involved as a bystander. For example, the perpetrator might send a humiliating email to the victim and copy all group members. In that case, even though the other members in the group should not be considered victims, they are involved in the situation and have viewed the content. Hence these so-called bystanders may have a higher intention to help because of their empathy and sympathy for the victim (Ashley N Doane, Ehlke, & Kelley, 2020; S. Wang, 2020). Therefore, the real-life victimisation experiences are unlikely to influence people's perceptions of cyberbullying in the workplace. The equally high ratings on the Perceptions of Cyberbullying scale between people with and without experiences might indicate a greater awareness of the negative issues among employees.

Interestingly, the observed significantly higher ratings on motivation scales indicated that the victimisation experiences may have an impact on people's perceptions of perpetration motivations. People with victimisation experiences were more likely to understand the perpetrator i.e., either exonerated or negative motivations. It could be argued that for cyberbullying victims, the solving

process may generate more understanding towards the perpetrator's underneath motives.

Findings from qualitative responses of real-life victims were consistent with the previous research (Cassidy et al., 2016) where respondents described feeling negative and telling others, mostly their colleagues, about their experiences. Opinions about the organisational support from the present study were consistent with the previous study as well where staff members with victimisation experiences had a far more negative opinion on the university policies and their capacities to adequately address cyberbullying situations. Similarly, the real-life victims from the present study reported their organisations had a lack of support in a wide range of aspects. In other words, the present study covers not only policies but all other supportive services from organisations that are relevant to the victims, such as ethical training and supporting programmes. Example quotes involved 'that he (perpetrator) needs to have some anger management training' (participant No. 39), '… (perpetrator) needs additional training in Communicating effectively and working collaboratively with others' (participant No. 1), and 'The organisation appears to have no intention to deal seriously with repeated emails of this kind, despite the existence of an email 'policy'' (participant No. 34).

3.5.3 Strengths and weaknesses

The main contribution of the present study may be providing a better understanding of the gender differences in perceptions and motivations of cyberbullying. Results also highlighted the importance of a consideration of the cross-country effect when investigating the effect of perpetrator and victim

gender on perceptions and motivations according to the substantial differences that were observed in ratings on scales between China and the UK. However, the cross-country results need to be interpreted with caution as China campus used in the present study may not be representative of the actual workplace environment in China. Members and staff on China campus might still be conducting the British working style since it is a campus of a British university.

Also, the experimental method may be argued as one of the strengths of the present study. It allows perfect control of the variables of interest to be taken, such as the perpetrator gender. Moreover, the experiment used the blindness of allocation. People were allocated to either female or male perpetrator vignettes automatically after giving their date of birth. Although the randomisation was not assigned to the participants, they did not know the existence of the other perpetrator gender vignette. This reduced the risk of bias from the knowledge of the materials, which allowed the participants to give an honest response and allowed a realistic statistical comparison. In addition, using employees from higher education as participants increased the ecological validity of the study. Most cyberbullying studies were conducted in adolescents and children, and less has been explored in the field of the workplace. Therefore, the use of real employees may help to fill this research gap. Although the recruitment of the higher education may have the possibility to limit the applicability of results to other types of organisations, the findings might still be referenceable as email is the most common means of communication that higher education places heavy reliance on. The findings might provide a basis for developing a general email

policy in organisations (Martin & Olson, 2011; McKay, Arnold, Fratzl, & Thomas, 2008).

Considering the study design, the use of a self-reported manner may end up with exaggerated responses that might be affected by the social desirability bias. For example, participants may feel too embarrassed to report their victimisation experiences or their current victim status, or they may try to guess the experimenter's expectation. Thus, they might provide biased responses. Therefore, the result may contain an over-reported understanding and acceptance of cyberbullying perpetrators.

In addition, the names used in the Chinese version of the vignette may have an effect on the cross-country results. Ming and Hong were the most commonly used role names in textbooks to represent male and female characters, respectively. However, with the growth of the population in China, many Chinese characters are occasionally used as unisex names. Although the sender's gender was mentioned by the pronoun 'he' and 'she' in the English version of the vignette and '他' for 'he' and '她' for 'she' in the Chinese version of the vignette, the pronoun was mentioned only once in the content. Participants could have not paid enough attentions and misinterpreted the gender. Therefore, they might respond to the survey without a clear recognition of the perpetrator gender.

3.6 Implications

Little has been done to build a comprehensive picture of cyberbullying in the workplace and this study could have made an important contribution. Results from this present study are consistent with the past research that the gender

differences could be a considerable influencing factor in the perceptions of workplace cyberbullying. In addition, the findings highlighted the interaction between the gender and culture. This may help us to conclude suggestions for workplace anti-cyberbullying intervention adjustments in the future.

Further improvements could be done by recruiting more participants in both workplace countries. A bigger sample size might improve the study result. Moreover, further studies could re-design the vignette to reinforce the perpetrator's gender differences. The names that were used to represent the perpetrator's genders could be reconsidered and changed to make it more apparently and difficult to misinterpret. In addition, this present study was conducted on a China campus with a British working style. Further studies could apply the same measurements to independent UK and Chinese organisations in order to avoid the confounding organisational effects.

Although this present study found some interesting findings of the victimisation experiences of the real-life victims, the given responses were not detailed enough where some consisted only one word or one sentence. Therefore, the next chapter would focus on the real-life victimisation experiences using a more in-depth qualitative research method.

Chapter 4 A qualitative study of cyberbullying experiences in the workplace

4.1 Introduction

Cyberbullying, as a relatively new phenomenon, has a short history due to its digital nature. It has been taken seriously in the school context due to the impacts on children and adolescents but usually remains relatively neglected in the workplace context though the negative impacts on mental health have been recognised within organisations.

Given the relatively brief history, the prevalence of cyberbullying in the workplace remains unclear (S. Farley et al., 2015; Gardner et al., 2016; Perreault, 2011; Privitera & Campbell, 2009). A potential explanation is the lack of a universal definition. Without clear boundaries for digital communications, people find it hard to classify themselves as victims which can lead to variations in the prevalence rate. Thus, it is very important to know what kind of negative behaviours are classified and perceived as cyberbullying in the workplace. In addition, from the limited information provided in the literature, we can see that cyberbullying has drawn increasing attention in both academia and practice because of its negative consequences on people's mental health and well-being (Bauman & Newman, 2013; Coyne et al., 2016; Ford, 2013). The perceived severity of cyberbullying also varied across the literature. Some research found

that workplace cyberbullying has been perceived as having more negative impacts than traditional bullying. For example, a study with 331 UK university employees reported that the negative relationship between cyberbullying and job satisfaction was stronger than those with traditional bullying (Coyne et al., 2016). Some found that people perceived cyberbullying and traditional bullying as having the same level of negative consequences in the workplace (Baruch, 2005). The previous vignette study in Chapter 3 showed people have different perceptions when considering cyberbullying in the workplace. Having a negative impact was found to be the most frequent response when the participants were asked to describe their real-life experiences of workplace cyberbullying.

Most of the current studies of workplace cyberbullying are conducted using quantitative methods which emphasise more objective and statistical measurements. These methods are more appropriate to test relationships between variables but they do not necessarily illuminate the understanding of the underlying meaning and nature of relationships. Although the previous vignette study asked participants to provide some descriptions of their real-life victimisation experiences of workplace cyberbullying, almost all of the responses were consisted of several words or very short sentences. Therefore, the present study is aimed to fill the research gap by exploring people's experiences of cyberbullying in the workplace using a qualitative method and analysing it in a thematic method to ensure the flexibility of data interpretation.

4.2 Aim

This present study is aimed to explore people's experiences of cyberbullying and their perceived needs for support in the workplace.

4.3 Research questions

1. What are the participants' experiences of cyberbullying in the workplace?
2. What types of behaviour are considered cyberbullying in the workplace? And
3. How do the participants perceive these behaviours?
4. What coping strategies do they use to deal with experiences of cyberbullying in the workplace?

4.4 Methodology

4.4.1 Reflexivity

The researcher is a Chinese female PhD student (SD) with about 10-year living experience in the UK. The researcher has completed an undergraduate degree in Psychology and a master's degree in occupational psychology but has no experience in qualitative research. In the past 3 years, the researcher spent some time working in a multi-national company. The researcher previously had no workplace cyberbullying experiences but had a self-identified cyberbullying experience in other areas which was perceived as being quite negative. Such experience made the researcher perceive that cyberbullying does not have to be a repeated behaviour or involve an imbalanced power to have a negative impact. As a qualitative study, data need to be interpreted by the researcher which may potentially be biased by the characteristics of the researcher described above. To minimise the potential bias in data analysis, the researcher has acknowledged her own biases and attempted to establish the trustworthiness and reliability of the interpreted themes by discussing the coding with an experienced qualitative

researcher (CG) who is the SD's PhD supervisor and made amendments accordingly.

4.4.2 Procedure

All aspects of the study were conducted online. Participants accessed the study through the invitation email that contained the online survey's URL (Appendix 15). The invitation email for the UK campus contained a URL that linked to the English version, whereas the invitation email for the China campus contained URLs that linked to both the English and the Chinese versions. Participants in the China campus were free to choose a preferred version to complete. Brief study information was provided on the first page of the online survey, which also included an embedded document with further information and a consent form. After completing all questions, a web link to the university's advice about bullying and counselling service was given in case the participants had been personally affected by the content of the survey.

4.4.3 Participants and recruitment

The recruitment process for this study was purposive sampling. Participants were eligible if they were a staff member, aged over 18 years old, at one East Midland university (UK or China campus), and self-identified that they had had an experience of being bullied via digital media. Staff members were recruited through email distributions and online advertisements.

4.4.4 Design and data collection

Given the sensitive nature of the research topic, data was collected in a text-based manner through a cross-sectional online survey to explore people's

experiences of cyberbullying and their perceived needs for support across the UK and China. Textual data has been used in previous studies exploring bullying experiences in the workplace (Caputo, 2018). The online text-based survey allows the participants to remain anonymous and protect their confidentiality. The present study was conducted by eight questions (i.e., qualitative) and a questionnaire that contained a 5-item scale (i.e., quantitative).

4.4.5 Ethical approval

This study was reviewed and approved by the University of Nottingham Medical School Division of Psychiatry and Applied Psychology Research Ethics Committee (Reference No. 251, Appendix 14). A consent to participate in the study was asserted through a tick box on the first page of the online survey.

4.4.6 Study materials

4.4.6.1 Demographic

A demographic questionnaire was used to gather participants' age, gender, the broad area of work (academic or administrative) and whether they are native English speakers.

4.4.6.2 Experience of cyberbullying questionnaire

This schedule started with a description of the typical characteristics of cyberbullying followed by eight questions with text boxes for the response. The first question required the participants to describe a personal experience of cyberbullying in the workplace (the index incident). If they had had several experiences, they would be prompted to describe the experience that impacted them the most. The following seven questions explored the impact of the index

incident, the reasons for the index incident, how the participant responded to the index incident, what has been done or could have been done to help the participants prevent or respond to the index incident, and how long ago the incident took place. The final textbox offered participants an opportunity to add any other comments that were not covered by the previous questions.

4.4.6.3 Perceptions of Cyberbullying Scale

The 5-item scale developed in Chapter 2 was used to assess people's perceptions of workplace cyberbullying. The content was related to antonyms and rated on 7-point Likert scales from -3 to 3. The total sum rating of these 5 items was measured as a perception score. The ratings were coded from 1 to 7 for analysis convenience. This produced a score ranging from 5 to 35. A higher score indicated a more negative or threatening perception of the cyberbullying experience, i.e., being more intentional, more serious, more psychologically harmful, and more difficult to prevent and avoid. Cronbach's alpha for the scale was calculated from study 1 (Chapter 2), which was 0.728 indicating a good internal consistency. Results from study 2 (Chapter 3) showed that participants who perceived workplace cyberbullying to have a negative impact also rated higher on the scale, which supported the validity of the measure (Chapter 3).

4.4.7 Analysis

The data were collected automatically by the Bristol Online Survey system. The analysis of qualitative and quantitative data was conducted separately and integrated afterwards.

4.4.7.1 Qualitative analysis

Text-box responses were extracted to transcript according to individual participants, and they were analysed using a step-by-step social constructionist thematic analysis method according to the recommendations (Braun & Clarke, 2006). The method was chosen because the nature of this study was to explore cyberbullying experiences in the workplace and sought to obtain rich data. It allows to identify, analyse and report patterns within data without applying epistemological approaches in advance.

Themes were inductively defined from raw data without any predefined classifications. Six steps were guided by the recommendation (Braun & Clarke, 2006) and followed by researchers.

Step 1: the responses from textboxes were extracted into 24 individual transcripts. These transcripts were read several times to familiarise the researcher with the content. Responses in Chinese text were translated into English by a bilingual researcher (SD). Initial thoughts and ideas were noted down during repeated reading (Riessman, 1993).

Step 2: initial codes were generated directly from raw data with the ideas and thoughts noted down in the first step. After that, these initial codes were grouped into sub-themes according to their shared similarities.

Step 3: the sub-themes relevant to the research question were formed into themes. At this stage, any sub-themes that had not enough data to support them were discarded.

Step 4: to ensure the themes accurately reflected the evidence in the data set, they were refined by double-checking the coded data that had been organised in a coherent pattern, and the themes were considered regarding the whole data set according to the recommendation (Braun & Clarke, 2006). The whole story that was told by individual themes was considered by the researchers as well.

Step 5: next step was to name and define the themes. Each theme was represented with a short and robust name that could deliver the immediate importance of the theme. Following the name, each theme was developed with a clear definition.

Step 6: the final comprehensive analysis of the themes was conducted. Appropriate extracts from transcripts were chosen and inserted to illustrate elements of the themes. A final report involving a discussion of the analysis was produced.

According to the guidelines for thematic analysis, the acceptable sample size for a small participant-generated text study should be within the range of 10 to 50 (Braun & Clarke, 2013).

To achieve the data saturation in the study, a saturation point was set according to suggestions from previous empirical studies. Thematic saturation has been defined as collecting data until no more new patterns or themes are derived from the data (O'reilly & Parker, 2013). Previous research suggested that most of the new information can be found in the first five to six interviews in a qualitative study (Morgan, Fischhoff, Bostrom, & Atman, 2002). Such suggestion has been supported by a systematic review in 2006 that found that 70% of the themes emerged from the first 6 out of a total of 60 interviews. However, the authors also found that more themes, about 92%, could be emerged from the first 12

interviews (Guest, Bunce, & Johnson, 2006). Given saturation points that described above were suggested in interviews and the present study was collecting textual data which might have an influence on the richness of data, a range of 12-20 participants was set as a point to reach the data saturation.

4.4.7.2 Quantitative analysis

Data were measured by the Perceptions of Cyberbullying scale. The scores from each item were summed up to provide a total perception score that ranged from 5 to 35. The individual score was reported by each participant. The mean and standard deviation of the score of all participants in the thematic analysis were calculated after removing the outlier by functions in Microsoft Excel.

4.4.7.3 Integrating analysis

The types of workplace cyberbullying experiences were summarised. The means and range of perception scores were calculated for each type of experiences in order to explore the most negatively perceived workplace cyberbullying behaviour by the real-life victims.

4.5 Results

4.5.1 Characteristics of participants

A total of 29 participants responded to the study invitation and completed the semi-structured online interview. Five participants were excluded because they stated that they had no workplace cyberbullying experiences. Another participant was excluded because the participant described an experience of a colleague that he had been involved in (i.e., not own experience). Finally, a total of 23 eligible participants provided written answers and numerical responses to

the online survey. Table 17 described the characteristics of participants in the thematic analysis. The lengths of the transcript ranged from 27 to 793 words with an average of 259 words. Table 18 summarised the number and proportion of participants in terms of characteristics.

Table 17 Characteristics of 23 participants with individual details.

Participant No.	Gender	Age	Campus	Work type	Native English speaker	Perception score	No. of words reported
1	MALE	35-49	UK	Academic	YES	10	151
2	MALE	50+	UK	Academic	YES	26	216
3	MALE	50+	UK	Academic	YES	20	73
4	MALE	50+	UK	Academic	YES	16	284
5	FEMALE	50+	UK	Academic	YES	18	355
6	FEMALE	35-49	UK	Academic	YES	28	793
7	FEMALE	35-49	UK	Academic	NO	30	66
8	FEMALE	50+	UK	Academic	YES	27	230
9	FEMALE	35-49	UK	Academic	YES	31	245
10	FEMALE	35-49	UK	Academic	NO	24	250
11	FEMALE	35-49	UK	Academic	YES	22	456
12	FEMALE	35-49	UK	Academic	YES	7	102

13	FEMALE	50+	UK	Academic	YES	21	343
14	FEMALE	18-34	UK	Administration	NO	28	172
15	FEMALE	18-34	UK	Academic	NO	29	199
16	FEMALE	35-49	UK	Academic	YES	24	531
17	FEMALE	50+	UK	Academic	NO	27	555
19	MALE	50+	UK	Academic	YES	35	148
20	FEMALE	35-49	UK	Academic	NO	22	97
21	FEMALE	18-34	UK	Administration	NO	28	266
22	FEMALE	18-34	China	Administration	NO	30	235
23	MALE	35-49	China	Academic	NO	28	155
24	FEMALE	35-49	China	Academic	NO	11	27

Table 18 Summary of characteristics of 23 participants

Characteristics		**No. of participants (%)**
Country	UK	20 (87.0)
	China	3 (13.0)
Gender	Male	6 (26.1)
	Female	17 (73.9)
Age (years)	18-34	4 (17.4)
	35-49	11 (47.8)
	50+	8 (34.8)
Broad area of work	Academic	20 (87.0)
	Administration	3 (13.0)
Native English speaker	Yes	13 (56.5)
	No	10 (43.5)

4.5.2 Perceptions of Cyberbullying scale

The mean perception score was 23.57 ± 7.18, with a median of 26, ranging from 7 to 35.

4.5.3 Extracted themes

The thematic analysis that was conducted on 23 transcripts elicited 5 overarching themes to deeply understand the experiences and perceptions of participants. These themes were labelled as ‘Significant negative impact’, ‘Victims tried to reduce the impact’, ‘Organisational response unsatisfactory’, ‘Organisation

needs to intervene and make changes' and 'Need to understand underlying cause'.

4.5.3.1 Significant negative impact

This theme was defined as representing both the emotional and job impacts of the described experience. The theme was found in 21 transcripts. The 'significant negative impact' theme was divided into two sub-themes, 'negative emotional impact' and 'negative impact on work'.

Twenty-one out of 23 participants described the 'negative emotional impact' associated with cyberbullying. The most frequently reported emotion was sadness:

"*I felt very upset*" (participant 11, female, UK);

"*depressed for the whole week…it was frustrating to take it further*" (participant 10, female, UK).

Some victims stated that they felt disappointed and embarrassed after experiencing cyberbullying in the workplace:

"*I felt embarrassed, angry and disappointed that a colleague would act in such a way towards me*" (participant 5, female, UK);

"*I felt undermined and embarrassed that my senior colleagues, whom I respect, might have a low opinion of me*" (participant 4, male, UK).

Some victims also stated that the experience decreased their confidence:

"*lowered my self-esteem and makes me doubt myself as a person*" (participant 8, female, UK);

"*I feel I have to please everyone otherwise colleagues may reject me*" (participant 7, female, UK).

Fifteen out of 21 transcripts provided evidence on the sub-theme 'negative impact on work' which indicated that their cyberbullying experiences negatively affected their job. For example, concentration has been diverted from daily work:

"*sometimes spent a lot of time worrying and thing how to respond professionally…unwilling to express opinion to self-protect, more time on administration and politics…worried if missing any important information*" (participant 15, female, UK);

"*I am concerned if I should lie to the students and avoid offering feedback on the real performance*" (participant 23, female, China),

Some were considered resigning or changing roles:

"*I withdrew from a senior position, focusing on another*" (participant 20, female, UK);

"*I took time off. I considered resigning. I was off for a while… next time it happens, I leave*" (participant 2, male, UK),

Other participants described losing enthusiasm for work:

"*no desire to work in the same area as this individual, which limits some activities*" (participant 3, male, UK);

"*my enthusiasm for work was deeply discouraged*" (participant 20, female, UK).

4.5.3.2 Victims tried to reduce the impact

This theme was defined as victims reporting solving the problems by themselves in different ways. The theme was found in 10 transcripts. This overarching theme was divided into two sub-themes, 'changing work style in order to take more control' and 'ignore or accept'.

Eight transcripts provided evidence on the sub-theme 'changing work style in order to take more control'.

This included responding to the cyberbullying behaviour in a reasonable time:

"*I'll certainly respond quicker, in the future if such cyberbully happens again, as soon as I realise it, stop it going worse*" (participant 10, female, UK);

"*acted sooner in response to the initial problems*" (participant 9, female, UK).

Some participants involved other people to try to protect themselves:

"*I tried to manage by ensuring that other people were always copied into email threads to ensure that conversations were visible and maintained*" (participant 11, female, UK);

"*public slapping down of the bullying incident to bully the bully*" (participant 2, male, UK).

Some participants improved their writing style in the email to reduce the impact:

"…and have become better at writing strong rebuttals when confronted with rude and bullying emails" (participant 5, female, UK);

"*…maintained a professional tone which did not belittle my position or effort on the project*" (participant 11, female, UK).

Some participants discussed with the perpetrator in person:

"*I responded by email…speak in person*" (participant 12, female, UK);

"*…try and catch her going into/out of lectures, in the main office, or in her office*" (participant 6, female, UK).

Some participants tried not to leave opportunities for bullies:

"*I changed my teaching and avoid offering feedback on student's academic performance*" (participants 23, male, China).

And the other participants reported the cyberbullying behaviour to organisations:

"*I'll also keep everything in writing for future references… formal complains archived at the management board across the school or faculty*" (participant 10, female, UK).

Five transcripts provided evidence on the sub-theme ‘ignore or accept’. These included responding to the cyberbullying behaviour without substantial actions by either ignoring it:

“*I left the matter there*” (participant 10, female, UK);

“*so for the public email I didn’t do anything*” (participant 17, female, UK).

or accepting it:

“*accept that email has limitations for human expression*” (participant 12, female, UK);

“*do the job myself and take the consequences of being reported for doing it*” (participant 13, female, UK).

4.5.3.3 Organisational response unsatisfactory

This theme captured the perceptions of victims that nothing was done or could have been done by the organisation to protect the victims. This theme was found in 10 transcripts. This overarching theme was divided into two sub-themes, ‘nothing has been done’ and ‘some form of resolution’.

Seven transcripts provided evidence on the sub-theme ‘nothing has been done’.

Victims felt nothing had been done to solve the problem:

“*the university did not take action against that person…colleagues did not say anything in public, just in private, after the meeting, so I realised I didn’t respect theme (anymore)*” (participant 17, female, UK);

“*this makes me feel worthless and hopeless as no-one challenges his behaviour when I ask for help…*” (participant 8, female, UK),

and victims doubted that their organisations could provide support:

“*I doubt (anything could be done)*” (participant 4, male, UK);

"*nothing has been done… it is a secondary matter for the university. Student satisfaction is first*" (participant 19, male, UK).

Four transcripts provided evidence on the sub-theme 'limited form of resolution'. This included the sense that the victim was not satisfied with the resolution:

"*the academic accepted the word from Head of school and then stopped emailing me. No apologise were tendered*" (participant 5, female, UK);

"*he didn't apologise as such but admitted his choice of words was up for misinterpretation*" (participant 12, female, UK).

4.5.3.4 Organisation needs to intervene and make changes

This theme captured victims' requirements that organisations should provide help to deal with cyberbullying in the workplace. This theme was found in 19 transcripts and was divided into three sub-themes, 'value of management changes', 'value of cultural changes and emotional support' and 'policy and procedure clarification'.

Thirteen transcripts provided evidence on the sub-theme 'value of management intervention'. Some participants stated they reported the incident to the management level and were willing to be supported:

"*I did eventually speak to someone else and raised the issue so that it could be managed*" (participant 11, female, UK);

"*I forwarded the emails to and discussed this with my head of group, who supported me to report this to the school. I then officially reported this incident to the head of school, who forwarded my complaint and discussed the matter with the colleague*" (participant 10, female, UK).

Some participants stated suggestions to the management level:

"*train managers/leaders to manage people and create opportunities for them to meet and share their experiences, instead of assuming that because they have academic records they would be able to manage staff*" (participant 17, female, UK);

"*employment of management levels with professional background and good ethical records*" (participant 15, female, UK).

Thirteen transcripts provided evidence on the sub-theme 'value of cultural changes and emotional support'. Some participants shared that seeking emotional support from others had been helpful:

"*I have been well supported by other members of staff, who have helped me to deal with these sorts of incidents without taking things personally*" (participant 21, female, UK);

"i*t was done (resolved), by my colleagues and the student concerned*" (participant 4, male, UK).

Some participants suggested using other ways of communication instead of email to avoid conflict:

"*discourage discussions via email. Encourage formal/informal meetings among staff to discuss issues and disagreement*" (participant 17, female, UK);

"*more means of other communications rather than emails; open face-to-face discussion…have places to go to (rather than counselling) to help stop the approach*" (participant 15, female, UK).

Some participants suggested that changing work style to deal with the cyberbullying in the workplace:

"*Not forward the original email (hides the problem) all staff should consider whether they would send their email about a person to the person. If not, don't send it*" (participant 1, male, UK);

"*try to make other department realise they should work as a team, not stand alone*" (participant 13, female, UK).

Some participants suggested organisations should make changes to improve the organisation culture:

"*I believe it is the university that should stop using this commercial style of evaluation to evaluate the teaching members*" (participant 23, male, China);

"*give everyone a role/project as an opportunity to grow and show excellence*" (participant 11, female, UK); "*…with regular tutorial and training courses*" (participant 10, female, UK).

Five transcripts provided evidence on the sub-theme 'policy and procedure clarification'. This included clarification on complaining procedures:

"*the supervisor (=manager) needs to tell me what to complain about. Some information needs to be made public, and no information can be kept private or confidential as a reason…must have the clear appraisal process and the standard, and carries out strictly*" (participant 22, female, China);

"*a clear procedure set at school and faculty level*" (participant 10, female, UK),

as well as clarification on professional/acceptable behaviours:

"*clarify to people expectations about their behaviours instead of assuming that 'we are all professionals' and we should know…better define the steps that need to be taken for career improvement*" (participant 17, female, UK);

"*have a clearly protocol/policy on what is 'professional' behaviour e.g. response times to emails, meeting with your line manager*" (participant 6, female, UK).

4.5.3.5 Trying to understand underlying cause

This theme was defined as victims believing the occurrence of workplace cyberbullying was due to the perpetrator or organisation or just partially due to themselves. The theme was found in 19 transcripts and divided into three sub-

themes, ‘trying to understand the perspective of the perpetrator’, ‘blaming of organisation’, and ‘victim self-blaming’.

Fourteen transcripts provided evidence on the sub-theme ‘trying to understand the perspective of the perpetrator’. Some participants were trying to understand the perpetrator in a negative way:

“*I feel leadership abuse*” (participant 22, female, China);

“*probably meant to be light-hearted but impact is ‘I’m in a position to mock you; and I have the power to sign-off*”.

Some participants were trying to understand the perpetrator in a positive or empathetic way:

“*maybe she feels threatened or undervalued*?” (participant 6, female, UK);

“*the colleague was annoyed that the candidate he wanted to put forward did not fit the eligibility criteria, and he wanted me to somehow make an exception*” (participant 5, female, UK).

Four transcripts provided evidence on the sub-theme ‘blaming of organisation’. Participants believed that the occurrence of cyberbullying in the workplace was mainly because of the unawareness or inappropriate policies at the management level in the organisation:

“*it was an example of university not defining clearly managing/academic excellence for all staff…it was the university that was unclear with staff (and particularly male staff) about the type of relationship that they can have with students*” (participant 17, female, UK).

“*My boredom with bureaucratic process and their trying to dump their bureaucratic process onto me*” (participant 2, male, UK).

Three transcripts provided evidence that supports the relatively small sub-theme 'victim self-blaming'. Victims were acknowledging their contribution to the occurrence of cyberbullying in the workplace:

"*(I was bullied because) I made the decision to not include him on as co-investigator on a grant proposal*." (participant 7, female, UK);

"*This was probably due to the fact that I am normally very friendly with the person so took the comment more to heart.*" (participant 12, female, UK).

4.5.4 Integrating analysis

The reported characteristics of workplace cyberbullying experiences were summarised into four types: 1) critical and misleading comments has been sent to others (including copied to others); 2) received hostile wording or aggressive tone via electronic devices; 3) no response to email; 4) information necessary for successful completion of work has been withheld. Among the 23 participants, 18 participants reported one type of experiences and 5 participants reported a combination of two types of experiences. The mean perception score was calculated for each type of experiences. Within the 23 participants, the highest mean score was given by two participants who had an experience of information necessary for successful completion of work being withheld and receiving no response simultaneously (mean ± SD = 29 ± 1.41, ranging from 28 - 30), followed by the mean score from three participants who had an experience of receiving no response to an email (mean ± SD = 25±7.16, ranging from 11-28), the mean score from three participants who had an experience of critical and misleading comments being sent to others (mean ± SD = 21 ± 9.54, ranging from 10 - 27), and the mean score from another three participants who had an

experience of receiving aggressive words that were copied to other colleagues (mean ± SD = 20.3 ± 5.86, ranging from 16 - 28). Twelve participants who had an experience of receiving hostile wording or aggressive tone via electronic devices gave the lowest mean score (mean ± SD = 20 ± 8.54, ranging from 7 - 35). In addition, 'email' was the most frequently reported platform of cyberbullying. Other platforms included social media (i.e., WeChat) (participant 19, perception score = 35), student evaluation survey (participant 23, perception score = 28), and text message of mobile (participant 9, perception score = 31).

4.6 Discussion

The mean perception score of all participants in the thematic analysis was 23.57 (SD = 7.18, median = 26). Compared with the mean perception score from previous studies in Chapter 2 (mean = 27.12, SD = 4.89) and Chapter 3 (mean = 26.77, SD = 4.54), the mean score from this study was slightly lower. However, considering the possible range of scores on the perception scale was 5 to 35, a score over 20 may indicate a relatively high rating. In addition, the range in this study probably reflected the range of actual experiences since the results from previous studies in Chapters 2 and 3 were hypothetical judgements. Four types of workplace cyberbullying experiences were summarised from the transcripts. It provided validation to the vignette content in study 2 (Chapter 3) because the four types of cyberbullying were consistent with the elements used to develop the vignette content (Samuel Farley et al., 2016; Jonsson et al., 2017). Unsurprisingly, the most frequently reported experience was receiving hostile wording or aggressive tone via electronic devices. Moreover, compared with workplace cyberbullying experiences via email, the three participants who

reported cyberbullying experiences via other platforms, such as WeChat and text message, perceived such behaviour as being more negative or threatening, i.e., more intentional to harm, more serious, more psychological harm, more difficult to avoid and prevent. This could be related to the communication devices used for these platforms. Compared to emails that would usually be checked on a computer in the workplace, WeChat and text messages are read on a mobile phone, which has a closer connection with the victim's personal life due to its portability. Therefore, negative impacts of cyberbullying experiences via these social media may have more frequent exposures to the victim than emails and thus be perceived as being more specific.

In addition, the result showed the combined experience of 'receiving no response to email' and 'information necessary to successful completion of work was withheld' had the highest rating which indicated that experiencing several types of cyberbullying behaviour simultaneously may increase people's negative perceptions of cyberbullying.

Five overarching themes captured the victims' experiences of cyberbullying in the workplace: 'Significant negative impact', 'Victim tried to reduce the impacts', 'Organisational response unsatisfactory', 'Organisation needs to intervene and make changes' and 'Trying to understand underlying cause'. The findings were considered in relation to existing research on traditional workplace bullying and school-aged cyberbullying in terms of their similarities and differences.

4.6.1 Significant negative impacts

The negative emotional impact and work-related impact of workplace cyberbullying victimisation experiences were found in the study. In literature, the negative consequence of cyberbullying has been widely investigated in the younger population, such as youths in the school and young adults in the university and college (M. Campbell, Spears, Slee, Butler, & Kift, 2012; Cowie, 2013; Goebert et al., 2011; R. M. Kowalski et al., 2014; Tokunaga, 2010). Only a few but a growing number of studies have investigated its consequence or impact in the workplace (S. Farley et al., 2015; Zhang & Leidner, 2014). Although traditional bullying showed more significant impacts than cyberbullying, the severity of cyberbullying was perceived as being more harmful (A. Ortega et al., 2009; Sticca & Perren, 2013). Previous studies found both similarities and differences of impacts between traditional bullying and cyberbullying in the workplace. Traditional workplace bullying has been confirmed as having negative impacts on people's working life, such as intention to quit (Ahmad & Kaleem, 2019; Djurkovic et al., 2008; T. H. Kowalski & Loretto, 2017; Nielsen & Einarsen, 2012). In the cyber-context, a total of 3371 working individuals reported that rather than a direct relationship between workplace cyberbullying behaviour and the negative work-related impacts, there was a strong indirect relationship which was mediated by social support and social organisational climate (Muhonen et al., 2017). Similarly, work-related impacts were found in the present study for workplace cyberbullying, such as consideration of quitting a job and losing enthusiasm for work. In addition, victims from this present study reported that they had been diverted from daily

work when experiencing cyberbullying. This may have a link to personal and organisational productivity. It has been pointed out that there might be a loss of productivity among the perpetrators because they are spending working hours conducting negative behaviours (Weatherbee, 2010). It could be assumed that targets are correspondingly spending working hours on dealing with those negative behaviours as well.

The negative emotional impacts have been widely explored in cyberbullying by focusing on the school-age population. It has been suggested that victims of cyberbullying may suffer damage to self-esteem, emotional well-being, and academic achievement (Cowie, 2013). This is consistent with results from the present study. Victims in this study reported that they felt upset, depressed, disappointed, embarrassed and decreasing self-esteem. The result was supported by a previous investigation that the most frequent feelings reported by pupils were angry and upset, followed by worried, afraid, embarrassment and depression after experiencing cyberbullying (R. Ortega et al., 2012). The relationship between lower levels of self-esteem and higher cyberbullying risks in the younger population has been confirmed (Palermiti, Servidio, Bartolo, & Costabile, 2017; Patchin & Hinduja, 2010). Moreover, the negative relationship between self-esteem and workplace traditional bullying has been demonstrated in a wide range of countries as well (Bano & Malik, 2013; Choi, Lee, & Kim, 2013; Elena Losa Iglesias & Becerro de Bengoa Vallejo, 2012). Although there was no direct support for the specific emotional impacts that were reported in this present study, the negative correlations between workplace cyberbullying and employees' emotional well-being have been shown in a few previous studies

which may be considered supporting evidence (Robin M Kowalski, Toth, & Morgan, 2018; Nikolić et al., 2017).

4.6.2 Victim tried to reduce the impacts

Results of the present study showed that people tended to use different coping strategies to deal with cyberbullying. This is consistent with previous studies on adolescents' cyberbullying and traditional workplace bullying (Djurkovic et al., 2005; Jóhannsdóttir & Ólafsson, 2004; Machackova, Cerna, Sevcikova, Dedkova, & Daneback, 2013). Conventionally, coping strategies are classified into two dimensions – problem-focused and emotion-focused (Folkman & Lazarus, 1984) or approach-focused and avoidance-focused (Roth & Cohen, 1986). The sub-theme 'changing work style in order to take more control' was supported by eight transcripts which could be classified as problem-focused or approach-focused coping strategies. It suggested that victims tried to reduce the impacts by facing the issue and finding a solution. The other sub-theme 'ignore or accept' was supported by five transcripts which could be classified as emotion-focused or avoidance-focused coping strategies where victims tried to hide or avoid themselves from the stress. Previous studies reported that although both problem-focused and emotion-focused coping strategies were recommended by cyberbullying victims, they were less likely to apply the former one (Heiman, Olenik-Shemesh, & Frank, 2019; Smith et al., 2008). However, in the present study, relatively more evidence was reported to support problem-focused coping strategies. Victims might perceive problem-focused strategies as being more important or more effective than the emotion-focused strategy. A possible explanation could be the doubt about the effectiveness of emotion-

focused coping strategies in cyberbullying. Vollink and colleagues surveyed 325 children and found that emotion-focused cyber-specific coping had a stronger link with health complaints and depressive feelings (Völlink, Bolman, Eppingbroek, & Dehue, 2013). This has also been supported by another investigation on adolescent cyberbullying victims (Machackova et al., 2013). Although blocking contacts or ignoring the bully on purpose as emotion-focused strategies were frequently used, it was found to be less effective in terms of buffering the negative emotions and stopping the cyber aggression. Another possible explanation could be the difference in the context. Less problem-focused coping was reported in children and adolescent victims who are experiencing cyberbullying in a school context; whereas findings from the present study focused on the adult victims in the workplace. A previous traditional workplace bullying study (Djurkovic et al., 2005) used 127 employed undergraduates to measure the correlation between different types of bullying and coping strategies. Results revealed that although avoidance was the most common strategy and could be considered a spontaneous and passive reaction, assertiveness was positively correlated with predominantly work-related bullying. Therefore, the perceptions and the use of coping strategies when dealing with stressful issues may switch to a more active way as the age and experience grow. In addition, the previous study also indicated that victims of cyberbullying attempted to use multiple strategies to cope with their negative experiences (Djurkovic et al., 2005). This could be supportive evidence for the present study where the same participants provided quotations on both sub-themes.

Unsurprisingly, although little research has been conducted to investigate the coping strategies for cyberbullying in the workplace, the current reported strategies are consistent with those for school-aged cyberbullying and work-related traditional bullying despite the age of the victim and the context. This may be assumed that the coping strategies used in the school-aged cyberbullying and traditional workplace bullying could be transferred to or adapted by workplace cyberbullying for people to protect and defence themselves.

4.6.3 Organisational response unsatisfactory

Organisational support has been found to play a moderating/mediating role in the relationship between traditional workplace bullying and its negative impacts, especially the turnover intention (Djurkovic et al., 2008; Haar, de Fluiter, & Brougham, 2016; Van Schalkwyk, Els, & Rothmann Jr, 2011). Similar results have been found in the workplace cyberbullying context where the perceived organisational support (POS) also showed a moderating effect on the relationship between workplace cyberbullying and employees' emotional well-being (Nikolić et al., 2017). It is easy to illustrate the importance of organisational support to workplace cyberbullying victims from the above evidence. However, victims in this present study reported that their organisations tended to provide no support, and a lack of satisfaction was reported even when the organisations intervened. These results are consistent with the qualitative results from Study 2 (Chapter 3) where the faculty members with victimisation experiences had a far more negative opinion of the university policies, and they reported their organisations had a lack of support in a wide range of aspects. In the present study most of the victims stated that, instead of an explanation, all

they wanted was an apology. Supportive evidence, with the results where victims perceived significantly less support from their supervisors, colleagues and the organisation as a whole (O'Driscoll et al., 2011), has been provided in the traditional workplace bullying context, but not in the cyber context. Results from the present study emphasised the current circumstances of interventions implemented by organisations. Attention should be drawn to the effectiveness of these interventions, and perhaps, a revision of the current interventions and development of new effective interventions are desperately needed to protect the victims.

4.6.4 Organisation needs to intervene and make changes

The importance of organisational support was mentioned by victims in the present study, which indicated that they were willing to receive effective support from their organisations. The support was believed to be effective in three dimensions: supervisors' support, organisational culture/climate, and policies. The current situation of victims in both traditional bullying and cyberbullying were found to be similar. Victims were likely to be ignored, unbelieved or leftover when they were seeking supervisors' help (Rebecka Forssell, 2016; Keashly, 2001; Lewis & Orford, 2005; Van Rooyen & McCormack, 2013), though the perceived supervisor support was found to be a predictor of perceived organisational support (Dawley, Houghton, & Bucklew, 2010). However, although no direct relationship has been found between the support from supervisors and cyberbullying behaviour, previous research did find that the support from supervisors may influence the organisational climate and thus, indirectly influence the relationship between cyberbullying behaviour and its

impacts (Muhonen et al., 2017). Therefore, results from the present study where organisational climate played a crucial role are consistent with previous literature on workplace cyberbullying. When it comes to the role of organisational anti-cyberbullying policies, victims in the present study believed in its effectiveness in solving workplace cyberbullying. Literature showed that employees did not believe or were not aware that their organisations had a relevant policy (Cowan, 2011). Evidence showed that less than half of recruited professionals in higher education supposed that their institutions had an anti-cyberbullying policy in place (Luker & Curchack, 2017). Therefore, with the growing knowledge of the published data and self-experience, employees may escalate the importance of implementing an effective anti-cyberbullying policy in the organisation. Thus, all three dimensions were addressing the importance of organisational support, which indicated that the improvement of management, change of climate, and revision/development of policies are the vital tasks in human resources departments.

4.6.5 Trying to understand underlying cause

The attribution of blaming by victims for the negative behaviour has been widely investigated. Results from this present study showed that victims attributed blame to both perpetrator and organisation, which were consistent with a theoretical attribution model proposed for workplace bullying by Samnani and colleagues in 2013 (Samnani, Singh, & Ezzedeen, 2013). Early studies confirmed that victims attributed greater blaming to perpetrators when the outcomes and impacts of cyberbullying are foreseeable or the perpetrator purposely engaged in the negative behaviour (Alicke, Weigold, & Rogers, 1990;

Morrow & Downey, 2013). The blaming of organisations could be explained by the perceived reciprocity in social exchange theory (Gouldner, 1960). Employees expect effective organisational support when experiencing negative behaviours (Djurkovic et al., 2008). Therefore, victims would be more likely to attribute blame to organisations when they perceived receiving a lack of organisational support. Some victims reported self-blaming in the present study. This is consistent with the result of study 2 (Chapter 3) where participants attributed partial blaming to the victims after reading the cyberbullying vignette. Possible reasons for self-blaming have been suggested in previous studies, such as information disclosure (Weber, Ziegele, & Schnauber-Stockmann, 2013) and negative initiation by the victim (Scott et al., 2020).

4.6.6 Strengths and limitations

Given the sensitive nature of the research topic, it could be difficult to recruit eligible participants. The purposive sampling method which has been argued as one of the most cost-effective and time-efficiency sampling methods in qualitative studies that was used in the present study may have particular benefits. Moreover, participants were recruited from the administrative and academic areas of work in higher education. Findings addressed from their experiences may be argued as not applicable to employees in other types of organisations. However, just like the results from study 2 (Chapter 3), the findings may also be considered applicable to organisations that use email as their main communication platform, because the most frequently reported platform of cyberbullying in the present study was ‘email’. The explorations of workplace cyberbullying were conducted mostly in the nursing context because of the high

prevalence rate of workplace bullying (apos, Souza, Catley, Tappin, & Forsyth, 2019; Park & Choi, 2019). Therefore, other than the nursing context, the present study may contribute to the understandings of workplace cyberbullying in organisations using emails, especially in higher education.

Another potential strength of this study is the use of an anonymous online survey to collect data. The most commonly used investigation method in previous qualitative studies of cyberbullying experiences is semi-structured interviews (Parris, Varjas, Meyers, & Cutts, 2012; Simon, 2017). However, given the sensitive nature of cyberbullying, victims in real life may be reluctant to discuss it in a face-to-face manner. Therefore, the use of an online text-box survey improves the confidentiality of the victims, which is particularly valuable in an educated population who used to express themselves in writing. Thus, to some extent, victims are more likely to be honest and frank. Additionally, the use of an online survey and textual data provides comparability for data collection of UK and China samples. It can ensure the consistency of results as it minimises misinterpretation by presenting a standardised content in a readable format. Compared to verbal responses such as interviews, the use of online anonymous textual data helps to minimise the impacts of the researcher because the researcher was not able to frame the questions and thus unintentionally influence the answers. For example, participants may suppress their responses when they feel disapproval of the researcher in the interview. On the other hand, the use of online textual data not only serves as a strength but also a limitation. It may reduce the ability to further explore in-depth responses. Although the survey contained open-ended questions, people may provide a shorter response due to

the time-consuming nature of typing. For example, the lengths of the transcript ranged from 27 words to 793 words with an average of 259 words. This may reduce the richness of data and influence the result eventually. In addition, because the text responses were collected anonymously, it was unable to clarify and validate the conclusion with participants.

The thematic analysis method serves both strengths and limitations in this present study. Due to its theoretical-free nature, the thematic analysis does not require a theoretical background in advance to explore cyberbullying experiences as rich and as detailed as possible, and various theories can be applied during the process of interpretation (Lorelli S. Nowell, Jill M. Norris, Deborah E. White, & Nancy J. Moules, 2017). This allows the researcher to explore cyberbullying experiences by purely interpreting the discourses. However, such flexibility may cause difficulty to maintain the consistency and continuity of interpretations in an individual unit because the researcher needs to identify themes across the whole dataset (Holloway & Todres, 2016). In addition, the characteristics and experience of the researcher may potentially bias the interpretations as well (Lorelli S Nowell, Jill M Norris, Deborah E White, & Nancy J Moules, 2017). For example, the lack of qualitative research background of the researcher may cause a missing of nuanced data and difficulties to decide what to focus on when deriving themes from the dataset. Moreover, although the data has reached the maximum saturation point according to the criteria range set with suggestions from previous research studies, i.e., 12 – 20 participants, it may always be possible that additional new themes or information could have emerged with more transcripts.

4.7 Implications

The findings from this study emphasise the importance of organisational support in workplace cyberbullying. Organisations need to develop effective interventions in various aspects to help employees to prevent cyberbullying from occurring, and to reduce the negative impacts if it's already occurred. Firstly, for those organisations with anti-bullying policies, revised policies with updates that focus on cyberbullying are necessary to clarify the acceptable online behaviours. Secondly, effective training for managerial levels is needed as the support from supervisors was perceived as being helpful to the victims. Finally, organisations should develop and implement a healthy working environment by pursuing an anti-cyberbullying organisation climate.

Chapter 5 Effectiveness of interventions for workplace bullying: a rapid systematic review

5.1 Introduction

The original aim of this systematic review was to explore effective interventions designed for cyberbullying in the workplace. However, no randomised-controlled trial specifically investigating cyberbullying interventions in the workplace has been found in the preliminary scoping exercise. Cyberbullying has been discussed as sharing many definitional features and could be seen as an extension of workplace bullying (Chapter 1). The interventions for generic workplace bullying may be applicable or modifiable to counter cyberbullying in the workplace. Therefore, the search was widened to include workplace bullying to enlarge the evidence pool.

5.1.1 Description of the condition

Prior to the 1990s, the main research on negative behaviours at work was harassment, which focused on the serious issues of racial discrimination and sexual harassment. The term ‘workplace bullying’ was first used widely in the early 90s. Instead of ‘harassment’, workplace bullying describes a type of interpersonal aggression which is independent of discriminatory factors such as gender, ethnicity or age (Andrea & Crawford, 1992). Significant differences

between ‘harassment’ and ‘bullying’ have been proposed with the argument that bullying should include the abuse of power (McMahon, 2000b). Employees are more frequently and repeatedly exposed to bullying rather than harassment in the workplace based on the difference between these two concepts (Dunn, 2000b).

Repetitive, power imbalance, aggression and intention to harm are the four key elements that are commonly used to define bullying (Colette Langos, 2012). The first legal definition of workplace bullying is stated as ‘…recurrent reprehensible or distinctly negative actions which are directed against individual employees in an offensive manner and can result in those employees being placed outside the workplace community’ (Anderson, 1993, p3). Later, researchers provided a range of different definitions of workplace bullying. The most commonly used definition is ‘Bullying at work means harassing, offending, or socially excluding someone or negatively affecting someone’s work. In order for the label bullying (or mobbing) to be applied to a particular activity, interaction or process, the bullying behaviour has to occur repeatedly and regularly and over a period of time. Bullying is an escalating process in the course of which the person confronted ends up in an inferior position and becomes the target of systematic negative social acts. It has been argued that conflict cannot be called bullying if the incident is an isolated event or if two parties of approximately equal strength are in conflict’ (Ståle Einarsen et al., 2011, p22).

5.1.2 Description of the intervention

All interventions that aimed to prevent or reduce workplace bullying were of interest in this review. According to Vartia 2011’s classification, bullying

interventions are classified into four levels: societal, organisational, job, and individual-levels (Vartia & Leka, 2011). The aim of societal-level interventions is to prevent or reduce workplace bullying at a more macro, national, and international level, such as developing the national legislation, policy, and regulations. For instance, the recent act in Europe is the Framework Agreement on Harassment and Violence at Work ("Framework Agreement on Harassment and Violence at Work," 2007). Organisational-level interventions primarily focus on the organisational culture and management practices. They usually include organisational activities that can increase the employees' awareness and recognition of workplace bullying (Hoel & Cooper, 2000). Job-level interventions aim to prevent or reduce workplace bullying by influencing the job itself. For example, taking a bullying risk assessment before starting the job or including anti-bullying knowledge in a job description. Finally, individual-level interventions focus on changing individual employees' attitudes, perceptions, and behaviours about workplace bullying. It aims to improve individual health, help to prevent from being targeted, and help to cope and respond to bullying.

Despite the four possible levels of interventions, the research found that the development of workplace bullying interventions is more likely to focus on individual and organisational-levels. A recent scoping review confirmed that within the included studies, 95.7% of interventions were targeted at the individual-level and 17.4% of interventions were targeted at the organisational-level (Tricco et al., 2018). The lack of societal-level interventions may reflect that time and resources are needed to develop interventions on such level. Also, the lack of the universal definition of workplace bullying makes it more difficult

to develop societal-level interventions. Whereas the lack of job-level interventions may be due to the uniqueness of each job role and its requirements, which would involve an extra effort and difficulties to develop interventions to target the specific roles effectively.

5.1.3 How the intervention might work

Interventions to prevent and reduce workplace bullying may work by:

Developing new or consolidating existing laws or policies or regulations that increase employees' knowledge and awareness of workplace bullying and the perceptions of accepted and non-accepted behaviours in the workplace, reduce potential risks of bullying in the psychosocial work environment, develop the functioning of the work unit, and facilitate reconciliation after bullying;

Providing a healthy and safe work environment that can help employees to cope with challenging behaviours during work;

Providing advanced acknowledgement, training or assessment of bullying risks before starting the job;

Providing any type of treatments before or after the occurrence of bullying to individual employees that could improve employees' attitudes towards and perceptions of workplace bullying, or improve employees' health and reduce counterproductive behaviours. For example, employees with an improved attitude would be more likely to agree with the statement that improved one to one relationship between healthcare staff and patients can reduce the incidence of patient aggression and violence (Duxbury, Hahn, Needham, & Pulsford, 2008).

5.1.4 Why it is important to do this review

Workplace bullying has received increasing attention worldwide in the last 20 years because of its high prevalence rate (Bilgel et al., 2006; Lutgen-Sandvik et al., 2007) and negative consequences on individuals and organisations (Bowling & Beehr, 2006; Coyne et al., 2016). A large number of studies have been conducted to understand the factors influencing workplace bullying and its consequences. Dealing with workplace bullying has been found to be costly and time-consuming (Giga, Hoel, & Lewis, 2008). Unsurprisingly, a major focus on workplace bullying has been shifted to create practicable interventions (Piotrowski, 2012). Therefore, it would be important to explore whether current interventions can effectively prevent and reduce workplace bullying hence to achieve improvements in both employees and organisations.

5.2 Methods

5.2.1 Registration

An a priori protocol was developed and registered on PROSPERO (registration number: CRD42020190949, Appendix 16). This review was informed by and reported using the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines (Moher, Liberati, Tetzlaff, Altman, & Group, 2009) (Appendix 17).

5.2.2 Search strategy

The following electronic databases were searched: PubMed, Embase, PsycINFO, Cochrane Library, CINAHL, and ASSIA. All databases were searched from 2015 to May 2020. The search was limited to studies of humans and not limited

to any document types or regions. The search strategies were developed by researcher SD (Appendix 16). An additional search was manually conducted in relevant systematic reviews from databases.

5.2.3 Inclusion and exclusion criteria

Design: All randomised controlled trials (RCTs) or cluster-RCTs that were designed to compare different interventions for workplace bullying or compare interventions with no intervention among employees were eligible.

Participants: Employees, who were aged over 18 years old, in either public, private, or voluntary organisations were included.

Intervention: The included interventions included both prevention programs and treatment programs. Preventions are proactive interventions that are aimed to prevent bullying from happening in the workplace. Whereas, treatments are interventions that are aimed to reduce the incidence of bullying in the workplace. There was no limitations on the frequency or duration of included interventions.

Studies were excluded if the language was not English or Chinese, and if the intervention was targeted at employees with a health condition.

5.2.4 Outcome measures

The primary outcomes of interest were the extents of workplace bullying as measured by the number of occurrences, frequencies, or perceptions of the severity of workplace bullying. Common synonyms for bullying were accepted, for example, harassment and aggression. The secondary outcomes included attitudes towards workplace bullying, confidence in dealing with workplace bullying, and any types of stress that resulted from bullying including burnouts

and post-traumatic stress. As bullying-related stress usually leads to negative mental health, well-being and behavioural consequences, stress also included measures of mental health such as depression, stress-related behaviours such as sleep disturbance, and counterproductive behaviours such as absenteeism.

5.2.5 Quality assessment

Domains of risk of bias in included studies were assessed and evaluated based on the standard criteria outlined by the Cochrane Collaboration (Higgins et al., 2011), including random sequence generation, allocation concealment, blinding of participants and personnel, blinding of outcome assessment, incomplete outcome data, selective outcome reporting bias, and other bias. The summary of the risk of bias is shown in Figure 11, where green refers to a low risk, yellow refers to an unclear risk, and red refers to a high risk.

The overall quality of evidence was assessed using the GRADEpro GDT (GRADEpro, 2016) based on the standard criteria outlined by the GRADE handbook for grading the quality of evidence and strength of recommendations (Schünemann, Brożek, Guyatt, & Oxman, 2013).

5.2.6 Data extraction

Data were extracted according to a standard extraction form, including:

- Identification of study including first author, year of publication, location, study design, and work settings;
- Characteristics of participants including total sample size, drop-out rate, age, gender and tenure;

- Characteristics of interventions including specific type, definition, frequency, and duration;
- Characteristics of outcomes including category and definitions of outcomes, follow-ups, and result data.

Data extraction was performed on a standardised form created for this study. When information was not available in original articles, efforts were made to contact the authors by email.

5.2.7 Data analysis

Data were extracted and input into RevMan 5.4. Unfortunately, due to no or inconsistent reporting of outcomes, the given data did not allow a meta-analysis to be conducted. Therefore, a descriptive synthesis of individual trial results and the quality of studies was performed.

5.3 Results

5.3.1 Study selection

A total of 2734 records were retrieved (Figure 10). After removing duplicates, 2331 studies were included. After screening, 2310 records were excluded by ineligible title and abstract. A total of 14 articles were eliminated for other reasons. Thus, 7 studies met inclusion criteria and were retained.

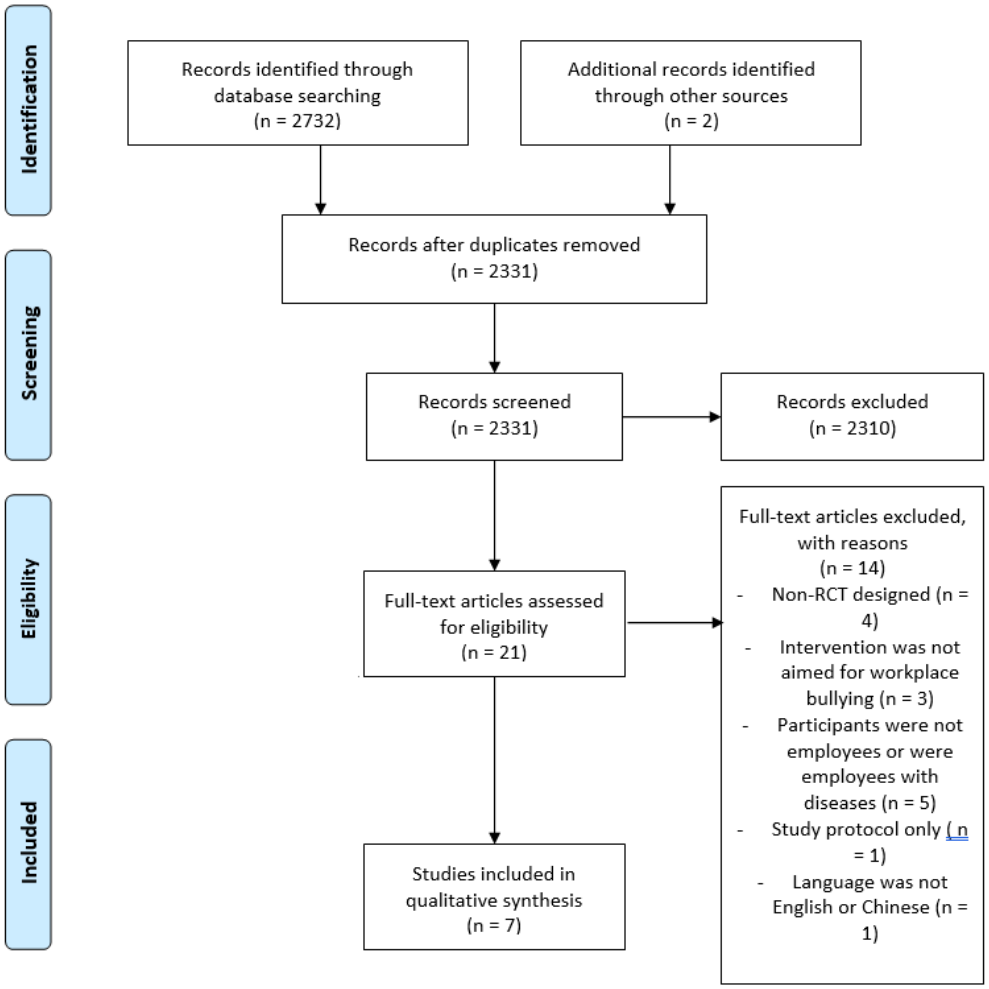


Figure 10 PRSIMA study flow diagram.

5.3.2 Characteristics of included studies and participants

Each of the included study reported at least one intervention that was clearly defined or had a clear theoretical underpinning. A summary of characteristics of included studies are shown in Table 19.

Table 19 Summary of Characteristics of included studies

Study ID	Study design	Country	Participants	Sample size	Intervention	Duration	Follow-up
Dwivedi 2016	RCT	India	Employees in private enterprise	N = 160	Yoga practice vs. Control physical exercise	10 weeks	Postintervention
Lanza 2016	cluster-RCT	USA	Healthcare workers	7 clusters N = NR	Violence prevention community meeting vs. Control community meeting	15 weeks	3 weeks after treatment
Baby 2019	cluster-RCT	New Zealand	Healthcare workers	17 clusters N = 127	Communication skills vs. Mindfulness	4 weeks	3 and 6 months after treatment
Glass 2017	RCT	USA	Healthcare workers	N = 306	Computer-based training vs. Computer-based training + peer facilitation	127 mins	3 and 6 months after treatment
Kang 2017	RCT	Korea	Healthcare workers	N = 44	Cognitive rehearsal program vs. Waiting list	5 weeks	Postintervention

Ming 2019	RCT	China	Healthcare workers	N = 400	Scenario stimulation teaching vs. No intervention	3 hours	3 months after treatment
Tarquinio 2016	RCT	France	Employees in retail company	N = 60	Eye movement desensitization and reprocessing - recent events protocol (EMDR-RE) vs. Critical incident stress debriefing (CISD)	NR	48 hours and 3 months after treatment

Note: Study ID = first author + year of publication, RCT = randomised controlled trial, N = number of participants, NR = not reported.

5.3.3 Study design

Of the seven included studies, two were cluster-RCTs (cRCT), and the other five were individual-RCTs. In the cRCTs, clusters were randomly allocated to a different bullying intervention programme or a control condition.

5.3.4 Setting and participants

A total of 970 participants were included in the five RCTs, with 15.3% male participants (n = 148). Among them, three studies were carried out in healthcare or service organisations with employees across China, Korea and the USA (n = 750), and the other two studies were carried out in non-healthcare private enterprises with employees across India and France (n = 220). The average age of participants ranged between 28.29 and 49.64 years. The average years of working at the current site were reported by two studies and ranged from 2.63 to 4.84 years. The average number of working years was reported by three studies and ranged from 6.96 to 10.8 years. One RCT did not report information about working years. The total sample size ranged between 44 and 400 participants among the five RCTs.

In the two cRCTs, one reported 127 participants were employees from seventeen healthcare clusters in New Zealand. The other cRCT reported that the included participants were patients and staff from seven healthcare clusters in the USA but did not report the number of individual participants.

Except for the cRCT that did not report the number of individual participants, the other six included studies had altogether 1097 participants.

5.3.5 Interventions

All included studies reported on the effectiveness of individual-level interventions.

5.3.5.1 Behavioural intervention

One study described the effects of a behavioural intervention that included a 10-week yoga practice and yogic theory to reduce counterproductive work behaviours and its predictors such as aggression and negative affectivity (Dwivedi, Kumari, & Nagendra, 2016). The control group was provided with management lectures, mild to moderate physical exercises and normal breathing practices.

5.3.5.2 Educational/informational intervention

Two studies described the effects of an educational/informational intervention.

One study investigated the effects of the intervention that included a 15-week violence prevention community meeting (VPCM) to reduce workplace violence (Lanza et al., 2016). The control group was provided with a standard community meeting with the same duration.

The other study described the effects of communication skills training that included a four-session training programme to reduce the experience of aggression in the workplace (Baby et al., 2019). The control group was provided with mindfulness training which was not aimed to improve communication skills.

5.3.5.3 Cognitive behavioural intervention

Three studies described the effects of three different cognitive behavioural interventions.

One study investigated the effects of computer-based training that included a two-module of standard knowledge dissemination and behavioural role modelling training to prevent workplace violence and harassment. The control group was given the same training but plus a peer-led training that included additional activities related to calming exercises, assertive speaking exercises, body language exercises, and role-plays in different scenarios with feedback (Glass et al., 2017).

Another study investigated the effects of a cognitive rehearsal programme (CRP) that included 20-hour activities on nine topics on nonviolent communication, withholding information, backbiting, sabotage, disgracing, undermining activities, failure to respect privacy, physical aggression, verbal affront, and self-empathy. The CRP intervention aimed to reduce workplace bullying. The control group received no intervention during the experiment period but was trained with the same CRP intervention after (Kang et al., 2017).

The other study investigated the effects of a 3-hour scenario simulation teaching on preventing and reducing workplace bullying that included reviewing workplace bullying prevention, watching an example of a 10-min workplace bullying clip, learning information on prevention of verbal bullying and physical bullying, and role-plays (Ming et al., 2019). The control group received no intervention.

5.3.5.4 Early psychological intervention

One study described the effects of an early psychological intervention called Eye movement desensitization and reprocessing – recent events protocol (EMDR-RE). The intervention was provided 48 hours after the bullying event and aimed to enable victims to heal from the symptoms and emotional distress which were caused by disturbing working experiences (Tarquinio et al., 2016). Each single EMDR session lasted between 1.5 and 2 hours. The control group received an intervention called critical incident stress debriefing (CISD) that included seven-phase sessions.

5.3.6 Outcome

5.3.6.1 Primary outcome

In five of the included studies, workplace bullying was measured by the number of occurrences, frequencies, and perceptions of severity. Among them, Lanza 2016 and Glass 2017 recorded the number of incidents by counting the numbers. Three studies reported the frequencies of workplace bullying. Kang 2017 reported the frequency using a Korean version of the Negative Acts Questionnaire-Revised (NAQ-R) where a higher score indicated a more frequent experience of negative behaviours. Baby 2019 measured the frequency using the Perception of Patient Aggression Scale-New Zealand (POPAS-NZ) where a higher score indicated a more frequent experience of patient aggression. Dwivedi 2016 measured trait aggression using the Buss and Perry Aggression Questionnaire (BPAQ) where a higher score indicated a more aggressive trait, and thus would be more likely to engage in workplace bullying.

5.3.6.2 Secondary outcomes

Attitude towards workplace bullying

Ming 2019 measured perceptions of workplace bullying using the Perception of Aggression Scale (POAS) where a higher score indicated a better understanding of workplace bullying. In addition, Ming 2019 measured attitudes towards coping strategies for workplace bullying by the management of aggression and violence attitude scale. A higher score indicated a higher level of agreement with the coping strategies for workplace bullying.

Confidence in dealing with workplace bullying

Two studies reported confidence to deal with workplace bullying after treatment. Glass 2017 measured confidence by a 4-point scale where a higher score indicated a higher rate of confidence. Ming 2019 measured confidence by a 10-item scale called the Confidence in Coping with Patient Aggression where a higher score indicated a higher confidence.

Stress

Three studies reported stress that was defined by the original study. Baby 2019 measured psychological distress using the Kessler Psychological Distress scale (K10) and post-traumatic stress using the Impact of Events Scale-revised (IES-R). Higher scores on both scales indicated poorer outcomes. Glass 2017 measured health and work outcomes (i.e., stress, depression, and sleep) using the 4-item Copenhagen Psychosocial Questionnaire (COPSOQ-II). Tarquinio 2016 measured psychotherapeutic process stress using the Subjective Units of Distress Scale (SUDS) where a higher score indicated stronger distress experienced from

the intervention. Tarquinio 2016 also measured the presence of post-traumatic stress disorder (PTSD) by the Posttraumatic Stress Disorder Checklist Scale (PCLS) where a higher score suggested a stronger presence of PTSD.

Two studies reported the counterproductive behaviour. Dwivedi 2016 measured the counterproductive work behaviour by a 45-item Counterproductive Work Behaviour Checklist (CWB-C) where a higher score indicated a more frequent occurrence of it. Kang 2017 measured the turnover intention by a 5-item Yun's Nurse Turnover Intention Tool where higher scores indicated stronger turnover intentions.

5.3.7 Follow up

Follow-ups ranged from 48 hours to 6 months. The most common follow-up period was 3 months (four studies). Three studies measured the outcomes at more than one time point. The longer follow-up period was associated with a higher drop-out rate.

5.3.8 Excluded studies

Among 2734 records that were identified through databases and manual search, 2331 were excluded because they were not focused on the effectiveness of interventions. This resulted in 21 full-text articles for screening. After screening, 14 articles were excluded due to the following reasons.

Four papers were not RCT designed. Three papers investigated interventions that were not developed for workplace bullying. Five papers included ineligible participants who were not employees or were solely employees with mental

health conditions such as intellectual disability. One paper was an ongoing study. And one paper was reported in neither English nor Chinese (Figure 10).

5.3.9 Risk of bias in included studies

An overview of the risk of bias judgement across five RCTs was provided in Figure 11 and per study in Figure 12.

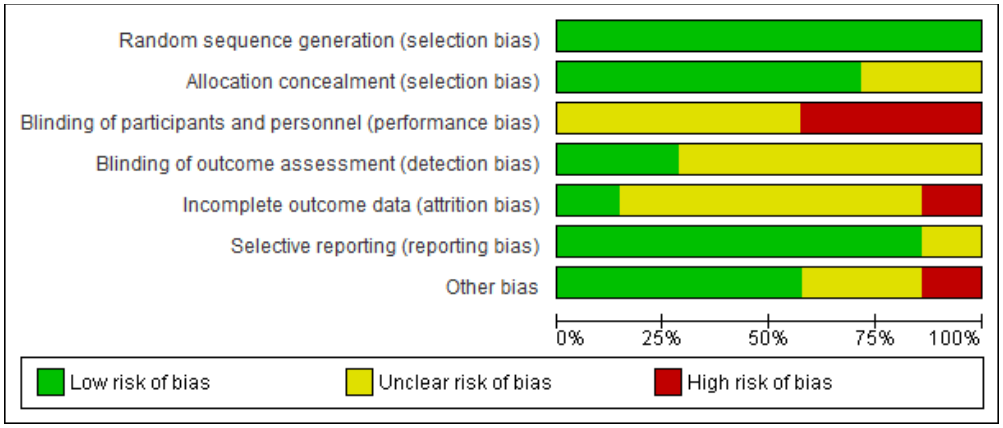


Figure 11 Summary of risk of bias of included studies



Figure 12 Detailed judgment of risk of bias of included studies

5.3.9.1 Random sequence generation

All seven studies were judged to have a low risk of selection bias regarding the random sequence generation.

5.3.9.2 Allocation concealment

Two studies were judged to have an unclear risk of bias regarding the allocation concealment due to insufficient information provided by the original studies.

The remaining five studies were judged to have a low risk of bias because they used either a computer-generated or other forms of random number sequence.

5.3.9.3 Blinding of participants and personnel

Three studies were judged to have a high risk of bias regarding the blinding of participants and personnel. Participants in Kang 2017 and Ming 2019 in the control group received no intervention which indicated that they were not able to be blinded. Tarquinio 2016 reported the first author was not blinded. The paper did not report whether the first author was involved in the experiment process. In addition, no information on blinding settings was reported for participants. Therefore, Tarquinio 2016 was rated to have a high risk as well. The remaining four studies were judged to have an unclear risk of bias in this domain due to insufficient information provided.

5.3.9.4 Blinding of outcome assessment

Two studies were judged to have a low risk of bias in the blinding of outcome assessment. Baby 2019 reported that the assessors were blinded, and Lanza 2016 stated that the data entry, database development and statistical analysis were completed by a third party. The risk of bias of the remaining five studies were rated as unclear in this domain because no relevant information was reported in the paper.

5.3.9.5 Incomplete outcome data

Baby 2019 was judged to have a high risk of bias regarding the incomplete outcome data because the drop-out rate was over 20% either for post-treatment time point, 3-month follow-up or 6-month follow-up. Kang 2017 was judged to

have a low risk of bias in this domain because the drop-out rate was 9.1% which was less than 20%. The remaining five studies were judged to have an unclear risk of bias in this domain, whereas Glass 2017 resulted in a 16.7% drop-out rate with no reasons reported and the other four studies reported no relevant information.

5.3.9.6 Selective reporting

Glass 2017 was judged to have an unclear risk of selective reporting bias because no published protocol was retrieved, and though all outcomes listed in the method section were reported, no original data was reported. The remaining six studies were judged to have a low risk because they reported all outcomes that were predefined in published protocols or in the method sections of studies with no published protocols.

5.3.9.7 Other bias

One study was judged to have a high risk of other bias because the author and the funding organisation may have a commercial interest in the results of research and technology. Two studies were judged to have an unclear risk of other bias. Ming 2019 stated that the study was funded by Taibei Rongmin General Hospital. It was not sure if this caused any bias in the result. Therefore, this study was rated with an unclear risk on other bias. Another study stated that the study was funded by a non-industrial organisation that participated in the analysis of data. Therefore, it was rated with an unclear risk. The remaining four studies were judged to have a low risk of bias because they had no financial support or were funded by a non-industry organisation.

5.3.10 Effects of interventions

All included studies reported the effects of individual-level interventions.

5.3.10.1 Behavioural intervention versus control intervention

Very low-quality evidence reported the effects of behavioural intervention on workplace bullying and stress in terms of the counterproductive work behaviour (Appendix 18).

Effects on workplace bullying

A randomised controlled study reported results of a yoga practice intervention (Dwivedi 2016) compared with a control intervention consisting of mild to moderate physical exercises and management theories. The authors found that the yoga practice intervention significantly reduced the aggression after treatment compared with the control intervention (MD -4.34; 95% CI -8.58 to -0.10).

Effects on stress

The yoga practice intervention significantly reduced the counterproductive work behaviour compared with the control intervention (MD -4.44; 95% CI -7.50 to -1.38).

5.3.10.2 Educational/informational intervention versus control intervention

Very low-quality evidence reported the effects of educational/informational intervention on workplace bullying and stress (Appendix 19; Appendix 20).

Effects on workplace bullying

A cluster-RCT reported results of violence prevention community meeting intervention (Lanza 2016) compared with a control community meeting. The authors found that both violence prevention intervention and control intervention reduced the rate of weekly aggression. And only the control intervention achieved a significant decrease in weekly aggression at a 3-week follow-up.

Another cluster-RCT reported results of the communication skill training intervention (Baby 2019) compared with the mindfulness intervention as the control group. The authors found that participants showed no significant difference in the workplace bullying frequency between the intervention and control groups at the post-intervention, 3-month or 6-month follow-up.

Effects on stress

Baby 2019 reported the psychological distress and post-traumatic stress at the post-intervention, 3 and 6-month follow-ups. The author found no significant difference between the communication skill training and mindfulness interventions at any time point.

5.3.10.3 Cognitive behavioural intervention versus No intervention

Very low-quality evidence reported the effects of the cognitive behavioural intervention on workplace bullying, attitudes towards bullying, confidence in dealing with bullying, and stress in terms of the turnover intention (Appendix 21).

Effects on workplace bullying

Kang 2017 reported the frequency of workplace bullying after treatment by a cognitive rehearsal programme intervention compared with no intervention. The

study found that there was no significant difference in the frequency between participants with and without intervention (MD 0.22; 95% CI -0.08 to 0.52) at post-intervention.

Effects on attitude towards bullying

Ming 2019 reported the perceptions of workplace bullying of a scenario stimulation teaching intervention compared with no intervention. The authors found that participants who received the scenario stimulation teaching intervention reported a significantly better perception of workplace bullying at a 3-month follow-up compared with those who received no intervention (MD 5.64; 95% CI 4.25 to 7.03).

Ming 2019 also reported that participants who received the scenario stimulation teaching intervention reported a significantly more positive attitude towards coping strategies of workplace bullying at a 3-month follow-up compared with those who received no intervention (MD 2.02; 95% CI 1.34 to 2.70).

Effects on confidence in dealing with bullying

Ming 2019 reported that the scenario stimulation teaching intervention significantly increased participants' confidence in dealing with workplace bullying compared with no intervention at a 3-month follow-up (MD 8.86; 95% CI 7.25 to 10.47).

Effects on stress

Kang 2017 found that participants who received the cognitive rehearsal programme intervention reported a significantly lower turnover intention compared with no intervention (MD -0.27; 95% CI -0.89 to 0.35).

5.3.10.4 Cognitive behavioural intervention versus Same intervention plus peer facilitation

Very low-quality evidence reported the effects of the cognitive behavioural intervention with peer facilitation on workplace bullying, confidence in dealing with bullying, and stress in terms of physical or mental health or the burnouts (Appendix 22).

Effects on workplace bullying

One RCT (Glass 2017) reported that there was no significant difference in the occurrence of workplace verbal aggression, workplace violence, or sexual harassment between participants who received the computer-based training intervention and those who received the same intervention plus peer facilitation at either a 3-month (MD 0.05; 95% CI -0.06 to 0.16) or 6-month follow-up (MD -0.13; 95% CI -0.37 to 0.11).

Effects on confidence in dealing with bullying

Glass 2017 reported that there was no significant difference in confidence in dealing with workplace aggression or sexual harassment between two groups at either a 3-month or 6-month follow-up.

Effects on stress

Glass 2017 reported that there was no significant difference in measures of physical or mental health or the burnouts between the two groups at either a 3-month or 6-month follow-up.

5.3.10.5 Early psychological intervention versus Other early psychological intervention

Very low-quality evidence reported the effects of the early psychological intervention on stress (Appendix 23).

Effects on stress

One study (Tarquinio 2016) reported results of the PTSD symptoms and psychotherapeutic process stress of EMDR-RE compared with CISD. The authors found that participants who received EMDR-RE showed significantly lower perceived stress from the treatment compared with CISD at both a 48-hour (MD -5.37; 95% CI -5.77 to -4.97) and 3-month (MD -5.70; 95% CI -6.15 to -5.25) follow-ups. Participants in EMDR-RE intervention also showed significantly lower PTSD scores compared with those who were in CISD intervention at both a 48-hour (MD -17.49; 95% CI -19.62 to -15.36) and 3-month (MD -21.20; 95% CI -23.98 to -18.42) follow-ups.

5.4 Discussion

5.4.1 Summary of main results

All included studies explored the effectiveness of interventions at an individual-level. Results showed that the effectiveness was observed only in the behavioural intervention and early psychological intervention for workplace bullying. The effectiveness of cognitive behavioural interventions remained debatable. Educational/informational interventions showed no significant effects on reducing the occurrence of bullying.

Three studies explored the effectiveness of cognitive behavioural interventions in reducing workplace bullying. Evidence from two studies compared different cognitive behavioural interventions with no intervention. One relatively large study with 400 participants reported that the scenario stimulation teaching intervention improved participants' perceptions of workplace bullying at the 3-month follow-up (MD 5.64; 95% CI 4.25 to 7.03). The other relatively small study which contained 44 participants reported that there was no difference in the frequency of workplace bullying measured by the Korea version NAQ-R between the cognitive rehearsal programme and no intervention (MD 0.22; 95% CI -0.08 to 0.52) at the post-intervention. Another study with 306 participants explored the effectiveness of the computer-based training alone and with additional peer facilitation. The result reported that both the computer-based training alone and with peer facilitation significantly reduced workplace violence and harassment. However, no difference was observed between interventions with and without peer facilitation at either a 3-month (MD 0.05; 95% CI -0.06 to 0.16) or 6-month follow-up (MD -0.13; 95% CI -0.37 to 0.11).

Two cRCT studies explored the effectiveness of educational/informational interventions in preventing and reducing workplace bullying. Evidence from one study compared the violence prevention community meeting intervention and control community meeting. Both the experimental intervention and control intervention reduced the rate of weekly aggression, but no significant difference was observed between the two groups at the 3-week follow-up. The other study compared a communication skill training intervention with a mindfulness intervention. Consistently, no difference was observed between two

interventions on the frequency of workplace bullying at either a post-intervention, 3-month or 6-month follow-up.

One RCT explored the effectiveness of the behavioural intervention by comparing the yoga practice and normal physical exercise. The results found that the yoga practice intervention significantly reduced aggression compared with the normal physical exercise intervention at the end of the treatment (MD -4.34; 95% CI -8.58 to -0.10).

Evidence from one study explored the effectiveness of the early psychological intervention. Except for this psychological intervention study, all other six included studies reported primary outcomes. This study reported the score of PTSD measured by PCLS. Results showed that compared with CISD, EMDR-RE reduced PTSD scores at both the 48-hour (MD -17.49; 95% CI -19.62 to -15.36) and 3-month (MD -21.20; 95% CI -23.98 to -18.42) follow-ups. In addition, this was the only study that assessed the stress of interventions. The results showed that EMDR-RE had a lower psychotherapeutic process stress at both the 48-hour (MD -5.37; 95% CI -5.77 to -4.97) and 3-month (MD -5.70; 95% CI -6.15 to -5.25) follow-ups compared with CISD.

Due to the high risk of bias and imprecision, evidence for all outcomes was rated as low to very low quality.

5.4.2 Overall completeness and applicability of evidence

The total seven included studies were all measuring the effectiveness of individual-level bullying prevention or reduction interventions. No interventions were found to investigate the effectiveness at organisational, societal, or job-

levels. All studies employed either an individual or cluster-randomised controlled trial design. Five studies had been conducted in high-income countries (i.e., United States, New Zealand, Korea, and France) and two had been conducted in middle-income countries (India and China) (Dwivedi 2016 and Ming 2019). The participants were diverse, ranging from healthcare workers (Lanza 2016, Baby 2019, Glass 2017, Kang 2017, and Ming 2019), employees from private enterprises (Dwivedi 2016), and employees from the unspecified retail company (Tarquinio 2016). No studies were found to be conducted in lower-income countries.

Except for one study (Tarquinio 2016) that did not evaluate the effectiveness of bullying interventions on the primary outcomes, all remaining six studies measured and reported results on the primary outcomes.

Each included study covered one intervention. The types of included interventions varied. Three studies explored cognitive behavioural interventions, two of them explored educational/informational interventions, one explored the behavioural intervention and one explored early psychological interventions. All included studies reported the individual sample size but one cRCT only reported the number of clusters (Lanza 2016). Except for one study, the follow-ups were relatively short, ranging from three weeks to 6 months.

In addition, most of the studies included both male and female employees as participants. None of the included studies investigated the gender effect on the effectiveness of interventions.

Furthermore, behavioural and early psychological interventions may be able to play a role in managing cyberbullying with targeted amendments. Considering

the effectiveness of reducing stress (Chong, Tsunaka, Chan, & medicine, 2011), yoga as a behavioural intervention could be a remedy for cyberbullying since it might work for both perpetrators and victims in the workplace. It is believed that specific forms of yoga such as karma-yoga and meditation could improve one's empathy, compassion and prosocial behaviours (Luberto et al., 2018; Mulla, Krishnan, & Societies, 2008). In other words, yoga practice may improve people's ability to feel other people's pain. Therefore, companies could organise specific forms of yoga practices regularly i.e., once or twice a week; and encourage all employees to join in the activities i.e., by organising a friendly competition and setting up small rewards. For companies that have enough space, a professional yoga classroom in their own office building would benefit the employees; for those that do not have enough space, the companies could cooperate with professional gyms. Except for yoga practices, other behavioural interventions such as fitness classes, dance classes, Pilates and sports may also have advantages in improving mental and physical health and reducing the incidence of cyberbullying though further evidence is needed to confirm their effectiveness. Regarding the role of an early psychological intervention, companies could set up a consultation group led by professional psychologists and apply tailored early psychological prevention interventions to reduce the incidence rate and harm of workplace cyberbullying. For example, if using the EMDR-RE treatment for cyberbullying, the traumatic scene could be changed to virtual video clips as cyberbullying is usually subtle and hard to be summarised within one image. However, for the psychological consultation group to work, there are several preconditions. Firstly, the company should ensure that all employees share the common awareness and definitions of cyberbullying.

Therefore, targeted employees would know that they are victims of workplace cyberbullying when suffering it. Next, the company should also ensure that employees understand the company's tolerance policy of cyberbullying. And employees need to know that they are encouraged to seek help after being cyberbullied and organisations could provide professional helps. To deliver these messages to employees, induction training could be a possible route. In addition, organisations may need to remind the employees about this information regularly by appropriate methods, such as emails or training sessions.

5.4.3 Quality of the evidence

The overall quality of the evidence provided by the included studies was assessed to be very low. The evidence was downgraded due to the high risk of bias caused by study limitations, such as lack of blinding, a large proportion of loss to follow-up, self-reported measurements, and imprecision, such as wide confidence intervals and limited sample size for outcome measurements. Although all included studies were conducted using a randomisation design, blinding was very difficult to achieve due to the nature of bullying interventions. Also, self-reported measurements were commonly used in all included studies though the measurements were suggested to be reliable and valid. All included seven studies explored individual interventions. Therefore, no study results were combined for a meta-analysis. One study was downgraded due to indirectness as it did not measure bullying as results (Tarquinio 2016). Instead, it measured PTSD scores to indirectly explore the effectiveness of workplace bullying interventions. In addition, the quality of evidence was not downgraded for publication bias as there were only seven included studies.

The very low quality of evidence indicated that future studies need to improve the study designs in order to improve the quality.

5.4.4 Potential biases in the review process

A relatively broad search strategy was run to ensure all intervention types and all synonyms for workplace bullying were targeted in a wide range of electronic databases with no limitation of language. As this search strategy resulted in a large number of hits from databases, the present systematic review was conducted in a rapid way by limiting the publication years from 2015. A recent review (Gillen et al., 2017) that applied a similarly broad search strategy from the earliest record to January 2016 found only one unpublished RCT after screening all searched results. This gave another reason to limit the publication years. The search strategy finally resulted in an affordable number of references (2734) to be screened for inclusion. Future well-designed and high-quality original studies could help to refine the broad search terms to result in a more precise hit of relevant studies. For the current situation, the broad search strategy ensured that no eligible studies published from 2015 were missed.

During scoping, some studies that explored the effectiveness of workplace bullying interventions for employees with a learning disability were found. It could be assumed that employees with a learning disability may have different acceptability of interventions, especially the educational/informational interventions, and thus consequently affects the measure of the effectiveness of the intervention. Therefore, eligible participants were required to be healthy employees. Moreover, interventions aimed to prevent and reduce workplace bullying were both defined as eligible. This could possibly increase the

comprehensiveness of understanding in workplace bullying interventions. As for the inclusion criteria of the study design, only RCT or cRCT-designed studies were included. Such design is the gold standard for effectiveness research (Hariton & Locascio, 2018). The randomisation design helps to reduce various biases such as confounding and to improve the quality of evidence.

A wide range of terms that were used to describe intervention outcomes were accepted because it was realised that aggression, harassment, violence and other synonyms were used interchangeably in included studies to similarly represent a form of bullying in the workplace. Hence, an agreed definition and universal name of workplace bullying are expected in future original studies to allow a more precise review of workplace bullying. Unlike the previous review (Gillen et al., 2017), this present review included all relevant studies despite of the reporting of the primary or secondary outcomes. This ensured that we did not miss any paper that explored the effectiveness of workplace bullying interventions by not reporting the predefined primary outcomes.

Furthermore, self-reported scores were accepted as a measurement of results in the current review. It is obvious that social desirability may affect the results, for example, by leading the participants to report less on the occurrence of workplace bullying. However, because workplace bullying usually happens suddenly with no early warnings, it is very difficult to objectively measure the intervention's effectiveness. Therefore, self-reporting by the involvers is assumed to be the most straightforward measure.

Another limitation of this review could be that the included evidence did not allow the researcher to conduct a meta-analysis. Each comparison contained

evidence from one study only, and some studies involved a very small sample size (e.g., Kang 2017). Therefore, the applicability of results on each intervention may be doubted.

5.4.5 Agreements and disagreements with other studies or reviews

The search of the present review retrieved one relevant recent review that was published in 2017 (Gillen et al., 2017). Therefore, the discussion of agreements and disagreements was mainly compared between these two reviews.

Gillen 2017 identified five studies that aimed to explore the effectiveness of interventions on workplace bullying. The authors of the previous review included a wide range of study designs including RCT, cRCT, controlled before and after studies, and interrupted time-series studies. For the present review, we limited the included study design to RCT or cRCT only to minimise the bias and to find the causal-effect relationship between the intervention and outcomes. The focus of Gillen 2017 review was on the prevention interventions, which was different from the present review where the focus was not only on the prevention but also to reduce workplace bullying after its occurrence. The authors in Gillen 2017 concluded that organisational and individual-level interventions could possibly prevent workplace bullying. This was partially concurred by our review that individual-level interventions may prevent and reduce workplace bullying. However, we did not draw any conclusions on the effectiveness of organisational-level interventions as we found no evidence on that level. In addition, evidence from Gillen 2017 showed no significant effect on multilevel interventions which contained different combinations of policy communication, stress management training, and negative behaviours awareness training. As the

finding of the multilevel intervention came from a cRCT that was published in 2006, it might be integrated with the findings of our review.

In terms of cognitive behavioural interventions, evidence from Gillen 2017 showed no effect on reducing the victimisation, perpetration or absenteeism compared with no intervention group. Although the evidence from Gillen 2017 was not limited to RCT or cRCT designed studies, the findings of cognitive behavioural interventions were broadly in line with our review. In the present review, two RCTs were comparing different cognitive behavioural interventions with no intervention group. One RCT reported no significant effect on reducing the frequency of workplace bullying. The other reported an improved perception of workplace bullying, but no measures were done on reducing either the occurrence number or frequency of workplace bullying.

Unlike Gillen 2017, the present review did not limit the inclusion criteria to studies that reported the primary outcomes, studies were included as long as they reported any of the primary or secondary outcomes. The restriction on primary outcomes might lead to an incomplete inclusion. For example, Gillen 2017 included one RCT only which might be due to the restriction on the primary outcome. If the authors of Gillen 2017 review applied a broader inclusion criterion to all outcomes, there might be more RCTs available. In addition, the search of Gillen 2017 was run from the earliest record to January 2016, whereas the present review limited the publication date from January 2015 to May 2020. The only RCT included in Gillen 2017 was published in 2006. Whereas the included studies in the present review were published between 2016 and 2020. This indicated that there were no newly published RCTs in the overlap search

period, which also backed up the predefined selection of the search period for the present review.

In addition, our review assented to the need for large well-designed controlled trials of workplace bullying interventions on various levels to improve the quality of evidence. Also, valid, reliable, and standardised outcome measurements are expected in the future.

5.5 Conclusion

5.5.1 Implications for practice

A total of seven studies with very low-quality evidence exploring the effectiveness of behavioural, cognitive behavioural, educational/informational, and early psychological interventions at the individual-level were found.

For employees in private enterprises, results from one study showed that the yoga practice could possibly reduce workplace aggression.

For employees in unspecified organisations, evidence from another study indicated that the early psychological intervention EMDR-RE helped to lower PTSD scores after being bullied in the workplace.

For healthcare workers, one of the cognitive behavioural interventions, the scenario stimulation teaching, helped to improve the perceptions of workplace bullying. But the other cognitive behavioural intervention, the cognitive rehearsal programme, was found to have no effect on reducing the frequency of workplace bullying. By integrating evidence from previous reviews, the effectiveness of cognitive behavioural interventions remains unclear.

Educational/informational interventions were found to have no effect on reducing workplace bullying in healthcare workers either.

No studies were found to evaluate the organisational, job, or societal-level interventions to prevent and reduce workplace bullying, and this is identified to be a gap of the field. Although none of the studies found in this review evaluated multilevel interventions, by integrating evidence from the previous review, it might be assumed that multilevel interventions would be less effective in preventing or reducing workplace bullying.

5.5.2 Implications for research

Future high-quality randomised controlled trials of workplace bullying interventions at the individual-level are needed. And there is a clear gap in organisational-level interventions. The randomisation sequence, allocation concealments and blinding need to be carefully designed in future trials to improve the quality of the study. However, due to the nature of the interventions, it might be difficult to blind the participants. In that case, experimenters need to standardise the treatment of the experiment and control groups apart from the tested intervention. Another way to minimise the bias from blinding is to use objective, reliable outcomes if possible. Evidence included in the present review showed the use of the self-reporting subjective manner to assess the effectiveness of interventions. Thus, the development of a universal, agreed, objective measurement is needed in the future, as it could not only minimise the bias from being unable to blind but also eliminate the influence of social desirability in the results.

Currently, evidence showed that each intervention was applied to a particular type of employee only. For example, the yoga practice intervention only showed the effectiveness for employees in a private enterprise. The applicability of the yoga practice intervention in other occupations thus remains unclear. Therefore, future trials are also expected to apply the same intervention to a wider range of types of employees. Moreover, future trials with a large sample size are needed. For instance, the cognitive rehearsal programme was found to have no clear effect on reducing workplace bullying in healthcare workers. The trial was conducted with only 44 participants which might be argued as lacking power. Future trials should test this intervention with a larger sample size to further confirm its effectiveness. However, the prevalence rate of the investigated phenomenon needs to be taken into account as bullying behaviour may be relatively rare.

In addition, the failure to conduct a meta-analysis may indicate the need for consistent outcomes. Evidence showed in the present review that as the outcomes measuring bullying varied in original studies, data from studies under the same comparisons can hardly be synthesised. For measuring the frequency and nature of workplace bullying, one of the most widely applied measurements in research is the Negative Acts Questionnaire-Revised (NAQ-R) (Staale Einarsen, Hoel, & Notelaers, 2009) which contains 34 items and has been translated into many languages.

Surprisingly, the preliminary scoping exercise failed to find sufficient RCTs for workplace cyberbullying. It might be the case that the study design restriction limited the search result since individual-level suggestions (Samuel Farley,

Coyne, & D'Cruz, 2018), organisational-level policies (Mainiero & Jones, 2013), and societal-level laws have been found and discussed in previous reviews (Vranjes et al., 2020). This indicated the need for well-designed studies evaluating interventions specifically for cyberbullying in the workplace in the future. Learning from what has been found in this review, future studies for cyberbullying should apply consistent measurements to assess outcomes. For example, the workplace cyberbullying measure (WCM) which contains 17 items with good reliability and validity could be used to assess the exposure to cyberbullying in the workplace (Samuel Farley et al., 2016). Moreover, the 5-item Perceptions of Cyberbullying scale that has been developed in Chapter 2 could be applied to assess people's appraisal of perceptions of cyberbullying in the workplace.

Regarding the follow-up period, the included studies in the present review showed a wide range of follow-up periods from post-intervention to 6 months. From the larger drop-out rate in studies with longer follow-up periods, it is easy to recognise the difficulty of measuring outcomes in a longer period. Although the rapidly changing employment may make it harder to achieve a longer follow-up period, a minimum of 6-month follow-up is still recommended as it helps to demonstrate the continued effectiveness of interventions. Either sharing the results of the study with participants or making an extra effort during follow-up may help encourage participants to continue the investigation process.

Furthermore, future high-quality randomised controlled trials at organisational, job and societal-levels are expected as this review was not able to find any to

include within. All implications discussed above are recommended for future trials as well.

Chapter 6 Implications and Conclusions

6.1 Overall summary

This thesis contains four studies that explored the perceptions of cyberbullying in the workplace. The first study explored the perceptions of cyberbullying using a semantic differential method. Five key elements were found and used to develop a practical scale, the Perceptions of Cyberbullying scale, which was to assess people's appraisal of perceptions of workplace cyberbullying using an exploratory factor analysis, i.e., intention to harm, serious action, difficulty to prevent, difficulty to avoid and psychological harm. The second study explored the impact of the perpetrator gender, victim gender and culture on victims' perceptions of motivations for cyberbullying in the workplace using a vignette method. Results showed that the male perpetrator was perceived as being more negative or threatening than the female perpetrator. Female victims were more likely to blame themselves and endorse exonerated motivations for the perpetrators. Results showed that employees in the UK seemed to have a lower tolerance of cyberbullying in the workplace than employees in China, and this cultural difference showed an interaction effect with the perpetrator gender and victim gender on the perception of cyberbullying in the workplace. The third study explored real-world experiences of cyberbullying using an online textual interview. Results from the qualitative analysis emphasised the perceived significant negative impacts of workplace cyberbullying and highlighted the

dissatisfaction with the organisational support from the victim's perspective. More respondents reported that they would like to engage in a problem-focused strategy than an emotion-focused strategy to solve the problem. The fourth study systematically reviewed the effective interventions for workplace bullying and discussed their compatibility for reducing the negative impacts of cyberbullying in the workplace.

6.2 Implications for practice

It is not surprising that the findings from the first three studies emphasised the negative and threatening perceptions of cyberbullying in the workplace. People believed workplace cyberbullying involves 5 elements, i.e., intention to harm, serious action, psychological harm, difficult to prevent, and difficult to avoid. A possible explanation has been suggested by empirical studies that cyberbullying has negative impacts on employees' well-being in the workplace. On the individual aspect, cyberbullying has been suggested to have negative impacts on employees' mental strain (S. Farley et al., 2015), health (Muhonen et al., 2017), emotional well-being (Nikolić et al., 2017), and psychological well-being (Ford, 2013). On the work-related aspect, cyberbullying has been found to be positively correlated with counterproductive work behaviours (Robin M Kowalski et al., 2018) including absenteeism, decreased job satisfaction (S. Farley et al., 2015), and turnover intentions (Muhonen et al., 2017). These negative impacts have been widely recognised in academia and practice, thus resulting in workplace cyberbullying as being a negative perception. Nowadays, gradually more employees are starting to work from home concerning the benefits of cost-effectiveness and time-efficiency. Especially since the COVID-19 pandemic, the

government has issued many lockdown rules to help control the rising number of coronavirus cases and to protect people's wellbeing. Part of the lockdown rules require or highly recommend people to work from home in order to keep social distance. This means that there will be an increasing use of CMC to maintain daily work-related communications (GOV.UK, 2020). It could be argued that the increasing use of CMC may rise the prevalence of cyberbullying. Therefore, it would be important for organisations to develop health and safety policies that emphasise cyberbullying in the workplace in order to prevent its negative consequences.

Findings from the first study showed that people perceived cyberbullying similarly to other concepts such as aggression, face-to-face bullying, and harassment. This may again indicate that employees recognise cyberbullying as a negative behaviour in the workplace. On the other hand, this may also indicate that employees might struggle to distinguish cyberbullying from other forms of negative behaviours in the workplace. Many studies compared cyberbullying with other forms of negative behaviours and found that it seems to be closely related to many concepts, such as cyber-aggression, cyber-stalking, and traditional bullying (Vranjes et al., 2020). For example, it has been argued that the four fundamental elements of traditional bullying including repetition, intention to harm, power imbalance and aggression, might also be applicable to cyberbullying with some adaptions due to the unique characteristics of cyberbullying such as anonymity and viral reach (Vranjes et al., 2020). Thus, an agreed definition of cyberbullying might need to be clarified in the policy to prevent its occurrence. Likewise, a valid and reliable assessment tool could be

recommended in the policy for employees to classify their experiences since cyberbullying has not been fully conceptualised in the workplace. For instance, the workplace cyberbullying measure (WCM) which is a 17-item scale that assesses the exposure to negative work-related behaviours through technology, could be an ideal option since the validity and reliability have been examined across disparate working populations (Samuel Farley et al., 2016). For organisations who have already established policies that generally capture the workplace bullying, it may be appropriate to suggest these organisations to refine their policies by clarifying the boundary of acceptable CMC behaviours. Thus, they could establish a rather general policy to manage different forms of negative behaviours, including cyberbullying in the workplace.

Although a clear social media policy could help to prevent cyberbullying in the workplace, it would be possible that employees disobey such policy (Whitty & Carr, 2006). Findings from the third study showed that some victims stated that they perceived a lack of organisational support and made suggestions on the management interventions and preventions. Therefore, organisations could consider implementing various forms of preventions. Rather than making policies, organisations could also implement more proactive interventions to prevent cyberbullying from occurring. Due to the absence of studies evaluating workplace cyberbullying interventions, organisations could learn from studies examining workplace bullying. For example, a recent systematic review confirmed the effectiveness of a zero-tolerance bullying program on increasing the staff awareness of workplace bullying and increasing the staff satisfaction (Escartín, 2016). This could be transferred to the cyber context in the workplace

as well. Besides developing a zero-tolerance policy (Scisco, 2019), organisations could also create a section in the employees' induction that particularly emphasise their zero-tolerance towards cyberbullying and introducing their relevant interventions in the organisations.

When considering helping victims to deal with the negative cyberbullying experiences or to solve the ongoing problems, it is important for organisations to know the preferred coping strategies of the victims. Findings from the third study showed that more victims preferred to use a problem-focused strategy such as changing work style to take more control, to deal with their experiences rather than an emotion-focused strategy such as ignoring. The results were contradicted by a previous report in 2018 where 64.3% of examined US workers preferred to do nothing and 35.7% of them preferred to face the issue (Robin M Kowalski et al., 2018). This may indicate an attitude change in handling cyberbullying where victims are now more likely to face the issue, seek help and tackle the problem rather than leave it alone. Therefore, it would be essential for organisations to provide some training and resources for employees to help them to act appropriately in response to cyberbullying. This may also help to build their resilience in the workplace and thus maintain a resilient organisation (Scisco, 2019). Moreover, it has been stated in the third study that victims nowadays tend to report their experiences to their supervisors or managers to seek help. Yet, some of them received responses from their supervisors but were not perceived as being helpful; some even received no responses from the supervisors. This might indicate that reactions from the managerial level are perceived to represent the organisation's attitudes from the employees' perspectives. It could therefore

be suggested that organisations might need to provide training and resources to the managerial level as well in order for the managers and supervisors to stay alert to the sign and symptoms of cyberbullying and to be able to respond to the victims appropriately (Piotrowski, 2012). For example, before being promoted to a manager, organisations could train the candidate using the WCM to justify a cyberbullying behaviour (Samuel Farley et al., 2016); and using the Perceptions of Cyberbullying scale which was developed in the second study to better understand the perceptions from the victims in order to provide appropriate responses accordingly.

Due to the absence of studies evaluating workplace cyberbullying interventions, it has been argued to apply effective workplace bullying interventions to cyberbullying according to their sharing similarities. Findings in the fourth study indicated the effectiveness of behavioural intervention i.e., the yoga practice on reducing bullying (Dwivedi et al., 2016) and the early psychological intervention (Eye movement desensitization and reprocessing - recent events, EMDR-RE) on preventing PTSD symptoms for the victims (Tarquinio et al., 2016). Therefore, it might be appropriate to suggest organisations to implement a similar program in order to reduce the occurrence of workplace cyberbullying and the stress caused by cyberbullying incidents. As the victims stated in the third study that they usually felt unsatisfied with their organisational support, it might be appropriate to suggest organisations to implement the interventions and preventions, and to make sure that the facilitators, sometimes might be the managers, are respected and trusted by the employees (Escartín, 2016).

Findings from the second study emphasised the gender and cultural differences on employees' perceptions of cyberbullying. Victims perceived cyberbullying as being more intent to harm, more serious, more difficult to prevent and avoid and more psychologically harmful when the perpetrator is male rather than female. And female victims were more likely to self-blame and to give the perpetrator an exonerated motivation. First, the findings may again emphasise the importance of assessing employees' perceptions of cyberbullying by using the perception scale developed in the thesis before organisations implementing any appropriate interventions. The gender difference observed in the second study might suggest organisations to take the perpetrator gender and victim gender into account when developing and implementing interventions for workplace cyberbullying. The previous research found that the negative relationship between self-esteem and prejudice may be a possible reason for the unequal treatment of males and females in the workplace (Valentine, 1998). In studies of workplace bullying, the female victims were found to be more likely to make excuses for the perpetrators and question themselves, thus having lower self-esteem (MacIntosh, 2012; MacIntosh, Wuest, Gray, & Aldous, 2010). In a previous workplace cyberbullying study containing a relatively high proportion of female participants (i.e. 77%), victimisation was found to be negatively associated with self-esteem (Visinskaite, 2015). Therefore, it could be suggested that organisations should implement self-esteem and self-confidence building interventions within employees, especially for female employees, in order to advocate gender equality in all aspects. In addition, the interacted cross-country effect observed in the second study may provide constructive suggestions for the multi-national organisations that, the variety of cultures might need to be

considered when developing and implementing cyberbullying interventions. Findings from the second study showed that in China although male and female victims both perceived male and female perpetrators as being negative and threatening, the female victims were more likely to self-blame compared to the male victims. This may suggest organisations that have employees from China or have branches in China to pay more attention to the female employees' self-esteem and self-confidence building and maintenance.

6.3 Implications for future research

The Perceptions of Cyberbullying Scale that was developed in the first study of the thesis could be useful for filling in the gaps in outcome measures on this topic. Literature tells us that there are abundant scales for measuring the exposure to cyberbullying such as the workplace cyberbullying measure (WCM), the 16-item cyber negative acts questionnaire (CNAQ) (Samuel Farley et al., 2016), the 22-item cyber negative acts questionnaire (CNAQ) (Privitera & Campbell, 2009), and the cyberbullying behaviour questionnaire (CBQ) (Jonsson et al., 2017). The validity and reliability of these scales have been well examined and reviewed (Escartín, Vranjes, Baillien, & Notelaers, 2019). Yet, the measures of the perceptions of cyberbullying are insufficient. The Perceptions of Cyberbullying Scale contains only 5 items which make it relatively practical to be implemented. Future research or even organisations could employ such scale easily in a time-efficient manner, which could assess the perceptions from both the perpetrator and victim perspectives.

This thesis may also provide contributions to discovering the academic gap. Findings from this thesis indicated that there is a lack of investigations assessing

the effectiveness of counter cyberbullying interventions. Abundant systematic reviews were conducted recently to evaluate the counter cyberbullying interventions in the school-aged population, but none was conducted for evaluating interventions in the workplace. Surprisingly, checks of the trials and systematic review registration platforms found no scheduled studies evaluating interventions designed for countering workplace cyberbullying. Together with the failure to assess the effectiveness of counter workplace cyberbullying interventions in the final systematic review study, these facts may indicate that well-designed studies, such as randomised controlled trials, are desperately needed to provide high-quality evidence. The developed perception scale could serve as a primary outcome measure in future studies to judge the effectiveness of an intervention. In addition, findings from the fourth study might indicate an academic gap that there is a lack of evaluations of the organisational-level interventions for workplace bullying and workplace cyberbullying. Although the previous review found few studies evaluating the organisational-level interventions, the quality of these studies remains very low (Gillen et al., 2017). Therefore, more studies are needed to assess the effectiveness of the organisational-level interventions. And it would be better for these studies to conduct with a cluster-RCT design to improve evidence quality though the method might be time and cost-consuming.

Current investigations of workplace cyberbullying are mostly carried out in ther nursing professions. Because of the high risk of experiencing traditional workplace bullying, the nursing profession has been assumed to have an elevated risk of exposure to workplace cyberbullying. This limits people’s understanding

of workplace cyberbullying in general. Therefore, the recruitment of participants from university staff and members allows the findings to provide possible contributions to fill the knowledge gap of understanding workplace cyberbullying in higher education.

6.4 Limitations of thesis

Findings of this thesis have to be seen in the light of some limitations. The primary limitation to the generalisation of these results is the relatively small sample size in each of the studies. This is especially true for study 2 where the sample size was only 62. One of the reasons could be that the sensitive nature of cyberbullying in the workplace hinders people's motivation to participate in the research. People may not like to admit their victim or perpetrator status though they were informed that the survey was totally anonymous. On top of that, the time period to collect data was limited and people may have been reluctant to respond to a PhD survey. Future studies could conduct data collection on behalf of an organisation's human resources department and allow longer collection period in order to enlarge the sample size. In addition, data from this research were collected from university students and staff in higher education. This may limit the applicability of results to other types of workplace organisations. Furthermore, only UK and China campuses of one university were sampled. Therefore, the results of cultural differences may not generalise beyond this study. Future studies could include the recruitment from more types of organisations and from a wider range of countries in order to enhance the applicability of the results.

Another limitation concerns the lack of previous research studies on the workplace cyberbullying topic. Although an increasing number of research are conducted in the field of workplace cyberbullying, very few research was identified assessing the gender difference in the perceptions and motivations of cyberbullying or evaluating interventions for workplace cyberbullying. Therefore, the materials and methods of studies were entirely designed by the PhD candidate, which could be improved in future studies.

Limitations that arise from the data collection method should be discussed as well. The entire research was designed in a mixed-method, and both quantitative and qualitative data were collected from participants' written responses. Especially in study 3 where participants were asked to provide their cyberbullying experiences, the semi-structured interview was conducted in an online survey form. Although compared with an interview in person, the survey form can save time and effort on conducting, transcribing, and analysing raw data, it may be difficult to keep participants on-topic, to capture discursive or complex information on participants' thoughts, feelings, behaviours, beliefs, and their verbal and emotional responses which could potentially help the researcher understand their perceptions thoroughly. Considering the aim of this research is to understand people's perceptions of workplace cyberbullying, future studies are suggested to collect experiences in an in-depth interview in person, or on the phone if the participants prefer a more anonymous way.

6.5 Conclusion

As the awareness of the dangers of workplace cyberbullying gradually emerges, people's understanding of the phenomenon in theory and practice becomes

urgent. In summary, studies from this thesis may provide contributions to the academic gap in people's perceptions of the phenomenon by exploring the perceptions of definitions, motivations, reactions, and experiences. Importantly, it has illustrated that people's perceptions of cyberbullying may be influenced by the perpetrator's gender, victim gender and cultural differences. This may help to raise researchers' awareness of the possible influencing factors of workplace cyberbullying when understanding the phenomenon in the future studies. By assuming the compatibility of workplace bullying interventions in managing cyberbullying, findings from the systematic review recommended the behavioural and early psychological interventions and urged evaluations on the organisational-level interventions in the future. The findings of this thesis may provide possible suggestions and recommendations to help organisations to develop preventions and interventions in increasing the awareness and management of cyberbullying in the workplace.

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Appendices

Appendix 1 Advertisement email for study 1 (Chapter 2)

Date 07/03/2017
Dear *Sir/Madam,*

I am a PhD student in Occupational Psychology at the University of Nottingham. As part of my course I am conducting a research study exploring workplace cyber-bullying in adults. The aim of my study is to understand university students' perception of workplace cyberbullying.

I am seeking your agreement to approach students within your school to take part in an online study. Participants will only need to complete a questionnaire survey which takes no more than 15 minutes to complete. I will recruit students to the study via school emails and lecture announcements, and hope to recruit 150 students.

The study has been granted ethical permission from the University of Nottingham, the Division of Psychiatry & Applied Psychology's Research Ethics Sub-Committee. I have attached copies of the approved Participants Information Sheet, Consent Form and study advertisements, and would hope that you are able to grant me access to advertise my study to students in your school or department.

Ethics Reference Number: 212

My research is supervised by:

- Dr Phil Leather lwzpl@nottingham.ac.uk School of Medicine
- Prof Cris Glazebrook mczcpg@nottingham.ac.uk School of Medicine
- Prof David Clarke lpadc1@nottingham.ac.uk School of Psychology

Yours Sincerely
Sitong Dong
PhD researcher in Occupational Psychology
The Division of Psychiatry & Applied Psychology
School of Medicine
Contact email: msxsd6@nottingham.ac.uk

Hi there,

I am a PhD student from the Division of psychiatry and applied psychology, University of Nottingham. I am conducting one of the studies in my PhD project. The study concerns about people's understanding of cyberbullying in workplace, and involves a short online questionnaire.

I am looking for participants who are students of University of Nottingham. I would be very grateful if you would be willing to take part in my study. If you interested, please click the link below and complete the survey. The questionnaire won't be more than 15 minutes, and you will have a chance to win £5 cash prize.

Survey link: https://nottingham.onlinesurveys.ac.uk/definition

This study has been approved by the Division of Psychiatry and Applied Psychology's Research Ethics Sub-Committee.

The researcher could be reached via email: sitong.dong@nottingham.ac.uk.

This study is supervised by:

- Dr Phil Leather lwzpl@nottingham.ac.uk
- Prof Cris Glazebrook mczcpg@nottingham.ac.uk
- Prof David Clarke lpadc1@nottingham.ac.uk

Thank you very much!

Sitong Dong

Appendix 2 Ethical Approval Letter for Study 1 (Chapter 2)

The University of Nottingham
UNITED KINGDOM · CHINA · MALAYSIA

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Investigators: Sitong Dong and Phil Leather

Title of study: Understanding workplace cyberbullying in adults: definition, motivation, and life events

Duration of study: Until September 2020

Ethics reference number: 212

6th March 2017

A favourable opinion is given to the above named study on the understanding that the applicants conduct their research as described in the above numbered application, and adhere to all conditions under which the ethical approval has been granted and use only materials and documentation that have been approved. If any amendments to the study are required, an amendment should be submitted to the committee for approval.

David Daley (Professor)

Co-Chair of DPAP Ethics Subcommittee

Appendix 3 Pearson's correlation of salient items on factor analysis (Chapter 2)

No.	Items	1	2	3	4	5	6	7	8	9	10
1	Intention to harm	1.00									
2	Serious action	.45	1.00								
3	Psychological harm	.46	.34	1.00							
4	Difficult to prevent	.32	.10	.47	1.00						
5	Difficult to avoid	.40	.27	.38	.30	1.00					
6	Sexual harm	.31	.43	.33	.19	.25	1.00				
7	Physical harm	.10	.31	.04	.09	.13	.43	1.00			
8	Acceptable	-.09	-.10	-.24	-.07	.01	.19	.21	1.00		
9	Direct	.25	.17	.05	-.04	.22	.07	-.06	-.10	1.00	
10	Difficult to detect	.25	.29	.26	.41	.14	.25	.16	.11	-.11	1.00

Appendix 4 Ethical Approval Letter for Study 2 (Chapter 3)

The University of Nottingham
UNITED KINGDOM · CHINA · MALAYSIA

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Investigators: Sitong Dong and Cris Glazebrook

Title of study: Reactions to receiving negative feedback by email in the workplace

Duration of study: Until September 2020

Ethics reference number: 228

Tuesday 23rd May 2017

A favourable opinion is given to the above named study on the understanding that the applicants conduct their research as described in the above numbered application, and adhere to all conditions under which the ethical approval has been granted and use only materials and documentation that have been approved. If any amendments to the study are required, an amendment should be submitted to the committee for approval.

David Daley (Professor)

Co-Chair of DPAP Ethics Subcommittee

Amanda Griffiths (Professor)

Co-Chair of DPAP Ethics Subcommittee

Appendix 5 Vignette content example (Chapter 3)

Please read the following scenario and complete the questions below.

You have been asked by your line manager to join a project team with four other work colleagues. The team is to complete a comprehensive report within 6 months and each team member has been given responsibility for one particular aspect.

Unfortunately, because of some personal family reasons, you had to send apologies for one of the meetings and then inadvertently missed one of the project deadlines because you had been told a later date. You submitted your report to the team last week. When you checked your email yesterday evening you found that you had just been sent the following email from one of the team members, John.

From: John
Sent: 05 April 2017 11:13
To: tm1@universitystaff.a.uk
Cc: tm2@universitystaff.ac.uk; tm3@universitystaff.ac.uk; tm4@universitystaff.ac.uk; tm5@universitystaff.ac.uk; lm1@universitystaff.ac.uk;

Subject: LATE WORK!!!

Can I ask that in future you complete your reports **ON TIME!!!!**

I am extremely ANGRY!!!! that I have had to spend my valuable time rewriting your section because of all your MISTAKES and because you missed out the important material that I circulated three weeks ago. .

If you attended our meetings you would know what was needed and realise how hard the rest of the team is working to cover for your lack of commitment….

You realise that John has copied the email to the whole team and to your line manager. You check your mail box and find that you have not been included in any emails about the project for several weeks.

You have emailed John to point out that you did not receive the information sent to the rest of the group and to ask that you are re-included in the group circulation list but he has not replied.

Appendix 6 Harmfulness scale (Chapter 3)

Now you are presented with some more judgments about scenario in a different format. Please rate where you think it fits best on the following scales.

No intention to harm	-3	-2	-1	0	1	2	3	Intention to harm
Not serious action	-3	-2	-1	0	1	2	3	Serious action
No psychological harm	-3	-2	-1	0	1	2	3	Psychological harm
Easy to prevent as a 3rd party	-3	-2	-1	0	1	2	3	Hard to prevent as a 3rd party
Easy to avoid as a victim	-3	-2	-1	0	1	2	3	Hard to avoid as a victim

Appendix 7 Motivation scale items and blaming items (Chapter 3)

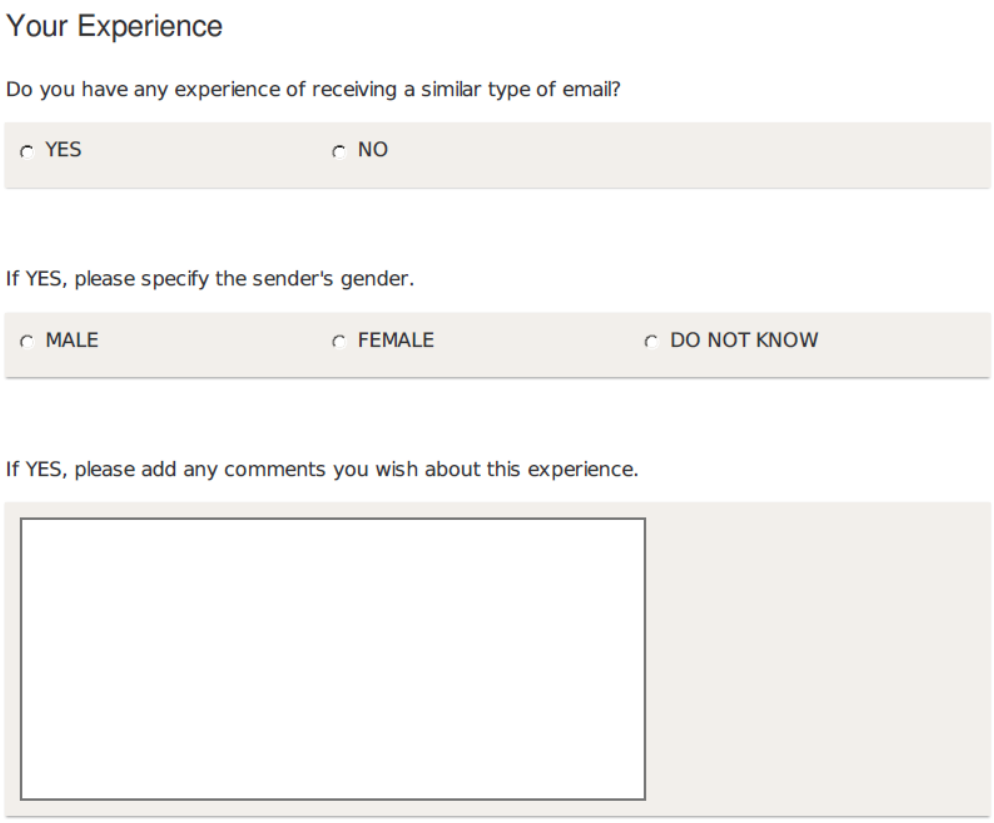
Denial of responsibility (work climate/social norm)		**Zhang and Leidner (2014)**
1	No clear guidelines about online communication in the organisation	Siponen and Vance (2010); W. William Minor (1980)
2	The email style is acceptable within John's organisation	Xiao and Wong (2013)
3	John is not sure what the guidelines about email style are in the organisation	Siponen and Vance (2010)
Denial of injury		**Zhang and Leidner (2014)**
4	John believes his email is not harmful	Siponen and Vance (2010)
5	John believes no damage is done to the team or organisation	Siponen and Vance (2010)
Denial of victim (victimisation experience/ target differences)		**Zhang and Leidner (2014)**
6	John feels justified in sending the email because he has received similar emails in the past.	W. William Minor (1980); Varjas et al (2010)
7	John feels you has been unfair to him in the past	W. William Minor (1980); Varjas et al (2010)
8	John thinks your absence at meetings was deliberate	Varjas et al (2010)
Appeal to higher loyalties		**Zhang and Leidner (2014)**

9	John wanted to get the job done better	Siponen and Vance (2010)
10	John wanted to help other team members	Siponen and Vance (2010)
11	John wanted to support his boss	Siponen and Vance (2010)
The metaphor of the leger		**Zhang and Leidner (2014)**
12	John feels his overall affinity with colleagues compensates for occasionally sending an email like this	Siponen and Vance (2010)
13	John feels his hard work in the organisation compensates for occasionally sending an email like this	Siponen and Vance (2010)
14	John feels his good job performance compensate for occasionally sending an email like this	Siponen and Vance (2010)
Higher internal competition		**Salin (2003)**
15	The company expects employees in the organisation to compete and John wants to win that competition	New item
Reward system and expected benefits		**Salin (2003)**
16	John believes that rewards from his organisation depend on his performance out-ranking yours	New item
Bureaucracy and difficulties to lay off employees		**Salin (2003)**
17	John feels the team would be better without you	New item

Jealousy		**Varjas et al (2010)**
18	John is jealous of you	New item
Disinhibition effect		**Varjas et al (2010)**
19	John is afraid to argue face-to-face manner	New item
20	John is not worried about the negative consequences of sending an email like this	New item
Protection		**Varjas et al (2010)**
21	John wants to protect the reputation of his team	New item
22	John wants to protect himself from being blamed for poor work	New item
Make themselves feel better		**Varjas et al (2010)**
23	Sending the email makes John feel better	New item
Power		**Xiao and Wong (2013)**
24	John is trying to establish his authority	New item
Acceptance		**Xiao and Wong (2013); Varjas et al (2010)**
25	John is trying to impress other co-workers	New item
Attention		**Xiao and Wong (2013); Varjas et al (2010)**

26	John wants to be noticed by his line manager	New item
Blame		**Farley et al (2015)**
27	You are partly to blame for John sending the email	New item
28	John is wholly to blame for sending the email	New item

Appendix 8 Victimisation experiences questions (Chapter 3)



Appendix 9 Advertisement email for study 2 (Chapter 3)

Dear Member of University Staff

Reactions to Receiving Negative Feedback by Email in the Workplace

Please would you consider taking part in a vignette study to investigate people's perceptions of receiving negative feedback by email in the workplace. It is being conducted as part of a PhD study.

In this study, you will be asked to read a short scenario which includes an email giving negative feedback on work performance. You will view one of two versions of the email and you will be asked to imagine that the email has been sent to you. Following this, you will be presented with a few questions about your feelings about the email and the person who sent it. The whole experiment should take no more than 15 minutes.

All the information collected from this study will remain anonymous. If for any reason and at any point in the experiment you do not want to continue, please feel free to withdraw and your data will not be used in the analysis.

Please click on the survey link to see more details on the study

https://nottingham.onlinesurveys.ac.uk/email-feedback

Thanks for your help

Best wishes

Sitong Dong

Division of Psychiatry and Applied Psychology, School of Medicine, University of Nottingham

Supervisors Prof Cris Glazebrook Prof David Clarke

Appendix 10 Correlations between scales in the UK and China (Chapter 3)

		Harmfulness Scale	Exoneration Motivation Scale	Negative Motivation Scale	Perpetrator Blaming	Victim Blaming
Harmfulness Scale	Pearson Correlation	1	.075	.175**	.053	.045
	Sig. (2-tailed)		.226	.005	.393	.473
	N	262	262	262	262	262
Exoneration Motivation Scale	Pearson Correlation	.075	1	.451**	.014	.172**
	Sig. (2-tailed)	.226		.000	.821	.005
	N	262	262	262	262	262
Negative Motivation Scale	Pearson Correlation	.175**	.451**	1	.208**	-.044
	Sig. (2-tailed)	.005	.000		.001	.482
	N	262	262	262	262	262
Perpetrator Blaming	Pearson Correlation	.053	.014	.208**	1	-.410**
	Sig. (2-tailed)	.393	.821	.001		.000
	N	262	262	262	262	262
Victim Blaming	Pearson Correlation	.045	.172**	-.044	-.410**	1
	Sig. (2-tailed)	.473	.005	.482	.000	
	N	262	262	262	262	262

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

N = number of participants.

Appendix 11 Correlations between scales in the UK (Chapter 3)

		Harmfulness Scale	Exoneration Motivation Scale	Negative Motivation Scale	Perpetrator Blaming	Victim Blaming
Harmfulness Scale	Pearson Correlation	1	.066	.162*	.105	.051
	Sig. (2-tailed)		.350	.022	.137	.473
	N	201	201	201	201	201
Exoneration Motivation Scale	Pearson Correlation	.066	1	.522**	.066	.155*
	Sig. (2-tailed)	.350		.000	.353	.028
	N	201	201	201	201	201
Negative Motivation Scale	Pearson Correlation	.162*	.522**	1	.129	.031
	Sig. (2-tailed)	.022	.000		.068	.665
	N	201	201	201	201	201
Perpetrator Blaming	Pearson Correlation	.105	.066	.129	1	-.385**
	Sig. (2-tailed)	.137	.353	.068		.000
	N	201	201	201	201	201
Victim Blaming	Pearson Correlation	.051	.155*	.031	-.385**	1
	Sig. (2-tailed)	.473	.028	.665	.000	
	N	201	201	201	201	201

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

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

N = number of participants.

Appendix 12 Correlations between scales in China (Chapter 3)

		Harmfulness Scale	Exoneration Motivation Scale	Negative Motivation Scale	Perpetrator Blaming	Victim Blaming
Harmfulness Scale	Pearson Correlation	1	.047	.322*	.007	-.137
	Sig. (2-tailed)		.719	.011	.958	.294
	N	61	61	61	61	61
Exoneration Motivation Scale	Pearson Correlation	.047	1	.309*	-.084	.136
	Sig. (2-tailed)	.719		.015	.520	.296
	N	61	61	61	61	61
Negative Motivation Scale	Pearson Correlation	.322*	.309*	1	.367**	-.111
	Sig. (2-tailed)	.011	.015		.004	.393
	N	61	61	61	61	61
Perpetrator Blaming	Pearson Correlation	.007	-.084	.367**	1	-.371**
	Sig. (2-tailed)	.958	.520	.004		.003
	N	61	61	61	61	61
Victim Blaming	Pearson Correlation	-.137	.136	-.111	-.371**	1
	Sig. (2-tailed)	.294	.296	.393	.003	
	N	61	61	61	61	61

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

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

N = number of participants.

Appendix 13 Content analysis for coding of real-life victimisation experiences (Chapter 3)

Code NO.	Code	Concept	Quantity	Quotes	Participant NO.
1	Victim feels being humiliated.	This code mentioned that perpetrator/cyberbullying occurrence makes victims feel ashamed and foolish by injuring their dignity and pride. Text was included with 'humiliated', 'insulted', 'belittling', 'shame', and 'make feel small/inadequate'.	10	A previous head of department who publicly chastised me and ***humiliated*** me by email.	2
				Something this strong would be rare but I have received similar ***belittling*** emails previously.	3
				I felt utterly ***belittled*** and bullied.	41
				Male line manager rude, curt, bully, use to shout at employers, ***belittle*** people and send curt emails, etc.	47
				We felt ***insulted*** and one of my colleague initiated the disciplinary procedure for his email abuse and eventually we received his apology.	78
				It was meant to ***'shame***' me into doing 'better' next time.	62
				Involved ***making me feel small*** and insignificant and ***beneath him***.	45

				My colleague was patronising and left me ***feeling inadequate***.	5
				I experienced bullying by a senior male within an HE organisation and ***felt undermined*** by some emails he sent…	38
				Yes I have received emails with a ***blaming/shaming*** element…	66
2	Copied to others.	This code represented the experience of bullying email that has been sent not only to the victim, but also been copied to others by either perpetrator or bystanders (e.g. other colleagues). Included text that mentioned 'copy to	12	Previous job, line manager reprimanding and ***copying in the rest of my team***.	7
				It was repeated and ***copied by other members*** of the team.	22
				However, she had also ***copied in our boss*** and so I think this damaged my reputation even though he was aware that she had been mistaken.	35
				…that he should not have ***copied the email to all***…	39
				However given that this ***copies in many people***…	55
				…also when ***other people are copied in the email***…	69
				…and ***copied more than 10 irrelevant colleagues***…	78

		others', 'circulated to others', and 'public email'.		…which had been ***circulated to some other colleagues***…	60
				The email was sent in order to 'show' myself and ***other colleagues*** the mistakes I had made.	62
				…but definitely have received a ***public blaming email*** before…	48
				…and made ***public*** instead of sending a private message…	66
				A previous head of department who ***publicly chastised me*** and humiliated me by email.	2
3	Aggression	This code represented that victim felt the perpetrator, email content or situation being aggressive. Therefore included text that mentioned	13	…but tone of her emails was very ***aggressive*** and ***rude*** on occasion.	9
				He was also a bully, ***curt***, disrespectful, ***aggressive***.	29
				A colleague sent multiple emails similar to this tone (not topic) and was verbally ***aggressive***...More recently, 2 male colleagues have sent me quite assertive/***aggressive*** emails.	40
				…and send ***curt*** emails etc.	47

	‘aggressive’, ‘rude’, ‘capital letters’, ‘red written’, ‘violate’ and ‘curt’.	…this is more likely the work of a bully who is accepted in an ***aggressive*** and bullying culture.	55
		I do believe that some of the ***aggression*** of the email was due to the manager not being happy within their own role in the company.	62
		I generally perceive shouting at people in ***capital letters*** as very ***rude***…	67
		…and so left me feeling a bit ‘***attacked’/ ‘violated***’.	74
		…’shouting’ through the use of ***capital letters***…	39
		I had an unfair email sent from a previous manager that contained ***capitals and written in red.***	43
		…it was in ***capitals*** in part and ***all in red font***.	52
		…and received a very ***angry*** and unfair response.	5
		…but I have received emails in which the sender is obviously ***angry*** and upset.	10

4	Negative Emotional Response	This code represented that victim's negative feelings due to the occurrence of CB. Text was included with 'upset', 'sad', 'worry', 'disappoint', 'hurtful' and 'depressed'	12	***Upsetting.***	4
				Upset me and ruined my weekend.	11
				Frequent, ***upsetting***, demotivating, uncalled for.	13
				It was also very ***upsetting*** and I called a meeting to discuss it.	20
				Very ***hurtful*** and could easily have been addressed by a face to face conversation.	23
				A very ***upsetting*** experience…	27
				I felt very ***upset***…He said he didn't realise that it would cause upset!	43
				It was ***upsetting*** to receive…	57
				It is, ***sadly***, a common experience.	58
				I was ***disappointed*** that I was singled out.	42
				I felt very upset and ***angry*** after and did discuss it with him.	43

				I was ***incensed*** and replied…	52
5	Unfair treatment	This code represented that victim perceived the CB behaviour as an unfair treatment. Text was included with 'unfair', 'unjustified', and 'wronged'.	8	…and received a very angry and ***unfair*** response.	5
				The sender had not got her facts right and her accusation were ***unjustified***.	19
				A very upsetting experience and totally ***unjustified***.	27
				The sender had not checked her facts and was ***unjustified*** in sending it.	35
				I had an ***unfair*** email sent from a previous manager that contained capitals and written in red.	43
				I felt that the comments were extremely ***unfair***…	46
				…made me feel unbelievable, very ***wronged***.	80
				Criticism by email is ***NEVER justified***.	24
6	Impact		14	Initially they used to have a ***great impact*** on me.	1

This code represented that CB has significant and sustained impact on victim. Text was included when mentioned 'impact', 'effect/affect', and other impacts that described specifically in details.	Upset me and ***ruined my weedend***.	11
	…I became ***psychologically unwell*** as a consequence, tried to resolve the situation 1-2-1, then via my union and lost my job as a consequence.	22
	Had a ***serious impact*** on me psychologically.	23
	…I think it would have a ***psychological impact*** on me.	28
	…so I think this damaged my reputation…	35
	I also considered ***ending my life*** as I was ***clinically depressed*** and felt nothing.	41
	I felt it broke the relationship somewhat.	43
	Was very surprised by how much it ***affected me*** and led me to ruminate on it for quite sometimes.	49
	…and my opinion of her went down.	51
	This sort of message often causes ***unrepairable damage*** to team morale.	56

				I was glad to get out of the role and back to my old one!	60
				I was in a nervous breakdown.	77
				I had enough and walked out and I handed my notice in without working the remaining weeks.	29
				Has also meant that I now ***worry*** about my abilities and work life…	49
7	Lack of support	This code represented that lack of support for victim when experiencing CB from organisation.	6	I have a feeling the whole situation was kept quiet and in-house.	29
				The organisation appears to have no intention to deal seriously with repeated emails of this kind…	34
				No action was taken by HR…	41
				I felt unsupported within the institution in which I worked.	46
				I think it was handled in a very immature and unprofessional way to be honest.	60
				No action was taken against my line manager either.	73

8	CB is a reflection of the sender	This code represented that victim believed CB email reflected on sender rather than themselves.	5	…but more of a reflection on the sender.	1
				…that they are more about the sender than me.	3
				Usually a deflection of ones own shortcomings…	12
				I can only say the email backfired and she end up embarrassing herself.	36
				…it has just made themselves look terrible to everyone!	37
9	Needs face-to-face communication	This code represented that victim decided to solve the problem face-to-face.	6	…I called a meeting to discuss it.	20
				…addressed by a face to face conversation.	23
				I prefer to discuss issues directly.	32
				I tackled the person face to face.	50
				I would have preferred a face-to-face conversation…	57
				I always respond personally.	63
10			7	…but I gave as good as I got in my reply…	16

	Needs Email Response	This code represented that victim decided to discuss, explain, and reply via email.		Wrote clarifying email to whole recipient list.	31
				It is probably best to respond to such emails by acknowledging the emotion…	33
				I replied stating that the article is submitted…	36
				I replied to the email in a controlled but firm manner.	42
				I was incensed and replied on behalf of the team…	52
				I will argue back.	71
11	Involving colleagues for support	This code represented that victim reported CB experience to seek for help (organisational and general).	8	I wrote a letter of complaint…	29
				I would want to approach his line manager…	39
				I ensured out boss was copied into all email communications.	40
				…and I then met the boss…	60
				…I was happy when my work was noticed by a superior…	62

				I was very lucky that my other colleagues helped to defend me from him…	65
				I would have spoken to my manager and also to the recipient.	69
				I showed it to his line manager…	73
12	Sender's unawareness of harm	This code represented that victim believed perpetrators did not aware that their behaviour is harmful.	6	…the sender did not perceieve the harm…	26
				…and lack of awareness of the impact of e-mail on another person.	28
				…some people really don't understand the hurt and harm that e-mails like this…	37
				He said he didn't realise that it would cause upset!	43
				I believe that the sender may not always realise the harm…	66
				…then I got the impression the sender wasn't aware of that.	67
13			8	…others in collaborative, competitive environment…	1

Sender is under pressure	This represented that victim believed that the perpetration might due to high pressure. Texts that mentioned 'sender under pressure', 'sender is stressful', 'sender's insecurity' and 'competitive/stressful work environment' were included.	…an employee who is under pressure in current role…	12
		… the other person's insecurity in their own role…	28
		…as he appears very stressed…	39
		…this type of email can also come from someone who is highly stressed…	55
		In pressured work environments less experienced individuals …	59
		The sender has been frustrated but under a lot of time pressures of this own.	66
		People who feel unsure of their position, role, competence, job…	70

Appendix 14 Ethical approval letter for study 3 (Chapter 4)

The University of Nottingham
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Investigators: Sitong Dong and Cris Glazebrook

Title of study: Cyberbullying victimization experiences in the workplace
Duration of study: Until September 2020

Ethics reference number: 251

Monday 12th February 2018

A favourable opinion is given to the above named study on the understanding that the applicants conduct their research as described in the above numbered application, and adhere to all conditions under which the ethical approval has been granted and use only materials and documentation that have been approved. If any amendments to the study are required, an amendment should be submitted to the committee for approval.

David Daley (Professor)

Co-Chair of DPAP Ethics Subcommittee

Amanda Griffiths (Professor)

Co-Chair of DPAP Ethics Subcommittee

Appendix 15 Advertisement email for study 3 (Chapter 4)

Dear Member of University Staff

Cyberbullying Victimisation Experience in the Workplace

Have you been cyberbullied ever in the workplace? If the answer is YES, please would you consider taking part in an online study to investigate people's real-world cyberbullying victimisation experience in the workplace? It is being conducted as part of a PhD study.

In this study, you will be asked to complete a questionnaire about your own cyberbullying experience.

All the information collected from this study will remain anonymous. If for any reason and at any point in the experiment you do not want to continue, please feel free to withdraw and your data will not be used in the analysis.

Please click on the survey link to see more details on the study

https://nottingham.onlinesurveys.ac.uk/cve

Thanks for your help

Best wishes

Sitong Dong

Division of Psychiatry and Applied Psychology, School of Medicine, University of Nottingham

Supervisors Prof Cris Glazebrook Prof David Clarke

Appendix 16 Protocol for study 4 (Chapter 5)

Effectiveness of interventions for workplace bullying: a rapid systematic review and meta-analysis (Protocol)

Objectives

To explore the effectiveness of workplace interventions to prevent or reduce bullying in the workplace.

Methods

Criteria for considering studies for this review

Types of studies

All randomised controlled trails (RCTs) will be included. If a trial is described as 'double blind' but implied randomisation, we will include such trials in a sensitivity analysis (see Sensitivity analysis). We will exclude quasi-randomised studies, such as those allocating by alternate days of the week.

Types of participants

We will include healthy participants who are/were employees (aged over 18 years old) in either public, private, or voluntary organisations.

Types of interventions

1. Interventions for workplace bullying

Interventions that aimed to prevent bullying from happening in the workplace will be included. The intervention programs will include both prevention and treatment of bullying in the workplace (prevention is a proactive approach,

which aims to reduce the incidence of bullying). The interventions can be directed to either involved individuals, groups of employees, or organisation as a unit.

2. Eligible comparisons

Comparison between different interventions, and between intervention and no intervention will be included. Included intervention must have clearly stated aim of implementation and clearly described content in details. Comparisons can be any active, non-active or no intervention.

Types of outcome measures

Primary outcomes

1. The number of occurrences, frequency, and perception of severity of workplace bullying, whether reported by perpetrator and victim, will be defined as primary outcome. Common synonyms will be accepted, for example harassment and aggression. Dichotomous, categorical, integer and continuous measures of bullying will all be included.

Secondary outcomes

1. Attitude to workplace bullying.

2. Confidence of dealing with workplace bullying.

3. Namely stress.

'Summary of findings' table

We will use the GRADE approach to interpret findings and employ GRADEpro GDT to export data from our review to create a 'Summary of findings' table

(Schünemann 2011). These tables provide outcome-specific information concerning the overall certainty of evidence from each included study in the comparison, the magnitude of effect of the interventions examined, and the sum of available data on all outcomes we rate as important to employees and decision making. We aim to select all outcomes for inclusion in the 'Summary of findings' table.

If data are not available for these prespecified outcomes but are available for ones that are similar, we will present the closest outcome to the prespecified one in the table but take this into account when grading the finding.

Search methods for identification of studies

Electronic searches

We plan to search all the published studies with a limitation on publication years (from 2015 to May 2020), languages (English and Chinese), and without no limitation on regions. These limitations will be applied due to the following reasons:

1. Previous systematic review that investigated the similar topic and published in 2017 included searches to January 2016.

2. Limited timeline as a part of PhD project.

We will search the electronic database: Embase, PubMed, PsycINFO, the Cochrane library, CINAHL and ASSIA. The detailed search strategies are presented in at the end of protocol.

Data collection and analysis

Selection of studies

Duplicated publications of studies will be discarded. If multiple publications happen on the same trial, all reference will be listed together under one study identifier and use all available data.

Data extraction and management

We will design a standard data extraction form. The following information will be extracted:

- Identification of the study (first author; year of publication; location; work setting)
- Information relevant to study design (the randomisation method; allocation concealment; blinding method)
- Participants (total sample size; age; gender; tenure)
- Interventions (specific type; definition; frequency; duration)
- Outcomes (pre-specified primary and secondary outcomes in the protocol; other outcomes reported by each study; drop-outs; follow-up; results data)

Assessment of risk of bias in included studies

We will evaluate every domain of risk of bias, on the basis of the standard criteria outlined by the Cochrane Collaboration (Higgins 2011), including sequence generation, allocation concealment, blinding of participants and personnel, blinding of outcome assessment, incomplete outcome data, selective outcome reporting, and other bias. We will generate a ‘Risk of bias graph' and a 'Risk of

bias' summary'. 'Low risk' will be shown in green, 'unclear risk' will be shown in yellow and 'high risk' will be shown in red.

Measures of treatment effect

1. Dichotomous outcomes

We will present the effect by using risk ratio (RR) with 95% confidence intervals (CI).

2. Continuous outcomes

We will present the effect by summarized mean differences (MD) with 95% CI. Where we identify skew data from studies of less than 200 participants, we will diagnose skewed data from means and standard deviations of our pre-determined outcomes, following the methodology in the Cochrane Handbook for Systematic Reviews of Interventions (Higgins 2011a).

Unit of analysis issues

Cluster trials

Where we identify cluster-randomised studies, we will make adjustments for the effect of clustering using the methods described in the Cochrane Handbook (Higgins 2011) before quantitative synthesis. We will investigate whether the clustering effect had been taken into account in the original analysis. We will obtain the intracluster correlation coefficient (ICC) of the trial and calculate the effective sample size (Bland 1997; Divine 1992; Gulliford 1999). When the ICC could not be obtained from the original studies or other similar studies, we will not add the data into other individual data but only describe the result.

Cross-over trials

Where we identify cross-over studies, we will only use the data from the first phase (pre-cross-over) of the study due to the major concern regarding the carry-over effect.

Studies with multiple treatment groups

Where we identify any study involving more than two treatment groups, if relevant, we will present the additional treatment arms in comparisons. With binary data they will be added and combined within the two-by-two table. With continuous data, we will combine the data following the formula in the Cochrane Handbook for Systematic Reviews of Interventions (Higgins 2011).

Dealing with missing data

Where the attrition rate is less than 50%, we will not make assumptions on missing data based on intention-to-treat (ITT) principle. We will use the data as reported in the original studies. For the data from trials with equal to or more than 50% drop-out rates, we will not include the data in meta-analysis, as missing data more than 50% of the total sample size could be related to attrition bias and influence credibility (Xia 2009).

Assessment of heterogeneity

We will consider and fully discuss the methodological heterogeneity, and make the priori subgroup analysis based on potential factors (See Subgroup analysis and investigation of heterogeneity). We will investigate the statistical heterogeneity based on I^2 statistics (Higgins 2011). The following levels of I^2 will be used as a guide:

- 0% to 40% may not be important;
- 30% to 60% may represent moderate heterogeneity;
- 50% to 90% may represent substantial heterogeneity;
- 75% to 100% considerable heterogeneity.

Assessment of reporting biases

We will assess the reporting bias through visual interpretation of funnel plots only for the outcomes included 10 or more than studies.

Data synthesis

Data will be extracted and input into RevMan. Random-effect model will be used if heterogeneity can be found within studies. If not, fixed-effect model will be used. If the given data does not allow us to conduct a meta-analysis, review will be reported in a narrative approach.

Subgroup analysis and investigation of heterogeneity

We plan to perform subgroup analysis on primary outcomes using the following characteristics:

- Gender

Where a significant statistical heterogeneity is identified, we will explore and discuss the possible sources of heterogeneity.

Sensitivity analysis

We plan to perform sensitivity analysis for the primary outcomes on the following aspects:

- Implication of randomization

If trials are described in some way as to imply randomisation, we will compare data from the implied trials with trials that are randomised.

- Assumptions for lost binary data

Where assumptions must be made regarding people lost to follow-up (see Dealing with missing data), we will compare the findings when we use our assumption compared with completer data only. If there is a substantial difference, we will report the results and discuss them but continue to employ our assumption.

- Risk of bias

We will perform a sensitivity analysis to assess the effects on included studies by excluding those with high risk of bias on at least one domain.

If there is a substantial difference in above results then we will report these differences and discuss them.

References

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Bland JM. Statistics notes. Trials randomised in clusters. BMJ 1997; 315:600.

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Divine GW, Brown JT, Frazier LM. The unit of analysis error in studies about physicians' patient care behavior. Journal of General Internal Medicine 1992; 7(6):623-9.

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Gulliford MC. Components of variance and intraclass correlations for the design of community-based surveys and intervention studies: data from the Health Survey for England 1994. American Journal of Epidemiology 1999; 149:876-83.

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Higgins JPT, Green S (editors). Cochrane Handbook for Systematic Reviews of Interventions Version 5.1.0 [updated March 2011]. The Cochrane Collaboration, 2011. Available from www.cochrane-handbook.org.

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Xia J, Adams CE, Bhagat N, Bhagat V, Bhoopathi P, El-Sayeh H, et al. Loss to outcomes stakeholder survey: the LOSS study. Psychiatric Bulletin 2009; 33(7):254-7.

Search strategy

A. PubMed

bullying OR bully OR bullie* OR harassment* OR mobbing* OR intimidat* OR aggression* OR "personality clash" OR "horizontal violence”

Work OR Workplace OR Employment OR Health personnel OR Occupational Health Services OR Health Care Sector OR workplace* OR worksite* OR "work place" OR "work places" OR "work site" OR "work sites" OR "work setting" OR “work related” OR "work settings" OR "work environment" OR "work location" OR "work locations" OR job OR work* OR worker* OR staff OR personnel OR "human resources" OR colleague* OR nurse* OR doctor* OR physician* OR midwife* OR midwives* OR "allied health professionals" OR employee* OR employer* OR company OR companies OR business* OR factory OR factories OR office* OR organisation* OR organization*

intervention* OR program OR programs OR prevention OR tackling OR combatting OR outcome OR evaluation OR impact OR effect* OR legislati* OR scheme OR strategy OR strategies OR policy OR policies

(randomized controlled trial OR randomised controlled trial OR controlled clinical trial OR randomized OR randomised OR placebo OR drug therapy OR randomly OR trial OR groups OR RCT NOT (animals NOT humans))

B. Embase & PsycINFO

1. exp bullying/ or exp relational aggression/ or exp aggressive behavior/ or exp antisocial behavior/ or exp emotional abuse/ or exp harassment/ or exp physical abuse/ or exp victimization/

2. exp bullying/ or exp relational aggression/

3. harassment/ or exp bullying/ or exp perpetrators/

4. exp Aggressive Behavior/ or exp Bullying/ or exp Harassment/

5. 1 or 2 or 3 or 4

6. exp workaholism/

7. diversity in the workplace/ or exp employee characteristics/ or exp individual differences/ or exp organizational climate/

8. Workplace.mp.

9. exp employment status/ or exp occupations/

10. Employment.mp.

11. exp Mental Health Services/ or exp Health Personnel/ or exp Health Care Services/ or Health Care.mp.

12. exp Workplace Intervention/ or workplace*.mp. or exp Workplace Violence/

13. worksite*.mp. or exp Business Organizations/

14. job.mp. or exp Occupations/

15. worker*.mp.

16. exp Nurses/ or exp Health Personnel/ or exp Occupational Stress/ or staff.mp. or exp Intervention/ or exp Medical Personnel/

17. exp Employee Interaction/ or exp Employee Motivation/ or employee*.mp. or exp Employee Attitudes/ or exp Employee Efficiency/

18. employer*.mp.

19. company.mp. or exp Business Organizations/

20. exp working conditions/ or exp workday shifts/ or exp organizational climate/ or exp workplace violence/ or exp working space/ or exp workplace intervention/

21. exp Business/ or exp Organizations/ or exp Blue Collar Workers/ or factory.mp.

22. office*.mp.

23. exp Employee Attitudes/ or exp Organizational Climate/ or exp Business Organizations/ or exp Organizations/ or exp Organizational Behavior/ or organisation*.mp.

24. organization*.mp.

25. "organizational and occupational measures"/ or exp organizational behavior/

26. 6 or 7 or 8 or 9 or 10 or 11 or 12 or 13 or 14 or 15 or 16 or 17 or 18 or 19 or 20 or 21 or 22 or 23 or 24 or 25

27. exp Response to Intervention/ or exp Workplace Intervention/ or intervention*.mp. or exp Intervention/

28. exp intervention/ or exp treatment/ or exp early intervention/ or exp group intervention/ or exp workplace intervention/ or exp at risk populations/ or exp prevention/

29. program.mp. or exp Program Development/ or exp Mental Health Program Evaluation/

30. programs.mp. or exp Employee Assistance Programs/

31. prevention.mp. or exp Prevention/

32. exp Policy Making/ or exp Mental Health/ or legislation.mp.

33. strategy.mp. or exp Strategies/

34. learning strategies/ or exp strategies/

35. policy.mp.

36. policies.mp.

37. 27 or 28 or 29 or 30 or 31 or 32 or 33 or 34 or 35 or 36

38. randomised controlled trial*.mp.

39. randomized controlled trial*.mp.

40. controlled clinical trial*.mp.

41. exp placebo/ or exp randomized clinical trials/ or exp randomized controlled trials/

42. RCT.mp.

43. 38 or 39 or 40 or 41 or 42

44. 5 and 26 and 37 and 43

C. CINAHL (via EBSCO host)

S1 bullying

S2 bully

S3 bullie*

S4 harassment*

S5 mobbing*

S6 intimidat*

S7 aggression*

S8 S1 OR S2 OR S3 OR S4 OR S5 OR S6 OR S7

S9 Work

S10 Workplace

S11 Employment

S12 Health Care

S13 workplace*

S14 worksite*

S15 job

S16 worker*

S17 staff

S18 nurse*

S19 employee*

S20 employer*

S21 company

S22 factory

S23 office*

S24 organisation*

S25 organization*

S26 S9 OR S10 OR S11 OR S12 OR S13 OR S14 OR S15 OR S16 OR S17 OR S18 OR S19 OR S20 OR S21 OR S22 OR S23 OR S24 OR S25

S27 intervention*

S28 program

S29 programs

S30 prevention

S31 legislati*

S32 strategy

S33 strategies

S34 policy

S35 policies

S36 S27 OR S28 OR S29 OR S30 OR S31 OR S32 OR S33 OR S34 OR S35

S37 randomised controlled trial

S38 randomized controlled trial

S39 randomized clinical trial

S40 RCT

S41 placebo

S42 S37 OR S38 OR S39 OR S40 OR S41

S43 S8 AND S26 AND S36 AND S42

D. ASSIA (via ProQuest)

((bullying OR bully OR bullie* OR harassment* OR mobbing* OR intimidat* OR aggression* OR "personality clash" OR "horizontal violence") AND (Work OR Workplace OR Employment OR Health personnel OR Occupational Health Services OR Health Care Sector OR workplace* OR worksite* OR "work place" OR "work places" OR "work site" OR "work sites" OR "work setting" OR "work related" OR "work settings" OR "work environment" OR "work location" OR "work locations" OR job OR work* OR worker* OR staff OR personnel OR "human resources" OR colleague* OR nurse* OR doctor* OR physician* OR

midwife* OR midwives* OR "allied health professionals" OR employee* OR employer* OR company OR companies OR business* OR factory OR factories OR office* OR organisation* OR organization*) AND (intervention* OR program OR programs OR prevention OR tackling OR combatting OR outcome OR evaluation OR impact OR effect* OR legislati* OR scheme OR strategy OR strategies OR policy OR policies) AND (randomized controlled trial OR randomised controlled trial OR controlled clinical trial OR randomized OR randomised OR placebo OR drug therapy OR randomly OR trial OR groups OR RCT)) NOT (child* OR school OR adolescent* OR teen* OR college)

Appendix 17 PRISMA checklist (Chapter 5)

Section/topic	#	Checklist item	Reported on page #
TITLE			
Title	1	Identify the report as a systematic review, meta-analysis, or both.	158
ABSTRACT			
Structured summary	2	Provide a structured summary including, as applicable: background; objectives; data sources; study eligibility criteria, participants, and interventions; study appraisal and synthesis methods; results; limitations; conclusions and implications of key findings; systematic review registration number.	3-4
INTRODUCTION			
Rationale	3	Describe the rationale for the review in the context of what is already known.	158-162
Objectives	4	Provide an explicit statement of questions being addressed with reference to participants, interventions, comparisons, outcomes, and study design (PICOS).	158-162
METHODS			
Protocol and registration	5	Indicate if a review protocol exists, if and where it can be accessed (e.g., Web address), and, if available, provide registration information including registration number.	162

Eligibility criteria	6	Specify study characteristics (e.g., PICOS, length of follow-up) and report characteristics (e.g., years considered, language, publication status) used as criteria for eligibility, giving rationale.	163
Information sources	7	Describe all information sources (e.g., databases with dates of coverage, contact with study authors to identify additional studies) in the search and date last searched.	162
Search	8	Present full electronic search strategy for at least one database, including any limits used, such that it could be repeated.	163
Study selection	9	State the process for selecting studies (i.e., screening, eligibility, included in systematic review, and, if applicable, included in the meta-analysis).	163
Data collection process	10	Describe method of data extraction from reports (e.g., piloted forms, independently, in duplicate) and any processes for obtaining and confirming data from investigators.	165
Data items	11	List and define all variables for which data were sought (e.g., PICOS, funding sources) and any assumptions and simplifications made.	165
Risk of bias in individual studies	12	Describe methods used for assessing risk of bias of individual studies (including specification of whether this was done at the study or outcome level), and how this information is to be used in any data synthesis.	164
Summary measures	13	State the principal summary measures (e.g., risk ratio, difference in means).	165
Synthesis of results	14	Describe the methods of handling data and combining results of studies, if done, including measures of consistency (e.g., I^2) for each meta-analysis.	165
Risk of bias across studies	15	Specify any assessment of risk of bias that may affect the cumulative evidence (e.g., publication bias, selective reporting within studies).	164

Additional analyses	16	Describe methods of additional analyses (e.g., sensitivity or subgroup analyses, meta-regression), if done, indicating which were pre-specified.	NA
RESULTS			
Study selection	17	Give numbers of studies screened, assessed for eligibility, and included in the review, with reasons for exclusions at each stage, ideally with a flow diagram.	165-166
Study characteristics	18	For each study, present characteristics for which data were extracted (e.g., study size, PICOS, follow-up period) and provide the citations.	166-176
Risk of bias within studies	19	Present data on risk of bias of each study and, if available, any outcome level assessment (see item 12).	118-121
Results of individual studies	20	For all outcomes considered (benefits or harms), present, for each study: (a) simple summary data for each intervention group (b) effect estimates and confidence intervals, ideally with a forest plot.	176-179
Synthesis of results	21	Present results of each meta-analysis done, including confidence intervals and measures of consistency.	180-184
Risk of bias across studies	22	Present results of any assessment of risk of bias across studies (see Item 15).	180-184
Additional analysis	23	Give results of additional analyses, if done (e.g., sensitivity or subgroup analyses, meta-regression [see Item 16]).	NA
DISCUSSION			
Summary of evidence	24	Summarize the main findings including the strength of evidence for each main outcome; consider their relevance to key groups (e.g., healthcare providers, users, and policy makers).	184-192
Limitations	25	Discuss limitations at study and outcome level (e.g., risk of bias), and at review-level (e.g., incomplete retrieval of	184-192

		identified research, reporting bias).	
Conclusions	26	Provide a general interpretation of the results in the context of other evidence, and implications for future research.	193-196
FUNDING			
Funding	27	Describe sources of funding for the systematic review and other support (e.g., supply of data); role of funders for the systematic review.	NA

Appendix 18 Summary of finding table 1 (Chapter 5)

Summary of findings table 1

Yoga compared to Control physical exercise for Workplace bullying

Patient or population: Workplace bullying **Intervention**: Yoga **Comparison**: Control physical exercise

Outcomes	Anticipated absolute effects* (95% CI)		Relative effect (95% CI)	№ of participants (studies)	Certainty of the evidence (GRADE)	Comments
	Risk with Control physical exercise	**Risk with Yoga**				
Occurrence of bullying (endpoint data, high = poor) assessed with: Buss and Perry Aggression Questionnaire	The mean occurrence of bullying (endpoint data, high = poor) was 64.5	MD 4.34 lower (8.58 lower to 0.1 lower)	-	160 (1 RCT)	⊕◯◯◯ VERY LOW [a,b,c,d]	
Stress-counterproductive work behaviour (endpoint data, high = poor) assessed with: Counterproductive Work Behaviour Checklist	The mean stress-counterproductive work behaviour (endpoint data, high = poor) was 67.2	MD 4.44 lower (7.5 lower to 1.38 lower)	-	160 (1 RCT)	⊕◯◯◯ VERY LOW [a,b,c,d]	

Summary of findings table 1

Yoga compared to Control physical exercise for Workplace bullying

Patient or population: Workplace bullying **Intervention**: Yoga **Comparison**: Control physical exercise

Outcomes	Anticipated absolute effects* (95% CI)		Relative effect (95% CI)	№ of participants (studies)	Certainty of the evidence (GRADE)	Comments
	Risk with Control physical exercise	**Risk with Yoga**				

*__The risk in the intervention group__ (and its 95% confidence interval) is based on the assumed risk in the comparison group and the **relative effect** of the intervention (and its 95% CI). **CI:** Confidence interval; **MD:** Mean difference

GRADE Working Group grades of evidence
High certainty: We are very confident that the true effect lies close to that of the estimate of the effect
Moderate certainty: We are moderately confident in the effect estimate: The true effect is likely to be close to the estimate of the effect, but there is a possibility that it is substantially different
Low certainty: Our confidence in the effect estimate is limited: The true effect may be substantially different from the estimate of the effect
Very low certainty: We have very little confidence in the effect estimate: The true effect is likely to be substantially different from the estimate of effect

Explanations

a. Downgraded one level for risk of bias because no information was provided on loss to follow-up.

b. Downgraded one level for risk of bias because lack of blinding of participants.

c. Downgraded one level for risk of bias because the self-reported measurement may lead to social desirability.

d. Downgraded one level for imprecision because the trial contained a small number of participants (less than 200).

Appendix 19 Summary of finding table 2 (Chapter 5)

Summary of findings table 2

Violence prevention community meeting compared to Control community meeting for Workplace bullying

Patient or population: Workplace bullying

Setting:

Intervention: Violence prevention community meeting

Comparison: Control community meeting

Outcomes	Anticipated absolute effects* (95% CI)		Relative effect (95% CI)	№ of participants (studies)	Certainty of the evidence (GRADE)	Comments
	Risk with Control community meeting	**Risk with Violence prevention community meeting**				
Frequency of bullying (rate of aggression decreased weekly) follow up: mean 3 weeks	The mean frequency of bullying (rate of aggression decreased weekly) was 5.1 %	mean 0.6 % higher (5.6 lower to 6.5 higher)	-	(1 RCT)	⨁◯◯◯ VERY LOW [a,b,c,d]	

*__The risk in the intervention group__ (and its 95% confidence interval) is based on the assumed risk in the comparison group and the **relative effect** of the intervention (and its 95% CI).

CI: Confidence interval

Summary of findings table 2

Violence prevention community meeting compared to Control community meeting for Workplace bullying

Patient or population: Workplace bullying

Setting:

Intervention: Violence prevention community meeting

Comparison: Control community meeting

Outcomes	Anticipated absolute effects* (95% CI)		Relative effect (95% CI)	№ of participants (studies)	Certainty of the evidence (GRADE)	Comments
	Risk with Control community meeting	**Risk with Violence prevention community meeting**				

GRADE Working Group grades of evidence

High certainty: We are very confident that the true effect lies close to that of the estimate of the effect

Moderate certainty: We are moderately confident in the effect estimate: The true effect is likely to be close to the estimate of the effect, but there is a possibility that it is substantially different

Low certainty: Our confidence in the effect estimate is limited: The true effect may be substantially different from the estimate of the effect

Very low certainty: We have very little confidence in the effect estimate: The true effect is likely to be substantially different from the estimate of effect

Explanations

a. Downgraded one level for risk of bias because the lack of blinding of participants.

b. Downgraded one level for risk of bias because no information was provided on loss to follow-up.

c. Downgraded one level for risk of bias because the self-reported measurement may lead to social desirability.

d. Downgraded one level for imprecision because the trial contained a small number of cluster and did not provide information on individual sample size.

Appendix 20 Summary of finding table 3 (Chapter 5)

Summary of findings table 3

Communication skills compared to Mindfulness for Workplace bullying

Patient or population: Workplace bullying **Intervention**: Communication skills **Comparison**: Mindfulness

Outcomes	**Anticipated absolute effects*** (95% CI)		Relative effect (95% CI)	№ of participants (studies)	Certainty of the evidence (GRADE)	Comments
	Risk with Mindfulness	**Risk with Communication skills**				
Psychological distress (endpoint data, high = poor) assessed with: Kessler Psychological Distress Scale follow up: mean 6 months	The mean psychological distress (endpoint data, high = poor) was 13.39	MD 0.99 lower (2.98 lower to 1 higher)	-	74 (1 RCT)	⨁◯◯◯ VERY LOW [a,b,c,d,e]	
Frequency of bullying (endpoint data, high = poor) assessed with: Perception of Patient Aggression Scale-New Zealand follow up: mean 6 months	The mean frequency of bullying (endpoint data, high = poor) was 5.3	MD 0.99 lower (2.98 lower to 1 higher)	-	74 (1 RCT)	⨁◯◯◯ VERY LOW [a,b,c,d,e]	

Summary of findings table 3

Communication skills compared to Mindfulness for Workplace bullying

Patient or population: Workplace bullying **Intervention**: Communication skills **Comparison**: Mindfulness

Outcomes	Anticipated absolute effects* (95% CI)		Relative effect (95% CI)	№ of participants (studies)	Certainty of the evidence (GRADE)	Comments
	Risk with Mindfulness	**Risk with Communication skills**				
Posttraumatic stress (endpoint data, high = poor) assessed with: Impact of Events Scale-Revised follow up: mean 6 months	The mean posttraumatic stress (endpoint data, high = poor) was 3.39	MD 0.91 lower (3.38 lower to 1.55 higher)	-	74 (1 RCT)	⊕◯◯◯ VERY LOW [a,b,c,d,e]	

*__The risk in the intervention group__ (and its 95% confidence interval) is based on the assumed risk in the comparison group and the **relative effect** of the intervention (and its 95% CI).

CI: Confidence interval; **MD:** Mean difference

GRADE Working Group grades of evidence
High certainty: We are very confident that the true effect lies close to that of the estimate of the effect
Moderate certainty: We are moderately confident in the effect estimate: The true effect is likely to be close to the estimate of the effect, but there is a possibility that it is substantially different
Low certainty: Our confidence in the effect estimate is limited: The true effect may be substantially different from the estimate of the effect
Very low certainty: We have very little confidence in the effect estimate: The true effect is likely to be substantially different from the estimate of effect

Explanations

a. Downgraded one level for risk of bias because lack of blinding of participants and providers in the study.

b. Downgraded one level for risk of bias because the large losses to follow-up.

c. Downgraded one level for risk of bias because the self-reported measurement may lead to social desirability.

d. Downgraded one level for imprecision because of a small number of sample size (less than 200).

e. Downgraded one level for imprecision because the 95% confidence interval included both no effect and appreciable harm exceeding a minimal important difference.

Appendix 21 Summary of finding table 4 (Chapter 5)

Summary of findings table 4

Cognitive behavioural intervention compared to No intervention for Workplace bullying

Patient or population: Workplace bullying **Intervention**: Cognitive behavioural intervention **Comparison**: No intervention

Outcomes	**Anticipated absolute effects*** (95% CI)		Relative effect (95% CI)	№ of participants (studies)	Certainty of the evidence (GRADE)	Comments
	Risk with No intervention	**Risk with Cognitive behavioural intervention**				
Frequency of bullying (endpoint data, high = poor) assessed with: Negative Acts Questionnaire-Revised (Korean version)	The mean frequency of bullying (endpoint data, high = poor) was 1.53	MD 0.22 higher (0.08 lower to 0.52 higher)	-	40 (1 RCT)	⨁◯◯◯ VERY LOW [a,b,c]	

Summary of findings table 4

Cognitive behavioural intervention compared to No intervention for Workplace bullying

Patient or population: Workplace bullying **Intervention**: Cognitive behavioural intervention **Comparison**: No intervention

Outcomes	Anticipated absolute effects* (95% CI)		Relative effect (95% CI)	№ of participants (studies)	Certainty of the evidence (GRADE)	Comments
	Risk with No intervention	**Risk with Cognitive behavioural intervention**				
Attitude to bullying (endpoint data, high = good) assessed with: The management of Aggression and Violence Attutide Scale follow up: mean 3 months	The mean attitude to bullying (endpoint data, high = good) was 26.01	MD 2.02 higher (1.34 higher to 2.7 higher)	-	392 (1 RCT)	⨁⨁◯◯ LOW [a,b,d]	
Confidence to deal bullying (endpint data, high = good) assessed with: Confidence in Coping with Patient Aggression follow up: mean 3 months	The mean confidence to deal bullying (endpint data, high = good) was 59.98	MD 8.86 higher (7.25 higher to 10.47 higher)	-	392 (1 RCT)	⨁⨁◯◯ LOW [a,b,d]	

Summary of findings table 4

Cognitive behavioural intervention compared to No intervention for Workplace bullying

Patient or population: Workplace bullying **Intervention**: Cognitive behavioural intervention **Comparison**: No intervention

Outcomes	Anticipated absolute effects* (95% CI)		Relative effect (95% CI)	№ of participants (studies)	Certainty of the evidence (GRADE)	Comments
	Risk with No intervention	**Risk with Cognitive behavioural intervention**				
Perception of bullying-perception (endpoint data, high = good) assessed with: Perception of Aggression Scale follow up: mean 3 months	The mean perception of bullying-perception (endpoint data, high = good) was 66.48	MD 5.64 higher (4.25 higher to 7.03 higher)	-	392 (1 RCT)	⨁⨁◯◯ LOW [a,b,d]	
Stress-turnover intention (change data, high = poor) assessed with: Yun's Nurse Turnover Intention tool	The mean stress-turnover intention (change data, high = poor) was 3.18	MD 0.27 lower (0.89 lower to 0.35 higher)	-	40 (1 RCT)	⨁◯◯◯ VERY LOW [a,b,c]	

*__The risk in the intervention group__ (and its 95% confidence interval) is based on the assumed risk in the comparison group and the **relative effect** of the intervention (and its 95% CI). **CI:** Confidence interval; **MD:** Mean difference

Summary of findings table 4

Cognitive behavioural intervention compared to No intervention for Workplace bullying

Patient or population: Workplace bullying **Intervention**: Cognitive behavioural intervention **Comparison**: No intervention

Outcomes	Anticipated absolute effects* (95% CI)		Relative effect (95% CI)	№ of participants (studies)	Certainty of the evidence (GRADE)	Comments
	Risk with No intervention	**Risk with Cognitive behavioural intervention**				

GRADE Working Group grades of evidence

High certainty: We are very confident that the true effect lies close to that of the estimate of the effect

Moderate certainty: We are moderately confident in the effect estimate: The true effect is likely to be close to the estimate of the effect, but there is a possibility that it is substantially different

Low certainty: Our confidence in the effect estimate is limited: The true effect may be substantially different from the estimate of the effect

Very low certainty: We have very little confidence in the effect estimate: The true effect is likely to be substantially different from the estimate of effect

Explanations

a. Downgraded one level for risk of bias because the lack of blinding of participants.

b. Downgraded one level for risk of bias because the self-reported measurement may lead to social desirability.

c. Downgraded one level for imprecision because the trial contained a small sample size (less than 200).

d. Downgraded one level for risk of bias because no information was provided on loss to follow-up.

Appendix 22 Summary of finding table 5 (Chapter 5)

Summary of findings table 5

Computer-based training compared to Computer-based training plus peer facilitation for Workplace bullying

Patient or population: Workplace bullying **Intervention**: Computer-based training **Comparison**: Computer-based training plus peer facilitation

Outcomes	**Anticipated absolute effects*** (95% CI)		Relative effect (95% CI)	№ of participants (studies)	Certainty of the evidence (GRADE)	Comments
	Risk with Computer-based training plus peer facilitation	**Risk with Computer-based training**				
Occurrence of bullying (endpoint data, high = poor) follow up: mean 6 months	The mean occurrence of bullying (endpoint data, high = poor) was 0.64	MD 0.13 lower (0.37 lower to 0.11 higher)	-	255 (1 RCT)	⨁⨁◯◯ LOW [a,b]	
Confidence to deal with bullying (endpoint data, high = poor) follow up: mean 6 months	The mean confidence to deal with bullying (endpoint data, high = poor) was 71.96	MD 0.96 lower (6.96 lower to 5.04 higher)	-	255 (1 RCT)	⨁◯◯◯ VERY LOW [a,c]	

***The risk in the intervention group** (and its 95% confidence interval) is based on the assumed risk in the comparison group and the **relative effect** of the intervention (and its 95% CI). **CI:** Confidence interval; **MD:** Mean difference

Summary of findings table 5

Computer-based training compared to Computer-based training plus peer facilitation for Workplace bullying

Patient or population: Workplace bullying **Intervention**: Computer-based training **Comparison**: Computer-based training plus peer facilitation

Outcomes	**Anticipated absolute effects*** (95% CI)		Relative effect (95% CI)	№ of participants (studies)	Certainty of the evidence (GRADE)	Comments
	Risk with Computer-based training plus peer facilitation	**Risk with Computer-based training**				
GRADE Working Group grades of evidence						
High certainty: We are very confident that the true effect lies close to that of the estimate of the effect						
Moderate certainty: We are moderately confident in the effect estimate: The true effect is likely to be close to the estimate of the effect, but there is a possibility that it is substantially different						
Low certainty: Our confidence in the effect estimate is limited: The true effect may be substantially different from the estimate of the effect						
Very low certainty: We have very little confidence in the effect estimate: The true effect is likely to be substantially different from the estimate of effect						

Explanations

a. Downgraded two level for risk of bias because no information was provided for allocation concealment and blinding of participants and providers.

b. Downgraded one level for risk of bias because the self-reported measurement may lead to social desirability.

c. Downgraded one level for imprecision because the 95% confidence interval was consistent with the possibility for important benefit and large harm exceeding a minimal important difference.

Appendix 23 Summary of finding table 6 (Chapter 5)

Summary of findings table 6

Computer-based training compared to Computer-based training plus peer facilitation for Workplace bullying

Patient or population: Workplace bullying

Setting:

Intervention: Computer-based training

Comparison: Computer-based training plus peer facilitation

Outcomes	**Anticipated absolute effects*** (95% CI)		Relative effect (95% CI)	№ of participants (studies)	Certainty of the evidence (GRADE)	Comments
	Risk with Computer-based training plus peer facilitation	**Risk with Computer-based training**				
Occurrence of bullying (endpoint data, high = poor) follow up: mean 6 months	The mean occurrence of bullying (endpoint data, high = poor) was 0.64	MD 0.13 lower (0.37 lower to 0.11 higher)	-	255 (1 RCT)	⊕⊕◯◯ LOW [a,b]	
Confidence to deal with bullying (endpoint data, high = poor) follow up: mean 6 months	The mean confidence to deal with bullying (endpoint data, high = poor) was 71.96	MD 0.96 lower (6.96 lower to 5.04 higher)	-	255 (1 RCT)	⊕◯◯◯ VERY LOW [a,c]	

Summary of findings table 6

Computer-based training compared to Computer-based training plus peer facilitation for Workplace bullying

Patient or population: Workplace bullying

Setting:

Intervention: Computer-based training

Comparison: Computer-based training plus peer facilitation

Outcomes	**Anticipated absolute effects*** (95% CI)		Relative effect (95% CI)	№ of participants (studies)	Certainty of the evidence (GRADE)	Comments
	Risk with Computer-based training plus peer facilitation	**Risk with Computer-based training**				

*__The risk in the intervention group__ (and its 95% confidence interval) is based on the assumed risk in the comparison group and the **relative effect** of the intervention (and its 95% CI).

CI: Confidence interval; **MD:** Mean difference

GRADE Working Group grades of evidence

High certainty: We are very confident that the true effect lies close to that of the estimate of the effect

Moderate certainty: We are moderately confident in the effect estimate: The true effect is likely to be close to the estimate of the effect, but there is a possibility that it is substantially different

Low certainty: Our confidence in the effect estimate is limited: The true effect may be substantially different from the estimate of the effect

Very low certainty: We have very little confidence in the effect estimate: The true effect is likely to be substantially different from the estimate of effect

Explanations

a. Downgraded two level for risk of bias because no information was provided for allocation concealment and blinding of participants and providers.

b. Downgraded one level for risk of bias because the self-reported measurement may lead to social desirability.

c. Downgraded one level for imprecision because the 95% confidence interval was consistent with the possibility for important benefit and large harm exceeding a minimal important difference.