

An exploration of crimes related to online dating

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Abstract

This thesis explores crimes related to online dating. After an introduction to online dating crimes (chapter 1), a systematic literature review (chapter 2) looks at current studies considering online dating romance scams. Studies indicate several factors that make victims more vulnerable to these scams, such as their romantic beliefs. Techniques used by scammers are also discussed. Chapter 2 collates what is known so far and highlights gaps in the literature: namely the lack of research.

Later chapters focus on crimes occurring on face to face dates with an online partner. Chapter 3 provides the first empirical look at these crimes, and explores potential ways of predicting when these crimes will occur. Results indicate that sexual, pressuring, arrogant, or self-deprecating message content is more likely to indicate risk. Chapter 4 uses interpretative phenomenological analysis to obtain rich qualitative information on the experience of sexual assault on dates. It reveals that this experience triggers a range of negative emotions in the victim, and indicates that better education on consent may be an important prevention technique.

Finally, chapter 5 presents a critique of the Romantic Beliefs Scale (Sprecher & Metts, 1989), which has been used to measure romantic beliefs of online dating crime victims. The review suggests the scale is adequate for use in predicting who may fall victim to online dating crimes. These studies are then summarised in chapter 6 to provide implications for prevention of online dating crimes and suggests areas of further research.

Authorship declaration

Chapter three was presented as an oral presentation at the British Psychological Society Annual Conference (Brighton, 3rd May 2017).

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Glossary of Terms

ASD	Autism Spectrum Disorder
BBC	British Broadcasting Corporation
BPS	British Psychological Society
FODE	Forensically Significant Online Dating Experience
IPA	Interpretative Phenomenological Analysis
LAS	Love Attitudes Scale
NICE	National Institute for Health and Clinical Excellence
OCP	Online Communication Partner
ORS	Online Romance Scam
PECO	Population Exposure Comparison Outcome
RBS	Romantic Beliefs Scale
RLCS	Romantic Love Complex Scale
SLM	Sex, Love, and Marriage Scale
SPSS	Statistical Package for Social Sciences

Chapter One – Introduction

People have been using methods to assist with meeting romantic partners for centuries: printed personal advertisements were introduced in 1695 (Cocks, 2009). With the rise of technology, the main method for such advertisements has become the internet, with the first computer dating service being created in 1965 (Matthews, 1965). Now, in 2017, there are many thousands of different online dating sites, with Online Dating Magazine estimating that there were around 5000 sites in 2012 (Tracey, 2012), and more are being created every year. One of the most popular online dating websites, Match.com, created in 1995, hosts over 24 million people (Statistic Brain, 2017). This number is ever increasing, as online dating sites allow the unique access point to thousands of potential matches, giving it superiority over conventional dating (Finkel, Eastwick, Karney, Reis, & Sprecher, 2012).

Online dating has long been surrounded by stigma, although this is decreasing (Smith & Duggan, 2013). Online dating has been thought of as for the desperate, and as an unnatural way to meet people (Bartz, 2015). Stigma has existed since the times of the written personal ad in the 1900s, as people felt that it would morally corrupt users, that women who were using it tended to marry later and therefore had something wrong with them, and that personal ads were often used by homosexual individuals at a time when homosexuality was still considered wrong (Cocks, 2009). Undesirable behaviours are seen during online dating such as deception (Toma, Hancock, & Ellison, 2008). People's fears linked to online dating have been examined, and suggest that online daters are concerned about this deception, as well as the mental state of

their online partners, the risk of being hurt emotionally, and the risk of being recognised by people they know also using the site (Couch & Liamputtong, 2008). The term “catfishing” has come into existence specifically to describe the type of deception used in online dating where the online partner lures the victim into a relationship with a fictional persona.

Although clearly important to online daters, this thesis considers a much more sinister negative aspect of online dating than lies and embarrassment about being recognised. This thesis focusses on illegal activities that arise because of online dating. These crimes can be broadly split into online crimes in the form of scams (Whitty, 2015; Davis & Browne, unpublished; see Chapter 2), and face to face crimes (Davis & Browne, 2017; see Chapter 3). In its current form, the online romance scam imitates a long-distance relationship limited to online contact. The scammer plays the role of a helpless person who has fallen on hard times through no fault of their own, and uses a variety of techniques to encourage victims to send them money. The online romance scam is a more technologically advanced version of a similar scam linked to personal advertisements as early as the 1800s (Lee, 2016). Conversely, the face to face crimes include rapes (e.g. Furness, 2012), murders (e.g. Kirk, 2016), and kidnapping (e.g. McAboy, 2015) amongst other ordeals. It should also be noted that there are calls for catfishing to be made illegal (Wilson, 2017) despite such lies about looks and characteristics being permissible by law.

Crimes related to online dating often have a serious impact on their victims - maybe more so than other crimes as victims can lose a supportive relationship as well as being victimised (Buchanan & Whitty, 2014). Even deception in the

form of catfishing has led to depression and suicides after the disappointment of the relationship not going as planned (Wilson, 2017). These crimes committed during a meeting between what are essentially two strangers are not a new concept, as even newspaper personal ads in the early 1900s resulted in murder by strangers for some young women (Cocks, 2009). However, crimes related to online dating appear to be increasing (Readhead, 2016; National Crime Agency, 2016). In 2014, 184 reported sexual offences were linked to online dating in the UK alone (National Crime Agency, 2016), and there may even be more as it is thought that such experiences are under-reported (BBC, 2016). Furthermore, using an online dating smartphone app has been found to increase the likelihood of being sexually abused (Choi, Wong & Fong, 2016). In addition, online-only crimes are also increasing and a cumulative loss of over £21,000,000 from 2858 romance scams occurred in the UK from January to October 2015 (BBC, 2015; Ward, 2016).

Occurrences of crimes related to online dating must be reduced, and we must understand these crimes to prevent them. Research has started looking at online romance scams and some promising predictive factors have been found. Chapter 2 collates 11 studies on online romance scams in the form of a systematic review. Information on face to face crimes linked to online dating is much sparser. The media alerts us to their occurrences (e.g. Furness, 2012; Kirk, 2016; McAboy, 2015). Indeed, many of references in this introductory chapter are limited to online news articles and magazines. However, the media portrayal of such crimes is sensationalist, likely breeding fear, and provides no useful information to aid prevention efforts. This is the primary reason for this thesis:

virtually no scientific research has been conducted to investigate face to face crimes linked to online dating. This research begins in chapter 3.

It is difficult to determine where to start researching as so little is known.

However, one established theory is that face to face online dating crimes are thought to occur in higher rates for females (National Crime Agency, 2016; Smith & Duggan, 2013). This has even led to the invention of sites and apps like Bumble in 2014, where women must make the first move. Gender differences in prevalence rates are a primary factor to be investigated in Chapter 3, which provides the first look at face to face online dating crimes.

Once the prevalence of face to face online dating crimes is established, ways to predict them would most benefit society. Background checks on all dating site users may be useful, as Statistic Brain (2017) state that 10% of sex offenders use online dating to meet people – although there is no indication of how this statistic was generated. Indeed, dating site users have demanded background checks be implemented (Heussner, 2010), suggesting the need for online dating sites to take a role in crime prevention. Some dating sites such as True.com have implemented background checks, and it has become law in some states in America for sites to either conduct background checks or clearly state that they have not done so (Ahearn, 2012). However, this offers no protection from those who have not committed a first offence (e.g. CBS Las Vegas, 2013), those who have not been caught, and those who use the majority of online dating sites as they perform no background checks. Chapter 3 therefore goes on to explore whether face to face crimes can be predicted from characteristics of the victims

and from the messages received online. This information can then be used by online dating sites for crime prevention efforts.

After a detailed overview of what factors may predict face to face online dating crimes in general, chapter 4 goes on to look more closely at specific online dating crimes – sexual assaults on females. This chapter uses interpretative phenomenological analysis to consider what the lived experiences of these crimes are like for victims. As well as thinking about prevention, this allows consideration of the likely effects on the victims of such crimes, and what support should be provided to them.

Chapter 5 then brings together the search for factors that could assist online dating crime prevention. Characteristics of crime victims can be useful in determining where crime prevention should be targeted, and romantic beliefs, as measured by the Romantic Beliefs Scale (Sprecher & Metts, 1989) have been linked to online dating scams (Buchanan & Whitty, 2014). Further, this scale was used in chapter 4 to assess romantic beliefs in female victims of sexual assaults which arise out of face to face meetings with online dating partners. Chapter 5 is a critique of the Romantic Beliefs Scale to evaluate its psychometric properties and use as a predictor of crime victimisation.

A discussion of the findings of this thesis and their implications for both practice and further research can be found in chapter 6.

The aims of this thesis were:

- To collate current research into crimes related to online dating – specifically online romance scams.
- To initiate research into prediction of face to face online dating crimes.
- To understand what the experience of being sexually assaulted by an online dating partner is like for victims.
- To evaluate the use of the Romantic Beliefs Scale in prediction of online dating crime victimisation.
- To use information gained about online dating crime prediction to inform prevention efforts.

Chapter Two - What factors contribute to online romance scams? A systematic review.

Abstract

This review aimed to consider how and why online romance scams are successful by considering victim factors and scammer techniques. A systematic search of electronic databases and associated papers identified 3371 studies, 11 of which met pre-defined inclusion criteria. Studies were primarily qualitative. It was found that scam victims were likely to be middle aged, have needs and insecurities, hold traditional beliefs, and lack computer experience. Scammers use linked techniques to perpetrate scams, including matching personas to gender stereotypes, working collaboratively for additional skills and evidence, and highlighting trust and believability through methods such as using religious keywords, and presenting as similar to victims. The main narrative of online romance scams is that they take place in long distance relationships, and a negative event or crisis occurs that results in the victim agreeing to send money to the scammer, whom they think is a partner. The findings of this review have implications for identification and targeted education for interventions in potential victims. However, the likelihood of risk of bias was high, and this area would benefit from more statistical analysis and studies including control populations to determine victim characteristics.

KEYWORDS: Systematic review, Online Dating, Scams, Victimisation.

Introduction

The advancement of technology has allowed for the introduction of a new type of crime – the online romance scam (ORS). This is defined by ActionFraud (2016) as “when you think you’ve met your perfect partner online, but they aren’t who they say they are. Once they’ve gained your trust, they ask for money for a variety of emotive reasons”. The scammer pretends to be romantically interested in someone, but circumstances mean the relationship must remain long distance. They then fake a crisis and request money, after which they may vanish or make further requests. Online romance scams are problematic as they cause huge financial losses. Losses per victim in one study ranged from £50 to £63,000 (British Psychological Society, 2016), and greater losses of £174,000 from a single victim have been reported (Prynne, 2014). Around £33.7 million was lost through ORSs in 2014 to 2015 in the United Kingdom alone from over 3,500 victims (Barrett, 2015) – an increase from the previous year.

Furthermore, it is thought that not all victims reported their losses so actual figures may be much greater. Additional to financial losses, victims of ORSs incur psychological losses such as the loss of a valued relationship, which in many cases was more important than the financial loss (Whitty & Buchanan, 2015). Arguably, this makes ORSs more harmful than other types of scam. Not only that, but Australian authorities have suggested that almost 75% of all scams in a year were related to dating and romance (Cross, 2014), suggesting this scam is more prevalent than other scams.

It is important to understand what makes ORSs successful to reduce their frequency. A search of online databases indicated no previous systematic review

had been conducted on online dating scams, nor other online scams. It is important to focus on ORSs alone, as victims of ORSs are thought to lose more money than victims of other similar scams (Ross and Smith, 2011); because of the additional emotional harm resulting from ORSs; and because victim characteristics appear to differ by scam type (Deevy Lucich, & Beals, 2012).

The benefits of conducting a systematic review on factors contributing to ORS success are threefold. A review would help inform prevention strategies focussing on education, as people would have an idea of what techniques to look out for. Additionally, identifying what makes people vulnerable to scams would allow the most vulnerable to be targeted for prevention initiatives. Finally, such a review would highlight gaps in the literature to guide future research efforts.

Research objectives

The objectives of this review are as follows:

1. To understand what characteristics make people susceptible to online romance scams.
2. To understand what online romance scam perpetrators do to successfully scam individuals.
3. To use this information to recommend prevention strategies.
4. To identify areas with a lack of literature to guide future research efforts.

Methods

A full systematic review protocol can be seen in appendix 1.

Systematic search

Scoping searches, carried out from October 2015 to December 2015. No relevant studies appeared to have been written prior to the year 2000 so searches were limited to studies published in 2000 or later. Several irrelevant studies regarding cyber-bullying and intimate partner violence were found, so the search strategy was altered to exclude such topics.

Inclusion criteria were determined by PECO (Population, Exposure, Comparison, Outcome) criteria summarised in table 1. The inclusion criteria were broad due to the deficit of literature in the area, so all study designs using adults and young people over 16 years who had experienced dating scams in some way were included. Outcomes were defined as “any factors contributing to success of online romance scams”, so outcomes could relate to either victim characteristics or scammer techniques.

Table 1. PECO inclusion criteria

Population	Adults (16+) who have used online dating sites
Exposure	Experience of online dating scams – as victims, perpetrators, or experts in the field
Comparison	None required
Outcome	Determination of features relevant to the success of ORSs – victim vulnerability or scammer techniques
Study design	No limitations due to scarcity of studies
Publication status	Published in peer-reviewed journals; conference papers; dissertations/theses available online
Language	English, or translatable by Google Translate
Date	Year 2000 or later

A systematic search was carried out from April to May 2016 using English language keywords in "PsychINFO", "PsychARTICLES" and "Journals@Ovid Full Text" via Ovid. This search was also carried out in Web of Science and Science Direct. ProQuest was used for accessing dissertations and theses. Search strategies are provided in appendices 2 to 5 respectively. The electronic database search was repeated in January 2017 but no additional relevant papers were identified. One additional study was identified in January 2018, which was subsequently added to the review.

Assessment of the risk of bias

All relevant studies were assessed for risk of bias. A tool was developed using elements of the Newcastle-Ottawa Scale (Wells et al., n.d.) for assessing quality of non-randomised studies, the Cochrane Collaboration's guide to assessing risk of bias (Higgins et al., 2011) and the Effective Public Health Practice Project quality assessment tool (Thomas, Ciliska, Dobbins, & Micucci, 2004). The tool can be seen in appendix 6. The tool considers risk of bias from the study design, participant selection, comparability of controls, the ascertainment of the exposure to ORSs, the outcome measures, the attrition rate, and the statistics used. The control section was omitted in studies where no control was present as a lack of control was not considered to constitute a bias further than that implied by the study design.

Risk of bias can be assessed differently in qualitative and quantitative studies (Mays & Pope, 2000), so the tool was scored to ensure qualitative studies were not unfairly penalised. For example, qualitative studies were not scored on appropriateness of statistics used and document analyses were not measured on attrition levels. The tool was felt to be acceptable for illustrative purposes for risk of bias within studies, as no studies were excluded based on risk.

Data extraction

Data extraction was completed using a data extraction form, presented in appendix 7. This form was constructed based on PECO criteria, and extracted the number of participants and key demographics, the study design, information about a control group if present, and study findings.

Synthesis

Two separate syntheses were carried out: a narrative synthesis of quantitative data and a thematic synthesis of qualitative data (Thomas & Harden, 2008). For the latter synthesis, results and discussion sections of qualitative studies were copied into separate documents, which were then uploaded into NVivo (QSR International) text analysis software. Themes were identified using line by line coding.

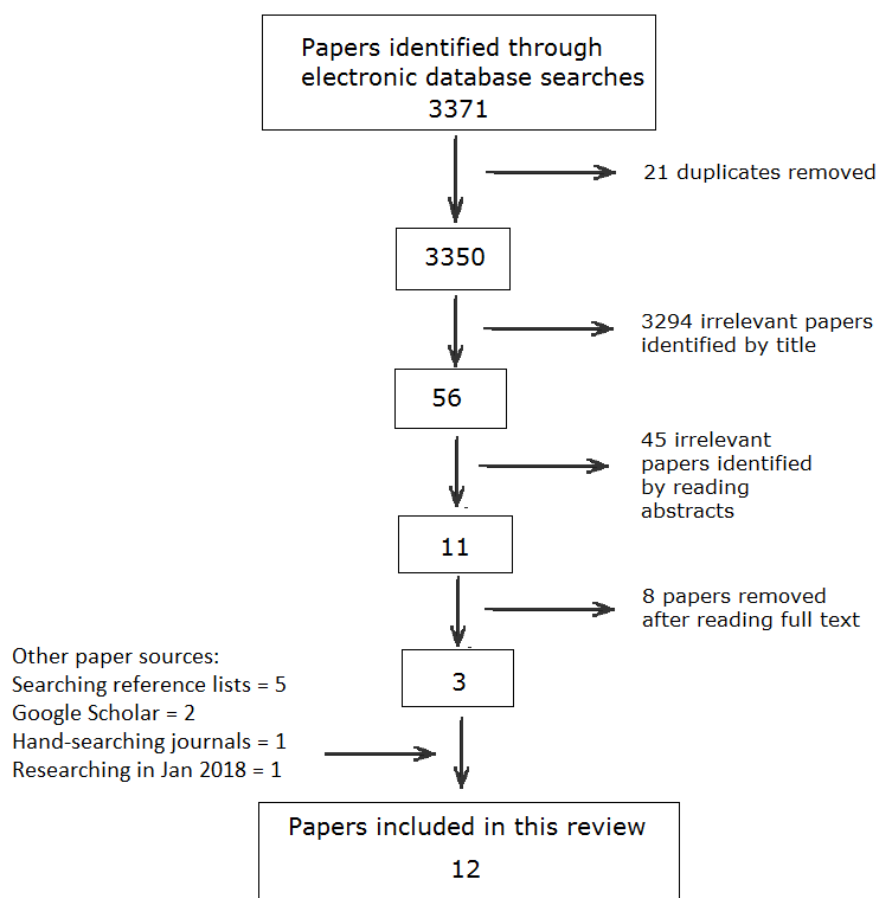
Results

Description of studies

The systematic search of databases resulted in 3371 references, which were imported into EndNote (Thomson Reuters). Twenty-one duplicates were identified and removed. Two foreign language articles were identified but translations of their titles in Google translate indicated that they were irrelevant, and 3294 other papers were deemed irrelevant based on their titles. Fifty-six

studies were identified as potentially relevant by title, which was reduced to 11 after reading abstracts. Three studies were included after reading the full text. Eight additional papers were identified: 5 obtained by scanning the reference lists of included papers; 1 obtained by hand-searching The International Journal of Cybercriminology; and 2 obtained by running a search on Google Scholar using search terms “online + romance + scam” and reviewing the first 100 results as an additional search. The Journal of Cyberpsychology, Behavior, and Social Networking was also hand-searched but no more relevant papers were identified. Authors of papers were contacted where necessary for additional information. A summary of the selection process can be seen in Figure 1.

Figure 1. Study selection process



Literature excluded after reading titles and abstracts was often related to other cybercrimes including phishing, viruses, and privacy breaches. Eight papers were removed after reading the full text. One paper (Whitty, 2013) was excluded for using the same data as another paper (Whitty, 2015a). Similarly, Rege (2013) appeared to present very similar data and conclusions to Rege's 2009 paper, and the earlier paper was reviewed due to containing more detail. Five papers (Cross, 2016; Sofarelli, Birich, & Hale, 2014; Sun, Shih, & Hwang, 2015; Whitty & Buchanan, 2012; Whitty & Buchanan, 2016) were excluded as they did not provide information on factors that contribute to ORS, and one paper (Whitty, 2015b) was excluded as it was impossible to differentiate between ORS and other scams.

Characteristics of included studies

Studies included 4 quantitative papers – 3 case-control studies and one observational study with no control. Eight qualitative papers were also included, which took information from dating site profile text, messages between scammers and victims, victim reports of their experiences, and assorted media. One study interviewed perpetrators. This review included 41 perpetrators and 959 victims of ORSs. Additionally, approximately 2000 documents and 43,355 scam dating site profiles were reviewed, and 1 ORS expert was interviewed. The characteristics of the included studies are provided in table 2.

Table 2. Characteristics of included studies

Study	Participants	Ages	Genders	Sexuality of victims	Comparison	Country	Design
Aransiola & Asindemade (2011)	40 scammers	50% 22-25 40% 26-29	38 (95%) Male 2 (5%) Female	N/A	None	Nigeria	Observational study with no control group, cross-sectional
Buchanan & Whitty (2014) Study 1	137 fooled victims	19-81, Mean = 47.71 SD = 10.02	59 (43.3%) Male 77 (56.2%) Female	93 (67.9%) Heterosexual 37 (27.0%) Homosexual 5 (0.36%) Bisexual	697 not fooled attempted victims	Primarily UK, 45 from other countries	Case-control
Study 2	331 victims	21-84 Mean = 51.8, SD = 9.9	87 (26.4%) Male 243 (73.3%) Female	325 (98.2%) Heterosexual 2 (0.01%) Homosexual 4 (0.01%) Bisexual	45 not fooled attempted victims	72.3% USA, 10.4% Canada, 4.8% UK, Other countries	Case-control

Garrett (2014)	110 victims	74% over 40	109 males 1 female	Not reported	None	World-wide (English- speaking)	Observational study with no control
Gregory & Nikiforova (2012)	1 victim	Not specified	1 male	Heterosexual (assumed)	Over 500 Nigerian other scam letters	Scams set in Nigeria and Russia	Case-control Qualitative – content and contextual analysis
Huang et al (2015)	43,318 “swindler” profiles	N/A	N/A	N/A	Legitimate dating site accounts	China	Case control document analysis Qualitative
Koon & Yoong (2013)	1 scammer 1 victim	Not reported	Female victim Male scammer	Heterosexual	None	Scammer: West Africa, Victim: Hong Kong	Case study Qualitative
Kopp et al (2015)	37 fake profiles	N/A	N/A	N/A	None	Not reported	Observational with no control, Document analysis, Qualitative
Kopp et al (2016)	17 victims	5x 30-40	4 males 13	Not reported	None	Not reported	Observational with no control,

		6x 40-50 6x 60-70	females				Qualitative
Rege (2009)	Approximately 2000 documents	N/A	N/A	Not reported	N/A	Not reported	Media analysis
Ross & Smith (2011)	42 victims	31% 35- 44	23 (54.5%) male 19 (45.6%) female	Not reported	78 victims of other scams, 82 non- victims	Victims – Australia Scammers - Nigeria	Case-control with 3 groups
Whitty (2015a) study 1	50 financial victims, 50 emotional victims	Not reported	Not reported	Not reported	None	Not reported	Observational study with no control Qualitative – thematic analysis
Study 2	20 victims	38-71	14 (70%) female 6 (30%) male	18 (90%) Heterosexual 2 (10%) Homosexual	None	19 UK, 1 USA	Observational study with no control Qualitative – thematic analysis

Study 3	1 ORS expert	N/A	N/A	N/A	None	Not reported	Expert opinion
							Qualitative
Whitty (2017)	200 victims	21% young 63% middle aged 16% older people	60% female, 40% male	Not reported	10,723 non-victims	UK	Case-control

Risk of bias within studies

Five studies (42%) were assessed for risk of bias by a second reviewer, and, after discussion of disagreements, a Cohen's Kappa score of 0.82 was obtained, indicating almost perfect agreement (Landis & Koch, 1997).

Three papers had a high risk of bias - at least 3 areas considered to have a strong risk of bias. The remaining 9 papers had a medium overall risk of bias, with at least one area with a strong risk of bias and/or 4 areas with a moderate risk of bias. Areas with risk of bias for each paper are shown in table 3. The area causing most risk was the study design, as most papers had no control group. Additionally, outcome measures often had a risk of bias as studies mainly used self-report methods that had not been assessed for validity or reliability. Although no *evidence* of bias was identified, a strong *risk* of bias was found in papers that recruited participants because no information on attrition was provided.

Participant selection often contributed to risk of bias. Most studies obtained samples from a single dating site (e.g. Huang et al, 2015). This is likely to create a systematic sampling bias, as different individuals may favour different websites. However, this source of participants reduced risk of bias from exposure, as participants or profiles were taken directly from dating sites. When control groups were used, they were comparable as they were taken from the same source as participants.

Appropriate statistics were used in two out of three quantitative papers, but it was felt that Garrett (2014) could have used analysis of variance where t-tests were used for variables with multiple levels. Further, much of Garrett's statistical interpretation is nonsensical, with impossible p values (e.g. $p = 1.2487$), and the term "significant" used inappropriately for any observable difference. Few studies made any attempt to control for confounds, statistically or otherwise.

Table 3. Risk of bias from included studies. Strong = bias is likely.

Study	Design	Selection	Comparability	Exposure	Outcome	Attrition	Statistics & controls	Overall risk (high, medium, low)
Aransiola & Asindemade (2011)	Strong	Moderate	Weak	Moderate	Strong	Strong	Moderate	High
Buchanan & Whitty (2014)								
Study 1	Weak	Moderate	Moderate	Moderate	Moderate	Strong	Moderate	Medium
Study 2	Weak	Strong	Moderate	Moderate	Moderate	Strong	Moderate	Medium
Garrett (2014)	Weak	Strong	Weak	Moderate	Strong	Strong	Moderate	Medium
Gregory & Nikiforova (2012)	Weak	Moderate	Strong	Weak	Moderate	Moderate	Moderate	Medium
Huang et al (2015)	Weak	Moderate	Moderate	Moderate	Strong	Moderate	Strong	Medium
Koon & Yoong (2013)	Strong	Moderate	Weak	Weak	Moderate	Moderate	Moderate	Medium

Kopp et al (2015)	Strong	Moderate	Weak	Moderate	Strong	Weak	Weak	Medium
Kopp et al (2016)	Strong	Moderate	Weak	Weak	Moderate	Weak	Moderate	Medium
Rege (2009)	Strong	Weak	Weak	Moderate	Moderate	Weak	Moderate	Medium
Ross & Smith (2011)	Weak	Strong	Strong	Weak	Strong	Strong	Weak	High
Whitty (2015a)								
Study 1	Strong	Moderate	Weak	Moderate	Strong	Strong	Moderate	High
Study 2	Strong	Moderate	Weak	Weak	Strong	Strong	Moderate	High
Study 3	Weak	Weak	Weak	Weak	Moderate	Strong	Moderate	High
Whitty (2017)	Weak	Moderate	Strong	Moderate	Moderate	Strong	Weak	Medium
Total papers with a strong risk	7	3	3	0	7	3	1	3

Note: “comparability” refers to risk of bias linked to the comparability of cases and controls. It was scored as “weak” risk when no control was used, as the presence of a control group is already scored in the “study design” section. It was therefore considered not applicable (N/A) so as not to double score this one risk element.

Papers with multiple studies are counted in totals of “strong” risk if even one study is counted as such.

Descriptive data synthesis of quantitative studies

Three studies provide quantitative data for characteristics of ORS victims, although there are few similarities in methods, variables, and findings. A summary of findings is included in table 4.

Table 4. Findings from quantitative papers

Study	Findings – victims	Non-significant factors
Buchanan & Whitty (2014)	• Hold romantic beliefs linked to idealization • Age (older = higher loss)	• Loneliness • Personality measures (openness to experience, conscientiousness, extraversion, agreeableness, neuroticism) • Sensation seeking • Sexuality
Garratt (2014)	• More likely from Australia, Norway, France, Sweden • Less likely from Italy, the Netherlands, Canada • Lonely • Use online dating	• Unaware of romance scams (n.s. trend) • Experience with other scams • Number of previous victimisations

	• Interested in international dating • Have less than 5 years' computer experience	• Relationship status • Age • Daily hours of internet use • Amount if IT training
Ross & Smith (2015)	• Age 45-54 • Low income compared to non-victims • Higher income than advance fee fraud victims • Spend longer on the internet daily • More contact with scammer than other victims • Higher depression rates than average • Altruistic (not statistically tested)	• Gender • Education • Employment status
Whitty (2017)	• Age (middle aged) • Gender – female • Highly educated • Impulsive/lack of self-	• Knowledge of cyber security • Lack of premeditation • Lack of perseverance

- | | |
|------------------------------|--------------------|
| control | • Locus of control |
| • Prone to sensation seeking | • Trust in others |
| • Score highly on addiction | (gullibility) |
| characteristics | • Greed |
| • Less kind | |
| • Less trustworthy | |
-

Age

Ross and Smith (2011) found that victims of ORSs were likely to be aged 45 to 54, with older and younger individuals more susceptible to other scams and those aged 35 to 44 less likely to be victimised at all (Likelihood ratio = 23.87, $p < .05$). This is likely to be similar to findings of Whitty (2017) that victims were “middle aged”, although no range is specified. Conversely, Buchanan & Whitty (2014) found that ages of victims and non-victims were similar, although age was found to correlate with the amount of money lost ($r = .22$, $p = .00$), suggesting older people are more vulnerable. Garrett (2014) found no link between mean amount of money lost and age ($t = 0.2164$, $p = 0.8404$).

Gender

Whitty (2017) found that a higher proportion of victims of online romance scams were female than male ($\beta = .736$, $Wald = 16.011$, $p < .001$). Gender was not considered as a variable in other studies, but reported demographic characteristics does not support this finding. Buchanan and Whitty (2014) found a slightly higher proportion of the scam victims were male (54.8%) than female. Ross and Smith (2011) also found a similar ratio – 59% of their online dating scam participants were male, whilst 53% of other scam victims were male. Garratt (2014) did not consider gender to be a useful predictor of who is vulnerable to scams, noting that Russian scams target male victims and that only one of the participants in this study was female.

Location

Garrett provides information on victim locations, although participants were required to speak English. Victimization rates were found to be highest (65 to 75%) for Australia, Norway, France, and Sweden. Lowest victimization rates (0 to 35%) were found in Italy, the Netherlands and Canada. Mean amounts lost showed a similar pattern. Garrett (2014) reports that participants who searched for international partners were likely to lose more than those who do not ($t = -3.5492, p = .0006$).

Financial vulnerability

Ross and Smith (2011) found that victims had lower incomes than non-victims, but higher incomes than victims of other advance-fee frauds. Garrett (2014) also states that higher monthly incomes are associated with a lower mean loss amount ($t = 0.2145, p = 1.2487$ (sic)). Despite the potential link to income, neither study found an association between victimization and employment status or level of education. Conversely, Witty (2017) found that higher educated people were more likely to fall victim to online romance scams ($\beta = .590, Wald = 55.486, p < .001$).

Psychological Characteristics

Buchanan and Whitty (2014), looks at ORS victims' scores on the Romantic Beliefs Scale (Sprecher & Metts, 1989). They found that having more romantic beliefs ($\chi^2 = 24.79, p < .0005$), particularly "idealization" ($\beta = .10, Wald =$

10.34, $p = .001$) was related to being victimised. Garratt (2014) finds that lonelier victims searching for a relationship lose more money ($t = -3.1664$, $p = 0.0020$), although Buchanan and Whitty (2014) found no link between victimisation and the UCLA loneliness scale (Russell, 1996). Ross and Smith (2011) state that depression rates are higher in victims of scams than the Australian average rate, but have not differentiated between scam types. Whitty (2017) looked at a range of additional psychological characteristics and found that people who were more impulsive ($\beta = .071$, $Wald = 21.647$, $p < .001$) and scored high in sensation seeking on the sensation seeking subscale of the UPPS (Urgency, Premeditation (lack of), Perseverance (lack of), Sensation Seeking) Impulsivity Scale (Whiteside & Lynham, 2001; $\beta = .089$, $Wald = 50.374$, $p < .001$) were more likely to be victims. This is contrary to findings of Buchanan and Whitty (2014), who did not find a link between sensation seeking and victimisation using the Brief Sensation Seeking Scale (Hoyle, Stephenson, Palmgreen, Lorch & Donohew, 2002). Whitty (2017) also found that victims were likely to be less kind ($\beta = -0.043$, $Wald = 7.301$, $p < .01$) and trustworthy ($\beta = -0.512$, $Wald = 5.908$, $p = .05$). Victims were also more likely than non-victims to score high on addiction characteristics ($\beta = .170$, $Wald = 47.489$, $p < .001$).

Experience

Garrett (2014) found people with fewer than 5 years of experience using computers lost more money than those with more experience ($t = 2.0552$, $p = 0.0423$). Ross and Smith (2011) found that victims spent longer on the internet than the Australian average, but Garrett (2014) found that hours of daily internet use was unrelated to amount lost ($t = 1.1882$, $p = 0.2374$). Amount of

IT training ($t = 1.2179$, $p = 0.2259$), and awareness of ORS ($t = 1.8767$, $p = 0.0633$), were also unrelated to amount lost. In addition, Whitty (2017) found no link between knowledge of cybersecurity and victimisation ($\beta = .042$, $Wald = 0.198$, $p = \text{n.s.}$).

Thematic synthesis of qualitative studies

Eight studies provided qualitative data. Overall, 2 themes described victim characteristics and 10 themes described scammer techniques. A summary of themes found in each paper is shown in table 5.

Table 5. Themes identified in each qualitative study

Study	Victims	Scammer techniques
Aransiola & Asindemade (2011)		Attractiveness
		Collaboration
		Long distance
		Volume of contact
Gregory & Nikiforova (2012)	Needs and insecurities	Believability
	Traditional beliefs	Good character
		Similarity
		Attractiveness
		Gender stereotypes
		Long distance

		Volume of contact
		Needing help
		Special relationship
Huang et al (2015)	Needs and insecurities	Attractiveness
	Traditional beliefs	Gender stereotypes
		Collaboration
		Long distance
		Volume of contact
		Needing help
Kopp et al (2015)		Believability
		Good character
		Attractiveness
		Gender stereotypes
		Long distance
		Needing help
Kopp et al (2016)	Needs and insecurities	Believability
	Traditional beliefs	Good Character
		Similarity
		Attractiveness
		Gender stereotypes
		Numerous requests

		Needing help
Koon & Yoong (2011)	Needs and insecurities	Believability
	Traditional beliefs	Good character
		Similarity
		Gender stereotypes
		Collaboration
		Long distance
		Volume of contact
		Needing help
		Special relationship
Rege (2009)	Needs and insecurities	Believability
	Traditional beliefs	Good character
		Tangible evidence
		Attractiveness
		Gender stereotypes
		Collaboration
		Long distance
		Numerous requests
		Volume of contact
		Needing help
		Special relationship

Whitty (2015a)	Needs and insecurities	Believability
		Good character
		Tangible evidence
		Similarity
		Attractiveness
		Gender stereotypes
		Collaboration
		Long distance
		Numerous requests
		Volume of contact
		Needing help
		Special relationship

Victim Themes (N = 2)

Needs and insecurities (7 studies)

Social, emotional, and financial needs affect victimisation (Gregory and Nikiforova, 2012). Victims are often thought to have little social support (Koon & Yoong, 2011) and poor quality past relationships (Gregory & Nikiforova, 2012; Kopp et al, 2016). Male victims' insecurities relate to not being rich or handsome enough to find a partner (Gregory & Nikiforova, 2012). The influence of victims' overwhelming need for love can also cause re-victimisation, where victims return to the scammer despite learning of the scam (Kopp et al, 2016, Rege, 2009, Whitty, 2015a).

Traditional beliefs (5 studies)

Victims who hold traditional beliefs are more likely to be victimised, which potentially links to age. This includes beliefs about what a family "should" look like (Gregory & Nikiforova, 2012) and traditional views about gender roles. Women who fit the stereotype of wanting to be looked after, and men who want to save a damsel in distress are more easily victimised. In addition, the mothering instinct may be important in female victims, who wish to help their potential partner when things go wrong (Gregory & Nikiforova, 2012). Traditional religious views also appear important, not just because of the general good nature implied by religious principles but also the guilt associated with failing to act morally. Kopp et al (2016) describes how victims feel it is worse to

not help in a real emergency than to lose money to a potential scam, so will still send money even if they suspect a scam.

Scammer Themes (N = 10)

Believability (6 studies)

It is unsurprising that scammers use strategies to make ORSs believable.

Believability is established in 2 ways: presenting a good character, and tangible evidence.

- *Good character – (6 studies)* - Koon and Yoong (2011) observed the use of keywords implying a good character, such as “honest” and “credible”. The use of religious keywords is also thought to suggest the good character of the scammer (Koon & Yoong, 2011; Kopp et al, 2016). Another way of suggesting credibility is to describe the persona as being highly educated, in a respectable job, and as having a well-to-do family (Whitty, 2015a; Koon & Yoong, 2011). This job may explain their need to travel (Rege, 2009).
- *Tangible evidence – (2 studies)* - Scammers may provide evidence to make the story believable. This can be copies of altered passports and visas, fake government documentation (Rege, 2009), boarding passes, and fake letter heads, or even gold bullion as proof of money (Whitty, 2015a). Whitty notes that even if these forgeries are poorly thought out, such as a Nigerian Airlines boarding pass to fly from Iraq to Amsterdam, people often still fall for the scam.

Similarity (4 studies)

Scammers portray themselves as similar to their victims. This can be in their history and experiences to increase empathy (Gregory & Nikiforova, 2012; Kopp et al, 2016), or their interests, to increase liking and approachability (Gregory & Nikiforova, 2012; Koon & Yoong, 2011; Whitty, 2015).

Attractiveness (7 studies)

Scammers use incredibly attractive pictures often taken from models (Gregory & Nikiforova, 2012; Rege, 2009) in fake personas. This is mainly in respect to female and homosexual male personas but heterosexual males are usually also described as attractive (Whitty, 2015a).

Gender stereotypes (7 studies)

Personas seem to be presented in line with gender stereotypes, with suggestions that scammers use neurological differences between the genders to target scams (Gregory & Nikiforova, 2012). Fake females are often involved in fashion (Gregory & Nikiforova, 2012), and are likely to be portrayed as poor or unfortunate – in need of saving, with occupations such as nurse or student. Fake males, on the other hand, are portrayed as breadwinners who are financially successful, and often in uniform. Additionally, some non-stereotypical features appear to be used to make the personas desirable to the opposite sex. For example, men are described as more emotional than might be expected, with an

interest in “romantic dancing”, and fake females have expressed interests in “motor sports or soccer” (Kopp, 2015).

Collaboration (5 studies)

Scammers often have a local and international network (Aransiola & Asindemade, 2011), although Huang et al (2015) suggest each scam account is used by a small group of scammers rather than a sprawling network. Scammers are recruited based on their skills (Rege, 2009), which include typing, hacking, social skills and English proficiency. Further, women are important collaborators to interact in phone calls (Aransiola & Asindemade, 2011), or play the role of the fake persona’s mother (Koon & Yoong, 2011).

Professional accomplices add unique abilities and assets: bank officials help clear money and postal agents help clear items. Police officers help prevent detection (Aransiola & Asindemade, 2011), or continue the scam by suggesting a fee is needed to return the money (Rege, 2009). They may provide other evidence, such as doctors confirming the need for medical fees (Whitty, 2015a). Trained psychologists also collaborate to help “psychologically trap” victims (Rege, 2009). Additionally, Aransiola and Asindemade (2011) list the traditional priest as a collaborator, as scammers self-report the use of voodoo with as much certainty as they report the assistance of police.

Long distance (7 studies)

An important aspect of ORSs is that they occur in long distance relationships. Scammers discussed in these studies are often West African (Aransiola & Asindemade, 2011; Rege, 2009; Kopp et al, 2015; Whitty, 2015a; Gregory & Nikiforova, 2012), or Russian (Gregory & Nikiforova, 2012) but have taken on a Western/white identity (Koon & Yoong, 2011; Aransiola & Asindemade, 2011) and interact with Western victims. As well as providing an excuse for victims not to meet their online partner, distance can benefit the scammer by making the scam harder to investigate due to lack of international collaboration (Rege, 2009).

Numerous requests (4 studies)

Romance scams often consist of multiple requests for money. The scammer may start out by asking for small amounts to see if their victim is receptive to the idea of sending money, and then increase their requests (Kopp et al, 2016; Whitty, 2015a). This is known as the foot-in-the-door technique (Freedman & Fraser, 1966). These requests may escalate because the crisis has intensified (Rege, 2009), or a new crisis occurs. Alternatively, the initial request may have been extreme then reduced to make the victim more likely to comply (Whitty, 2015a) – the door-in-the-face technique (Cialdini et al, 1975). Later, another request may be made from an authority figure claiming to be helping the victim (Rege, 2009), or from the scammer claiming to have genuinely fallen in love during the scam process and now wishing to meet their victim (Whitty, 2015a).

Volume of contact (6 studies)

Scammers send out large numbers of messages, and usually make first contact with many potential victims – often over 100 (Aransiola & Asindemade, 2011; Huang et al, 2015; Rege, 2009). Normal dating site users do not send out this volume of messages (Huang et al, 2015). Further, ORS occur over long time periods, with hundreds of messages to each individual victim as it takes time to gain trust (Whitty, 2015a; Huang et al, 2015; Rege, 2009). The regular contact may make it harder for victims to end the relationship (Whitty, 2015a). This conversation may also move away from the dating site to another source to create intimacy or make the scammer harder to track (Whitty, 2015a; Rege, 2009; Aransiola & Asindemade, 2011; Koon & Yoong, 2013; Huang et al, 2015). Video-chat may be encouraged by the scammer, who may record sexual video messages sent by the victim to use as blackmail if requests are refused (Rege, 2009).

Needing help (7 studies)

Scammers often describe recent misfortunes such as divorce or loss from the first message (Gregory & Nikiforova, 2012; Koon & Yoong, 2011; Kopp et al, 2015). This may be to suggest the scammer is empathetic to the victim with similar experiences, which is linked to victim insecurities. Alternatively, it could be to encourage sympathy from the victim, especially male victims asked to save damsels in distress (Gregory & Nikiforova, 2012; Kopp et al, 2016). An unfortunate situation is then used as the basis for financial requests. This may be general financial issues preventing the persona from buying an airplane

ticket, or a new crisis which requires funds to solve – such as a medical bill. This crisis is often urgent, so victims do not have time to logically assess the decision before sending funds (Koon & Yoong, 2011; Kopp et al, 2016; Rege, 2009; Whitty, 2015a).

Special relationship (4 studies)

Scammers attempt to make victims feel special to exploit their insecurities. Fake female personas are described as emphasising their own beauty to show male victims how lucky they are to have her (Gregory & Nikiforova, 2012). Equally, female victims are made to believe they are lucky to have found an ideal partner who can provide for them (Koon & Yoong, 2011). Scammers create intimacy early in the relationship, expressing love and disclosing intimate details (Whitty, 2015a). The idea appears to be to make the relationship seem perfect so the victim will not risk losing it. Scammers then emotionally blackmail victims who do not send money immediately, citing the importance of the relationship (Rege, 2009).

Discussion

This review aimed to look at factors that make ORSs successful. It was found that victims are more likely to hold romantic beliefs or have insecurities, be inexperienced with computers, be happy to engage in international relationships, hold traditional beliefs, and be middle-aged. They may also be impulsive and prone to sensation seeking, and score highly on measures of addiction characteristics. Although counter-intuitive, there is some evidence to suggest

victims may be more highly educated, less kind, and less trustworthy than non-victims (Whitty, 2017). Both genders may be victimised, as well as people of hetero- or homosexual orientation – although one study indicated that females were more likely to be victims (Whitty, 2017). Techniques used by scammers were also considered. This includes presenting themselves as having a good character, providing tangible evidence, and collaborating with officials to increase the apparent legitimacy of the scam. Scammers often function in groups, and send out vast numbers of messages to many people over time. Scammers tend to operate internationally, which provides an important excuse not to meet their online communication partner face to face, and makes it harder for them to be tracked down by authorities. An attractive photo is paramount, whilst compatibility and similarity with the victim are also included in personas. Finally, the persona will emphasise how their relationship with the victim is special, and that they need the victim's help.

The findings are generally consistent with known statistics on ORSs - 62% of victims are aged between 40 and 69 (ActionFraud, 2016). Literature on other scams also supports the findings of this review. This includes the use of "visceral appeals" to emotional insecurities (Button, Nicholls, Kerr & Owen, 2014), which are likely to be particularly damaging in ORSs as an additional emotional trauma occurs with loss of a relationship (Whitty & Buchanan, 2015). Further, Button et al (2014) suggest that distance is important, not only as an excuse for scammers and victims not to meet and making scammers harder to catch but also because this contributes to scammers feeling less empathy for victims. Literature on persuasion and compliance also backs up many of the findings in the current review. This includes the use of authority/status, and similarity

between the victim and scam persona (Modic & Lea, 2013), as well as the use of a time-limited crisis narrative and the foot-in-the-door technique (Lea, Fischer, & Evans, 2009).

However, there are also factors of ORSs that are inconsistent with findings for other scams. This includes introversion (Modic & Lea, 2012), which was not found by Buchanan & Whitty (2014). There are mixed findings for the role of low self-control (Modic & Lea, 2013; Holtfreter, Reisig, Piquero, & Piquero, 2010), as this finding was not supported by Buchanan and Whitty (2014) but was seen in the later study (Whitty, 2017). Furnell (2005) found greed to be important in advance-fee fraud, whereas Whitty (2017) found it was not present in victims of ORSs.. Another factor found relevant to other scams, agreeableness (Modic & Lea, 2012), was found to be non-significant with ORSs (Buchanan & Whitty, 2014), and the related characteristic of "kindness" was negatively associated with victimisation (Whitty, 2017). Additionally, other scams ensure only likely victims respond by making a barely believable story that only certain people would fall for (Huang et al, 2015). Online romance scams do not do this, as they create a fictional relationship that takes similar directions as real relationships. The reasons for these differences appear to be due to the relationship narrative of the romance scam, which is not present in other scams. For example, Whitty (2017) suggests that kindness may not be related to ORSs as the romance scammers encourage victims to push loved ones away and focus on the fictitious relationship, so it may be that their ratings of kindness dropped during the scam process. Further, greed may be unimportant in ORSs as the gain of a romantic partner – a goal not available through other scams - may be more desirable than money.

The findings of this review can be split into victim and technique factors, but should not be thought of in isolation. Cross and Kelly (2016) emphasise the importance of targeting a particular pitch to a particular set of vulnerabilities in order to complete a successful online scam and ORSs seem to be no exception. It is likely that ORSs are only successful when victim characteristics and scammer techniques match up. Important pairings of victim characteristics and scammer techniques can be seen in table 6. Sometimes there is a clear direction, with specific victims being more vulnerable to scams: an openness to long distance relationships is important for the scam to succeed, as it could not be tailored to those who are not due to the impossibility of meeting. Conversely, it is hard to determine whether some aspects started as part of a scam and attracted certain victims, or whether victims had characteristics that influenced scammers to adopt certain techniques. For example, scammers may have started using religious keywords because susceptible victims were often religious, or religious victims may only have been more susceptible because of how the scammers indicated trustworthiness.

Table 6. Corresponding victim characteristics and scammer techniques

Victim characteristics	Scammer techniques
Emotional insecurities	High volume of contact making victims find it harder to cut contact
Addiction characteristics	
Loneliness	Using key words to describe how the relationship is special and the victim is lucky to have it
Traditional religious values	Use of religious keywords, emphasis on

	how God supports the relationship
Stereotypically female traditional values	High status male persona with an important job, able to be the breadwinner
	Previous or current unfortunate circumstances, allowing the victim to take on a nurturing role
Stereotypically male traditional values	Female persona with a low income, allowing the victim to support them.
	Current unfortunate circumstances which suggest the victim needs to save them
Openness to international dating	Persona lives or works abroad
Middle Age	Target older people with financial resources who have limited
Lack of computer experience	computer/internet experience/knowledge
Impulsive	Crisis narrative resulting in little time to think about decision to send money

Risk of bias

When considering implications of the findings of this review, risk of bias should be considered. Such assessment for qualitative data has been controversial, but is useful to comment on when considering reliability. Overall, the risk of bias in the studies was high, suggesting unreliable conclusions. This was due to a lack of controls, sampling from single sources, and unclear information being provided. Deevy et al (2012) suggest that the most important research topic for scam victimisation is not the victim profile per-se, but how the victims differ from the typical population exposed to the scam. The current literature lacks

control groups of online daters who have not been scammed, and therefore this review has been unable to make this distinction.

In terms of methodology, studies were heterogeneous with little direct comparison between outcome measures. This adds doubt into interpretations of their results. For example, when looking at victim characteristics, Buchanan and Whitty (2014) used scores on validated tests, Garrett (2014), and Ross and Smith (2011) measured demographic factors, Whitty (2015a) interviewed victims, and others made assumptions on victims by reading their messages or reports (e.g. Gregory & Nikiforova, 2012; Koon & Yoong, 2013).

Another problem with the interpretation of some of these studies results from the lack of stringent sample criteria. To thoroughly assess all factors linked to online dating, Ross and Smith (2011) were included despite their samples containing people who were scammed by means other than ORSs. It was hard to differentiate between groups in this study at times.

Finally, it should be noted that the influence of Professor Monica Whitty is likely to be strong. Professor Whitty was directly involved in the writing of three of the included papers, and was referenced in five more. For example, Kopp et al (2015) make many inferences from the work of Professor Whitty, and it is sometimes unclear what is a finding by Kopp et al (2015) and what is an inference. This may inadvertently lead to a bias towards her opinions in the literature.

Limitations of the current review

Online romance scams are a fairly new crime and research area. As such, keywords for this topic are not well defined and although the search process was systematic, some studies could have been missed. Thomas and Harden (2008) suggest it is not imperative to find all relevant studies when analysing qualitative data, but merely to reach “conceptual saturation”. This review discovered many important factors in the success of ORSs, and these can still be used to inform and prevent victimisation.

Khan & Chaudhry (2015) suggest that finding a mate, courtship, and dating have evolved in part with human and primate evolution. Therefore, it could be argued that emotional vulnerability would show similar characteristics across cultures, as has been shown for emotional attachment patterns (Bowlby, 1969). The studies in this review covered a variety of countries and the ORS as described here were present in a variety of cultures, so it is likely to be generalisable to many online daters. Deevy et al (2012) found that race has no apparent impact on scam victimisation, although surveys (Anderson, 2004; Anderson, 2007) have found that African Americans, Native Americans, and Hispanics were more likely to be victimised. The external validity of reviewed studies is high, as all studies looked at real victims, scammers, or profiles. However, the results may not generalise to all online daters, as participants were limited mainly to heterosexual relationships.

Future directions and recommendations

ActionFraud, a UK agency for reporting frauds, has made attempts to educate people about signs of ORSs. They have highlighted several factors found to be important in this review, including the use of attractive pictures, and a fake persona needing help. However, there are other findings from the current review which could be amalgamated into this advice for a more thorough overview of what to look out for. This includes being wary of individuals who live or work in another country, and who make excuses not to meet in person. Contradictory to ActionFraud's advice, people should not identify scammers as those who do not disclose personal information, as scammers are thought to disclose pseudo-personal information (Koon & Yoong, 2011). They may disclose difficult or broken past relationships for empathy with a victim who may have had similar experiences, or else disclose other information that may then link to the reason they ask for funds. Less useful risk factors are middle age and keeping in contact regularly, as these are common characteristics of legitimate daters.

Cross and Kelly (2016) discuss current preventative messages for a variety of frauds and suggest that education on specific scam types does not help victims avoid other scams. So, for example, information about investment fraud does not help victims of ORSs. This means that information about ORSs would be best provided by online dating sites to target relevant populations. Indeed, some well-established online dating pay sites (e.g. Match.com) give specific web-page advice and warning signs to their 'customers' on how to avoid adverse experiences while online dating. This information is partly based on the complaints they have received from 'customers'. However, details of complaints received by commercial dating sites are rarely published or made public.

As well as the practical implications for education, this review highlights areas for future research. It is recommended that more quantitative case-control studies are carried out to statistically assess the impact of ORS risk factors. An implication highlighted from the current research literature is the lack of studies involving homosexual victimisation for ORSs. However, Whitty (2015a) notes that photos on fake homosexual male personas are often model-quality, akin to the photo choices for heterosexual females to attract males. Religious beliefs may also be less relevant in homosexual online daters, as it is linked to homophobia (Harbaugh & Lindsey, 2015). Additionally, there is no research whatsoever on ORSs in transgender individuals at present.

Conclusions

Overall, this review has made important progress in identifying and summarising factors that allow ORSs to be successful. This information can be used to identify the most likely victims and educate people in what scam techniques to look out for. It appears that those who are most likely to be victims are middle-aged with traditional beliefs, emotional insecurities, and a lack of computer experience. This may be particularly relevant for those who are widowed or divorced, and feel a sense of empathy with the scammer's described unfortunate circumstances. These individuals could be targeted for intervention by online dating sites, who would be privy to this type of information about their clients and thus determine who is the most vulnerable. Finally, more research should be conducted in this area to consider statistical significance of ORS risk factors as well as victimisation in other groups such as homosexual daters.

This review has located and collated a reasonable amount of data on ORSs, which can be utilised in detection and prevention of such crimes. However, no information is currently available regarding crimes related to online dating that occur when this contact moves from online to offline. Chapters three and four of this thesis start to investigate these face to face crimes to inform and guide prevention efforts of verbal, physical, and sexual assaults linked to online dating. Chapter three presents a broad empirical study on prediction of crimes related to online dating, followed by a case study exploring victim experiences of sexual assault as a result of online dating in chapter four.

Chapter Three - Online dating and victimisation: Can adverse experiences be predicted from message content?

Abstract

Background: Online dating has been linked to adverse experiences such as sexual and physical assaults. Online daters often have little information about their online communication partner besides the content of their online messages. This study investigated whether adverse online dating experiences can be predicted from message content.

Methodology: A sample of 754 online daters fully completed an online questionnaire (69% of participants), which asked about their experiences.

Results: On-line dating scams were experienced by 12% of females and 22% of males. Crime related negative experiences on the last face to face meeting were reported by 11% of females and 3% of males, with 46% and 35% claiming such experiences in the past. For female respondents, on-line messages that contain sexual, pressuring, arrogant and self-deprecating content significantly predicted date victimisation. Participants who gave the reason for meeting as having “nothing better to do” were also more likely to have negative experiences.

Conclusions: Online daters should be aware of aspects of message content that predict adverse experiences so they can take appropriate precautions when deciding to meet online communication partners face to face. Online dating sites could play an important role in providing this information to their service users.

KEYWORDS: online dating, adverse experiences, gender differences, dating violence, prevalence of victimisation.

Introduction

Online dating experiences

Online dating has become commonplace in today's society with over 1400 online dating sites in the UK alone (Telegraph Reporters, 2 December 2014). Twenty-three percent of internet users say they have spoken to someone new online (Dutton & Helsper, 2007), and about half went on to meet in person. This number is likely to have increased as online dating popularity has grown and the stigma surrounding it has fallen (Smith & Duggan, 2013). However, as online dating increases, so does the crime rate associated with it (Telegraph, 16 March 2016), with online dating sites being thought to contribute to a 700% increase in crime over the last two years (Readhead, 2016). This is particularly relevant to sexual assaults (National Crime Agency, 2016). Crimes associated with online dating include fraud, which is reported to have led to a cumulative loss of more than £21,000,000 in the UK from January-October 2015 from a reported 2858

separate incidents (BBC, 27 November 2015). Alternatively, crimes can occur at the point of the face to face meeting. These include rape (BBC, 7 February 2016; BBC, 10 August 2015), murder (Vonow, 2016; Crossley, 2015; BBC, 24 February 2015), and kidnap (Newton, 2016). The occurrence of such crimes has caused anger amongst online daters, and it has been suggested that online dating sites should do more to protect their users (Finnigan 2016; Telegraph, 24 August 2011). However, the important consideration is not the anger aimed at dating sites but the crimes associated with on online dating.

Research demonstrates that online daters are concerned about what their partner will be like face to face when they meet (Donn & Sherman, 2002), with fears of both sexual and physical harm (Couch, Liamputtong & Pitts, 2012; Corierro & Tong, 2015). Further, 43% of online daters acknowledge that it “involves risk” (Madden & Lenhart, 2006). There is little research on occurrences of such experiences, but Smith & Duggan (2013) report 28% of online daters have been “contacted by someone through an online dating site or app in a way that made them feel harassed or uncomfortable”. If only women are included this figure reaches 42%, suggesting a gender difference in the rate of adverse online dating experiences. This gender difference is supported by figures for sexual assaults related to online dating in the UK in 2014/15, where 85% of victims were female (National Crime Agency, 2016). Prevalence rates of adverse experiences are not readily available but 184 people reported being the victim of a sexual assault on their first date out of approximately 7 million UK online daters (0.003%) in 2014. This figure only considers one offence type, and is likely to be under-representative even of sexual assaults. These rates of adverse experiences suggest that measures need to be taken to reduce this risk.

Adverse experience minimisation

Attempts have been made to educate people on ways avoid adverse dating experiences, with advice such as “tell a friend where you are going” and “meet in a public place (The Online Dating Association, 2016). However, once the meeting has begun, people are already at risk of immediate danger. It would therefore be beneficial if adverse face to face experiences could be anticipated before people reached the meeting stage, which may be possible with uncertainty reduction strategies (Gibbs, Ellison & Lai, 2011).

Online daters use uncertainty reduction strategies prior to meeting as attempts to predict how their online communication partner (OCP) will present, and to decrease their own discomfort. This is due to the high prevalence of lies used by online daters. For example, Whitty (2008) found that 51% of online daters admitted to using deception. This was primarily in the areas of looks (26.7%), and relationships (10%). The prevalence of deception carried out by online daters may be even higher, with Toma, Hancock, & Ellison (2008), finding that 81% of online daters provided information different to their observed characteristics. More detailed analysis suggests that 59.7% lied about their weight, 48.1% lied about their height, and 18.1% lied about their age.

Techniques can include “information seeking”, where individuals ask their OCP questions, and “warranting” (Walther & Parks, 2002) – using third party information such as Google searches. Individuals primarily report using USRs to detect deception, but they may also prove to be useful in anticipating risk if

uncertainty reduction strategies lead to relevant discoveries or evidence of deceit. However, other factors come into play when individuals decide whether to meet, and precautions may be undermined by factors such as the attractiveness halo effect (Feingold, 1992). For example, Bak (2010) found that more attractive people are viewed more positively in online dating, so these people may not be considered such a risk, resulting in no uncertainty reduction strategies being considered necessary. Furthermore, Watkins & Boon (2016) found that people perceive their own partner as less likely to be unfaithful than the average person, which may link to an analogous belief that an individual's own OCP is less likely to be abusive than the average online dater and certainly less than those portrayed in the media, resulting in a lower perceived need to take precautions.

Additionally, even if uncertainty reduction strategies were to be used, they require information being available. Some people may not be forthcoming with information, or be easily searchable. Prior to face to face meetings, the only useful information people are guaranteed to have is message content, but many people misrepresent themselves in their profiles and may also misrepresent themselves in these messages (Whitty, 2008; Toma et al, 2008). Some research has considered message content, but in the context of predicting success rather than risk (Sharabi, 2015; Gibbs et al, 2011). Furthermore, Khan & Chaudry found that people are more likely to meet their OCP if there is a transition from online messaging to face to face meetings fairly quickly, suggesting that even if individuals use message content to screen for risk, they may have a limited amount of time and message content to do so. Those who offend sexually through online dating are more likely to use coercion and persuasion to

encourage early face to face meetings (National Crime Agency, 2016), indicating that these early meetings may be riskier if message content contains coercion and pressure to meet.

Common sense inferences would dictate that people do not meet those who are coercive or hostile in their message content. If this is the case, then more subtle aspects of message content would need to be considered for risk predicting potential. However, people may still be happy to meet with hostile communicators, as the online disinhibition effect (Suler, 2004) suggests people behave in worse ways online than they would in real life (e.g. swearing, sex references, ridicule). Hence, hostile people may not be seen as a risk. Whether people choose to meet individuals who message hostile and aversive content should be explored.

Adverse experience vulnerability

In addition to the potential for gender differences, some groups may be more vulnerable to adverse dating experiences than others. There is little literature focussing on this but comparisons can be made with literature on dating violence victimology. Factors found to affect this include depression (Foshee, Benefield, Ennett, Bauman & Suchindran, 2004), alcohol and substance use (Foshee et al, 2004; Champion, Foley, Durant, Hensberry, Altman & Wolfson, 2004), and Autism Spectrum Disorder (ASD; Brown-Lavoie, Viecili & Weiss, 2014). Those with ASD may put themselves more at risk, as ASD online daters are reported to

be more impulsive and meet someone as soon as possible, using 'gut instinct' (Roth & Gillis, 2015). Impulsivity is also a characteristic of borderline personality disorder (Lieb, Sanarini, Schmahl, Linehan & Bahus, 2004) and bipolar disorder (Swann, Pazzaglie, Nicholls, Dougherty & Moeller, 2003) in particular. Other character traits may increase risk of adverse experiences, including people with poor social skills and social anxiety (Stevens & Morris, 2007).

Research aims and hypotheses

For the first time, this research study aims to:

- a) Provide an empirical view of the difference in dating experience between males and females.
- b) Consider the use and utility of online dating precautions.
- c) Establish if there is a link between message content and adverse experiences during face to face meetings.
- d) Determine if people with mental health problems, personality disorders, substance misuse or developmental disorders are more likely to have adverse online dating experiences.

This study tests the following hypotheses:

- H1. Males will have fewer adverse online dating experiences than females.
- H2. Message content will be associated with an individual's decision to attend a face to face meeting.
- H3. Individuals with more experience with online dating will have fewer adverse experiences with the last person they met face to face.
- H4. Individuals who use other uncertainty reduction strategies including "Googling" and using video messaging prior to meeting will have fewer adverse experiences with the last person they met face to face.
- H5. Message content will be associated with the outcome of the meeting with the last person they met face to face.
- H6. Individuals with mental health problems, personality disorders, developmental disorders and substance abuse problems will be more likely to have an aversive date experience with the last person they met face to face than individuals without such problems.

Method

Participants

Participants aged over 16 were recruited by posting the study link on a variety of websites frequented by young adults, as this group are the primary users of online dating sites (Smith & Anderson, 2016). The Study link webpage was clicked 5957 times, including multiple visits and ineligible hits. From these hits, 1095 (18.4%) participants attempted to fill in the questionnaire online. A sample of 754 (69% of participants) completed the questionnaire in full.

Reasons for the 31% (n=341) drop-out were not collected, but two individuals reported that they had not realised they needed to have met someone face to face until reaching questions on this, and it is theorised that many others dropped out for the same reason as 234 individuals (68.6% of drop outs) stopped responding whilst completing sections asking about their last face to face date. Other drop outs denied searching for anyone using online dating or used multiplayer online games rather than traditional dating sites, which may have had different conversation dynamics. Three people were excluded as their answers strongly appeared to be joke responses. The sample of 754 respondents who fully completed the questionnaire were recruited from Facebook (41.6%), Reddit (24.1%), LinkedIn (7.8%), Twitter (6.7%), Tumblr (4.6%) and other links (15.1%). Dating sites (Match.com, E-harmony, OKCupid) refused to help recruit participants.

Respondents were 31.4% male, 65.0% female and 3.6% did not indicate a gender. Nearly, two-thirds indicated they were heterosexual (65.1%) and just over a third (34.9%) identified with other sexualities. With regard to age 37.8% were emerging adults (aged 16 to 25 years), 54.9% were young adults aged 26 to 45 years), and 7.3% were aged 46 or over. The demographic characteristics of drop outs (N=341), who only partially completed the questionnaire, showed no significant differences and very similar relative proportions to those included in the final sample (N=754). Hence the drop outs were not thought to have skewed results.

Materials

An online questionnaire was created using Bristol Online Surveys (www.onlinesurveys.ac.uk). This tool collected demographic information and whether participants self-reported any kind of disorder when asked if they had a mental health problem, personality disorder, substance abuse problem, developmental disorder, or disability. It then asked about online dating history including experiences, 'uncertainty reduction strategies', message content and details about the last face to face date. Questions were dichotomous yes/no answers or multiple-choice answers with the option to select multiple options. Spaces for elaboration on answers was also provided. This questionnaire can be seen in full in appendix 8.

Procedures

A link to the online questionnaire was distributed. This took participants to an information page with a summary of the study, the ethics approval, and the inclusion criteria (appendix 9) then to a consent form (appendix 10). Consenting participants were directed to the questionnaire. Finally, participants were directed to a debrief page containing information about the study and contact details for the primary researcher, supervisor, and ethics committee (appendix 11).

Ethical considerations

This study was approved by the Faculty of Medicine and Health Sciences Research Ethics Committee at the University of Nottingham. The information sheet warned participants that they would be asked about their online dating experiences and contained advice on what to do if participants felt distressed by any questions, including talking to their GP and helplines.

Statistical analysis

Statistical analyses were conducted using the IBM Statistical Package for Social Sciences (SPSS), Version 23. Chi-square analysis was used to identify variables that saw significantly different rates of negative and non-negative dating experiences from the expected rates. Fisher's exact test was reported instead

when expected counts in one or more cells was less than 5. Bonferroni corrections were used to allow for family-wise error due to the large number of Chi-squares performed. Bivariate logistic regression was used to examine whether variables identified using Chi-square formed a model that was able to significantly predict adverse face to face experiences.

Results

H1 predicted that males and females would have different dating experiences. The sample consisted of 237 (31.4%) males, 490 (65%) females and 27 (3.6%) people who do not identify with binary (male/female) genders. The following analysis is carried out on males and females only ($n=727$) due to the small number of non-binary participants.

With regards to all dating experiences, chi-square analysis suggested that significantly more males (21.9%) and fewer females (11.9%) experienced an attempted online dating romance scam ($X^2(1, N=725) = 12.533, p < .05$), but Fisher's exact test on those who lost money (0.8% of males, 0.4% of females) was not significant ($X^2(1, N = 713) = .548, p = n.s.$). For all past face to face experiences, Chi-square analysis suggested that significantly fewer men (34.9%) and more women (45.7%) had ever had a forensically related adverse/negative experience involving verbal or physical aggression or sexual harassment or assault during a face to face meeting with an online communication partner ($X^2(1, N = 713) = 7.517, p < .05$).

In order to look at factors predicting adverse dating experiences, participants were asked about their last face to face meeting with an OCP and the preceding messages. When considering the last face to face date, 59 (8.1%) participants reported a forensically significant negative experience, 52 of which were reported by females (10.6%) and 7 by males (3.0%). Chi-square analysis suggested this is significantly different to expected values ($X^2(1, N = 727) = 12.565, p < .05$), providing support for H1. The differences in gender experiences of negative face to face meetings, along with the low rate of adverse experience in the male sample resulted in the decision for the remaining analyses to be completed for females only (H2 to H6; $N = 490$).

Female negative experiences of last face to face meeting

Of the 490 female respondents who met their last on-line partner face to face, 89.4% ($n=438$) had no adverse experiences and 10.6% (52) did.

H2 predicted that message content would be associated with the decision to attend a face to face date. All but one participant ($n=489$) identified message content that would make them decide not to meet someone (message content precautions). The number of message content precautions ranged from 0-28 ($M = 17.5, SD = 5.0$), out of 37 choices. No single precaution was identified by 100% of participants, indicating that even seemingly obvious aversive content can be acceptable to some people. Table 7 summarises the number of female

respondents ($N = 489$) who identified message content precaution types. The way message content precautions were coded can be seen in appendix 12.

However, it was also found that 69.9% ($n=342$) of participants met someone whose messages had contained content indicating precaution. Of these, 88% ($n=301$) had no negative experiences and 12% ($n=41$) did, representing a 1.4% increase on the overall prevalence figure (10.6%). Thus, H2 did not receive support, as many people who identified message content precautions met face to face after. Hence message content does not determine whether a meeting takes place.

Table 7. The number of females who identify message content precautions from different categories (n=489), and the number who met people whose messages contained these topics regardless (n=342).

Message content precautions	Number of participants who identified message content precautions (n=490)	Total number of participants who met those who used similar message content to their precautions (n = 342)	Number of participants who met and had non-negative experiences (n=301).	Number of participants who met and had negative experiences (n=41).
Sexual	467 (95.3%)	50	37 (74%)**	13 (26.0%)
Romantic	121 (24.7%)	73	58 (79%)**	15 (20.5%)
Hostile	469 (95.7%)	17	12 (70.5%)**	5 (29.4%)
Pressuring	466 (95.1%)	11	4 (36.3%)**	7 (63.7%)
Prying	425 (86.7%)	297	267 (90.0%)**	30 (10.1%)
No clear photo of face	306 (62.4%)	3	2 (66.7%)**	1 (33.3%)
Arrogance	376 (76.7%)	5	0 (0%)**	5 (100%)
Self-Deprecation	240 (48.0%)	1	0 (0%)**	1 (100%)
No precautions identified*	1 (0.2%)	0	0 (0%)**	0 (0%)

* One participant identified nothing from message content that would dissuade them from meeting. They did not have an adverse experience.

** Percentage of total number of participants who met people who used similar message content to their precautions within each category.

Hypotheses 3-6 aimed to answer the question of what can predict adverse online dating experiences. Forensic related adverse/negative experiences were any verbal or physical aggression or sexual harassment or assault experienced during a face to face meeting with an online communication partner. All adverse experiences were analysed together due to the low frequency.

A total of 46 variables were analysed using chi-square statistics to determine whether they were significantly associated with date experience in 490 female participants. A full list of these variables can be seen in table 8. The way that content of messages prior to last date was coded into categories is provided in appendix 13.

Table 8. Chi-square analysis to determine what variables are linked to adverse dating experiences of females ($N = 490$)

Variable	(sub-variable)	% with negative experiences	% with non-negative experiences	χ^2	Fisher's exact p	Factor linked to higher than expected rates of negative experiences
Demographics						
Age range (over 45s excluded due to small sample size)	16-25 ($N = 198$)	12.6	87.4	2.036		
	26-45 ($N = 258$)	8.5	91.5			
Ethnicity	Caucasian ($N = 422$)	10.0	90.0	1.395		
	Non-Caucasian ($N = 68$)	14.7	85.3			
Employment status	Employed/ Student ($N = 451$)	9.8	90.2		.049* (2-sided)	Being unemployed
	Unemployed ($N = 38$)	21.1	78.9			
Sexuality	Heterosexual ($N = 356$)	9.3	90.7	2.474		
	Non-heterosexual ($N = 134$)	14.2	85.8			
Social class	Upper class/ middle	9.6	90.4	1.284		

	class (N = 334)				
	Lower middle class/ lower class (N = 154)	13.0	87.0		
Vulnerabilities					
Mental health problem	Yes (N = 181)	14.4	85.6	4.260*	Having a mental health problem
	No (N = 309)	8.4	91.6		
Personality disorder	Yes (N = 12)	16.7	83.3		.360 (1-sided)
	No (N = 469)	10.2	89.8		
Disability	Yes (N = 43)	11.6	88.4		.494 (1-sided)
	No (N = 445)	10.6	89.4		
Developmental disorder	Yes (N = 36)	19.4	80.6		.074 (1-sided)
	No (N = 453)	9.9	90.1		
Substance misuse	Yes	22.2	77.8		.107

(N = 18)					
No	10.0	90.0			(1-sided)
(N = 471)					

Online dating background

Dating site experience

Length of dating site use	Less than 1 year (N = 289)	10.4	89.6	.056	
	1 year or more (N = 199)	11.1	88.9		

Number of people met	1-10 (N = 385)	10.4	89.6	.114	
	11+ (N = 104)	11.5	88.5		

Dating site type

Free general sites	Used (N = 353)	11.6	88.4	1.338	
	Not used (N = 137)	8.0	92.0		

Paid general sites	Used (N = 121)	11.6	88.4	.155	
	Not used (N = 369)	10.3	89.7		

Specialist sites	Used	19.7	80.3	6.029*	Using specialist dating
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	(N = 61) Not used (N = 429)	9.3	90.7		sites
Apps	Used (N = 328)	10.7	89.3	.004	
	Not used (N = 162)	10.5	89.5		
Dating site use					
Friends	Searched for (N = 132)	15.2	84.8	3.924*	Searching for people to be just friends
	Not searched for (N = 358)	8.9	91.1		
Casual sexual partners	Searched for (N = 135)	8.1	91.9	1.193	
	Not searched for (N = 355)	11.5	88.5		
Dating	Searched for (N = 470)	9.8	90.2	.013* (2-sided)	Not searching for people to date
	Not searched for (N = 20)	30.0	70.0		

Precautions

Uncertainty reduction strategies

Attempts to verify information prior to date	Attempts made (N = 423)	11.1	88.9	.692	
	No attempts made (N = 65)	7.7	92.3		
Phone/video contact use essential before meeting	Essential (N = 144)	16.0	84.0	6.176*	Requiring phone/video chat before meeting
	Not essential (N = 346)	8.4	91.6		
Minimum number of messages required before meeting	1-29 (N = 281)	7.1	92.9	7.757*	Requiring 30+ messages before meeting
	30+ (N = 208)	14.9	85.1		

Message content precautions

Romantic	Would not meet (N = 121)	14.0	86.0	2.001	
	Would meet (N = 369)	9.5	90.5		
Hostility/derogatory comments	Would not meet (N = 469)	10.7	89.3	.611 (1-sided)	
	Would meet (N = 21)	9.5	90.5		

Sexual content	Would not meet (N = 467)	10.5	89.5	.449 (1-sided)
	Would meet (N = 23)	13.0	87.0	
Pressuring content	Would not meet (N = 466)	10.5	89.5	.479 (1-sided)
	Would meet (N = 24)	12.5	87.5	
Prying content	Would not meet (N = 425)	10.1	89.9	.826
	Would meet (N = 65)	13.8	86.2	
No clear photo of face	Would not meet (N = 306)	9.5	90.5	1.107
	Would meet (N = 184)	12.5	87.5	
Arrogance	Would not meet (N = 376)	10.9	89.1	.145
	Would meet (N = 114)	9.6	90.4	
Self-deprecation	Would not meet (N = 240)	11.3	88.8	.202
	Would meet (N = 250)	10.0	90.0	

Features of the last face to face date

Who initiated messaging	Self (N = 114)	2.6	97.4	9.672*	Other person initiating messaging
	Other (N = 285)	13.0	87.0		

Reason for meeting

They seemed romantic	Yes (N = 77)	7.8	92.2	.766	
	No (N = 413)	11.1	88.9		
We had similar interests	Yes (N = 380)	9.5	90.5	2.313	
	No (N = 110)	14.5	85.5		
They seemed nice	Yes (N = 411)	9.0	91.0	6.964*	Not providing "they seemed nice" as a reason for meeting
	No (N = 79)	19.0	81.0		
For sexual contact	Yes (N = 36)	11.1	88.9		.785 (2-sided)
	No (N = 454)	10.6	89.4		
They were pushy about meeting	Yes (N = 8)	25.0	75.0		.204 (2-sided)
	No (N = 482)	10.4	89.6		

Participant had nothing better to do	Yes (N = 103)	20.4	79.6	13.139**		Providing “having nothing better to do” as a reason for meeting
	No (N = 387)	8.0	92.0			
To get a free meal/activity	Yes (N = 21)	28.6	71.4	.017* (2-sided)		Providing “to get a free meal/activity” as a reason for meeting
	No (N = 469)	9.8	90.2			
Message content prior to last date						
Sexual	Present (N = 54)	27.8	72.2	18.851**		Receiving sexual message content
	Not present (N = 436)	8.5	91.5			
Romantic	Present (N = 347)	13.0	87.0	6.958*		Receiving romantic message content
	Not present (N = 143)	4.9	95.1			
Hostile	Present (N = 17)	29.4	70.6	.026* (1-sided)		Receiving hostile message content
	Not present (N = 473)	9.9	90.1			
Prying	Present (N = 346)	10.4	89.6	.054		
	Not present (N = 144)	11.1	88.9			

Not sending a clear photo of their face	Present (N = 6)	33.3	66.7	.126 (1-sided)	
	Not present (N = 484)	10.3	89.7		
Pressuring	Present (N = 11)	63.6	36.4	.000** (1-sided)	Receiving pressuring message content
	Not present (N = 479)	9.4	90.6		
Arrogance	Present (N = 8)	75.0	25.0	.000** (1-sided)	Receiving arrogant message content
	Not present (N = 482)	9.5	90.5		
Self-Deprecation	Present (N = 5)	80.0	20.0	.001** (1-sided)	Receiving self-deprecating message content
	Not present (N = 485)	9.9	90.1		

Note:

* denotes $p \leq .05$

** denotes $p \leq .001$ (significant after Bonferroni correction)

The Bonferroni correction method indicates that only items with a significance level of $p = 0.001$ or lower should be considered. This correction resulted in 5 variables of importance in predicting whether online dating experiences would be negative. These included the reason for the face to face meeting being that the participant had “nothing better to do” ($\chi^2(1, N=490) = 13.139, p < .001$), and four aspects of message content – sexual comments ($\chi^2(1, N=490) = 18.851, p < .001$), comments pressuring the individual to meet or share information ($N=490, p < .001$, Fisher’s exact test), arrogance ($N=490, p < .001$, Fisher’s exact test), and self-deprecating content ($N=490, p = .001$, Fisher’s exact test). If any of these factors were present, participants were more likely to have had a negative online dating experience. These variables provide support for only H5, as online dating experience (H3), uncertainty reduction strategies (H4) and disorders (H6) were not found to significantly relate to dating experience. Hostile content ($p = 0.026$) and ‘not searching for people to date’, also reached significance on a Fisher’s exact test ($p = 0.013$), indicating a possible trend in the results.

These 5 significant variables were included in a binary logistic regression using the Enter method. A minimum of 50 participants with negative experiences was required for sufficient power to this regression, which was met with the current sample. This model was found to significantly predict online dating experience ($\chi^2(5) = 42.568, p = .000$). The amount

of variance explained by this model was low (Cox & Snell $R^2 = .083$) with 99.1% of non-negative experiences being correctly predicted but only 19.2% of negative experiences being correctly predicted, resulting in a total of 90.6% of cases being correctly classified. The Hosmer and Lemeshow test was not significant, indicating good model goodness of fit ($\chi^2 (1) = .072, p = n.s.$). Three predictors significantly added to the model, with sexual message content ($B = 1.077, Wald = 6.985, p < .05$), arrogance ($B = 2.250, Wald = 5.352, p < .05$) and self-deprecating statements ($B = 2.588, Wald = 4.321, p < .05$) all significantly associate with the face to face date experience being negative. A summary of this model can be seen in table 9.

Table 9. Predictors of adverse face to face date experience.

Variable	B	SE	Wald	df	Sig.	Exp (B)
Sexual message content	1.077	.408	6.985	1	.008	.340
Pressuring message content	1.426	.812	3.083	1	.079	.240
Arrogance	2.250	.973	5.352	1	.021	.105
Self-deprecation	2.588	1.245	4.321	1	.038	.075
Reason for meeting: nothing better to do	.641	.358	3.211	1	.073	.527
Constant	-5.323	1.686	9.964	1	.002	204.947

Table 10. percentage of participants who received certain message content/met due to having nothing better to do

Factor	All participants (N = 490)	Adverse experiences (N = 52)	Non-adverse experiences (N = 438)	Physical assault (N = 7)	Sexual assault (N = 18)	Verbal assault/threats (N = 35)	Verbal sexual harassment (N = 12)
Message content							
Sexual	11%	29%	9%	29%	33%	31%	50%
Romantic (n.s.)	71%	87%	70%	100%	78%	94%	67%
Hostile (n.s.)	3%	10%	3%	14%	6%	11%	8%
Pressuring	2%	13%	1%	14%	22%	14%	17%
Arrogance	2%	12%	0.5%	14%	11%	11%	25%
Self-Deprecation	1%	8%	0.2%	0%	11%	6%	25%
Prying (n.s.)	71%	69%	71%	71%	67%	71%	67%
Not sending a clear photo of their face (n.s.)	1%	4%	1%	0%	11%	3%	8%
Reason for meeting							
Nothing better to do	21%	40%	19%	43%	50%	37%	33%

When examined further, sexual, pressuring, arrogant, and self-deprecating message content is seen in a much larger percentage of those with adverse experiences compared to those with non-adverse experiences, as shown in table 10. A similar difference is seen between those with and without adverse experiences for people who chose to meet their partner due to having nothing better to do. However, differences such as this are not found for romantic or prying message content, which was not found to be linked to date outcome.

Table 10 also shows the breakdown for different adverse experience types. All types of experience see elevated proportions of sexual, pressuring, arrogant and self-deprecating content compared to those without adverse experiences. In particular, sexual content is highly related to verbal sexual harassment, as it is seen in 50% of those with such experiences but only 9% of those who have had no adverse experience. Arrogance and self-deprecation also seems highly related to this adverse experience type, as they are both seen in 25% of those with such experiences, but lesser proportions of those with other experiences. Additionally, pressuring message content was reported by a higher percentage of those who had both verbal and physical sexual adverse experiences compared to those who experienced physical or non-sexual verbal assault. A higher proportion of those with adverse contact physical or sexual experiences met their partner because they had nothing better to do than those with verbal adverse experiences.

In addition to this, hostile message content is seen in a higher proportion of those with adverse than non-adverse experiences, in line with the non-significant trend linking hostile messaging and adverse experiences. A similar

marked increase is seen in those who have physical or verbal assault and hostile message content. This is observed as a difference to those with no adverse experiences and the percentage of those with sexual assault or verbal sexual harassment, and may explain why hostile comments show a non-significant trend when all adverse experiences are analysed together.

Summary of Results

To summarise, it was found that females experience significantly more adverse face to face dates than males (H1 accepted). Participants identified message content precautions, but the majority (70%) did not use them to determine whether a meeting took place (H2 rejected). Similarly, precautions were not linked to face to face date outcomes (H4 rejected), nor was level of online dating experience (H3 rejected). A variety of disorders also did not appear to increase vulnerability to adverse face to face date experiences (H6 rejected), although there was a trend in the data for mental health problems to be associated ($p < 0.05$). However, it was found that adverse face to face date experiences could be predicted by sexual, pressuring, arrogant and self-deprecating message content as well as participants embarking on the date due to having “nothing better to do” (H5 accepted).

Discussion

On-line dating scams were experienced by 12% of females and 22% of males. Crime related negative experiences on the last 'first-time' face to face meeting with an OCP was reported by 11% of females (n=490) and 3% of males (n=237), with 46% and 35% claiming such experiences in the past.

Further analyses were carried out on females only as rates of negative experience were too low in males to draw further conclusions about risk factors. All but one female (n=489) identified message content precautions, but 70% met people regardless. This provides little support for the notion that online daters consider risk can be predicted by message content. Only a minority (30%) rely on this information to determine whether to meet. Furthermore, those who were assumed to be more experienced online daters who had been using online dating for more than a year (40.6%), or had met 11+ people (21.2%) did not have fewer adverse experiences. Nor did those who used uncertainty reduction strategies such as Googling their OCP (86.3%) or speaking to them via telephone or video prior to meeting (29.4%). Nevertheless, message content containing sexual, pressuring, arrogant and self-deprecating comments was significantly associated with negative experiences during the last 'first-time' face to face date/meeting with the OCP. There was little evidence that psychological disorders were significantly related to negative dating experiences.

Adverse dating experiences were also associated with “had nothing better to do” as a reason to meet with the OCP. This may be related to apathy resulting in less awareness of potential risks. The most important finding is that online daters may be able to predict whether their OCP is a risk or not from limited information provided in the online message content they have prior to meeting. It was found that messages, which include sexual comments or the sending of sexually explicit images as well as online conversations where the OCP pressures or coerces the individual to meet or give out information, can significantly predict adverse experiences during face to face meetings. This is in line with National Crime Agency (2016) findings that those who offend sexually through online dating use coercion. Messages containing arrogance and self-deprecation were also significantly linked to negative experiences.

The majority of participants appeared aware of the role of message content as a precaution, as 99.8% identified content that would lead them not to meet someone. However, 7 out of 10 female respondents met OCPs regardless of their message content precautions. This suggests that, although people may have ideas about how to remain safe when using online dating, they do not always consider these precautions when meeting people – which could also link to the lack of significance of ‘uncertainty reduction strategies’. This may be for a number of reasons. Firstly, online daters may feel that aversive message content does not actually indicate risk, potentially through an intuitive understanding of the online disinhibition effect (Suler, 2004). This is also supported by the fact that hostile messages were not significant predictors of adverse face to face experiences after Bonferroni corrections, suggesting people don’t always act as badly as would be assumed from their online conversation. Alternatively, there

may be some sort of halo effect where online daters may allow their OCPs to “get away with” more if they are physically attractive (Feingold, 1992; Bak, 2010), or they may feel that precautions should not apply to their own OCP (Watkins & Boon, 2016). These ideas are partially supported by the fact that the prevalence of adverse face to face meetings only increase by 1.4% (from 10.6% to 12%) when message content was ignored.

Psychological disorders did not appear to increase vulnerability to adverse face to face meetings/dates, contrary to inferences made from previous research on personality disorder (Lieb et al, 1004), ASD (Brown-Lavoie, et al, 2014; Roth & Gillis, 2015), substance misuse (Foshee et al, 2004; Champion et al, 2004) and other mental health problems (Swann et al, 2003; Foshee et al, 2004). This indicates that predictors of negative online dating experiences and victimisation may be different to predictors of “normal” dating victimisation.

Limitations

Firstly, this study used retrospective data collection where participants were required to recall their experiences and message content. Although participants were asked about their last date to increase the salience, this date was not necessarily recent, which could have influenced participants’ ability to accurately recall message content. Additionally, the cross-sectional nature of the design confounds the data regarding precautions, as participants may have only decided to take such precautions after having a negative experience, which could explain the lack of significant findings in this area.

Another limitation with this study is the method determining message content categories. Firstly, participants selected pre-populated conversation topics. Although this list was generated by online daters, it is still unlikely to exhaust all possible message content. Secondly, this data was simplified into categories. This means that the inferences that can be drawn from these categories are limited, as not every message containing items fitting with risk-predicting categories is likely to signify risk. For example, whilst some sexual messages are likely to predict risk, some messages classed as sexual content may be entirely harmless, well-meaning, and desired by both parties. This may explain the finding that many participants met OCPs regardless of their categorised message content precautions; for example, they may decline to meet people who send intimate pictures but other sexual content is permissible. Further research could analyse sub-themes within the relevant categories for a greater understanding of relevance to risk prediction.

Implications & future directions

If adverse experiences can be predicted, they can also be prevented. As emphasised throughout this study, the primary implication is that these findings could be used to educate online daters about what to consider when deciding whether to meet OCPs face to face. The results of this study could be used by online dating sites to help protect their users. Subsequently, this education role could potentially improve trust in online dating sites, due to public opinion that

online dating sites should take responsibility to improve safety (Finnigan, 2016; Telegraph, 24 August 2011).

This study focussed on female victims of adverse online dating experiences. Further research could consider males and people who identify as non-binary to assess whether the risk predictors are the same. A larger sample would also be beneficial to look at different types of adverse experience, as it may be that there are different predictors of sexual and violent experiences in the same way that some differences are found between violent and sexual offenders (Gudjonsson & Sigurdsson, 2000). A further recommendation is for research to consider the responses of both parties; messaging is mutual and so victim message content may also be important to consider. It would be unfair to suggest that any OCP who discusses certain topics would be risky if the discussion is mutual.

Conclusions

A prevalence rate of more than one in ten females age between 16 and 45 experience forensically significant adverse face to face meetings with people they have communicated with online. This has an impact on not only the victims but also the legal system dealing with these offences and online dating services as their users demand safer methods. It may be possible to reduce victimisation by educating individuals to think more carefully before meeting someone and to exercise caution when online messages contain sexual, pressuring, arrogant and/or self-deprecating content prior to any first-time date. The role of educator

could be taken up by online dating services to reduce the negative feelings towards them in the wake of adverse experiences regularly appearing in the press.

This chapter has provided the first piece of empirical research on face to face crimes resulting from online dating, and provided insight into potential ways to detect and prevent them from occurring. However, the exact nature of these crimes and the impact on victims has not yet been explored and documented. Chapter four looks at the experiences of victims of sexual assaults perpetrated by online dating partners to improve our understanding of the impact these crimes can have on the victim. Chapter four also reflects on whether these experiences point to any further methods to predict and prevent such crimes.

Chapter Four - Adverse online dating experiences: An interpretative phenomenological analysis

Abstract

Interpretive phenomenological analysis was used to examine transcripts from 3 female victims of sexual assault perpetrated by people they met online. Themes suggested that victims find these experiences distressing, and they may feel a lot of pressure both during the experience and possibly to use online dating in the first place. Victims appear prone to blaming themselves as well as their assailants, and the experiences can cause a disturbance in victims' sense of identity. These findings have implications for support offered to victims of adverse online dating experiences, and indicate areas to focus research on crime prevention – primarily education about consent and normalising being single.

Introduction

Online dating is increasing (Smith, 2016), as is the rate of adverse experiences associated with it (Khan, 2016; National crime agency, 2016). This relatively new context for crime has resulted in increased research efforts to understand both online (e.g. Whitty & Buchanan, 2016; Davis & Browne, unpublished-a; see Chapter 2) and offline (e.g. Davis & Browne, 2017; see Chapter 3) victimisation resulting from online dating. Arguably, more significant harm comes to online daters through experiences that occur face to face, as this includes rape (Furness, 2012) and murder (Kirk, 2016). Further, rates of such experiences are

high: a recent survey of online dating experiences found that 34.9% of men and 45.7% of women had been the victim of a crime whilst on a face to face date with someone they met online. Men were more likely to be victims of online romance scams – a finding that contradicts research by Whitty (2017) but fits with the general distribution of scam victim gender (Davis & Browne, unpublished-a; see Chapter 2). However, women were more likely to be victims of verbal, physical, and sexual assaults. When recalling the last person met online and dated, 10.6% of women were found to have experienced an assault whereas only 3.0% of men were victims of a similar crime on their dates (Davis & Browne, 2017; see Chapter 3). Therefore, Chapter 4 focuses on female experiences due to their higher assault victimisation rate. Dating experiences involving sexual assault following initial online contact and communication, are explored in three case studies of female victims and their victimisation is referred to as “*forensically significant online dating experiences*” (FSODES).

So far, online dating research has been very limited, with even fewer studies looking at FSODEs. Media reports of FSODEs (e.g. BBC, 2015) provide some insight into the types of adverse experiences, but there are rarely details of the impact on the victims. Using qualitative research methods to examine the victims’ experiences will provide a clear insight as to the implications for the victims and what support should be provided to them (Fischer, 1984; Janoff-Bulman & Frieze, 1983). Furthermore, it is hoped that details from victims may facilitate research into factors that can predict FSODEs to allow for prevention.

Previous studies suggest online daters report that they are aware of and fear the potential of harassment, physical and sexual violence on a date (Couch,

Liamputtong, & Pitts, 2016). Indeed, it is claimed that there has been a rise in sexual assaults related to online dating by more than 450% (Khan, 2016; National crime agency, 2016), which may be partly due to the increase in popularity of online dating as a way of meeting new people and romantic partners. Previous qualitative research into similar crimes, not related to online experiences, has examined the impact on victims of intimate partner violence (Reynolds & Shepherd, 2011), male rape (Pretorius & Hull, 2005), sexual assault on females (Connop & Petrack, 2004), and general crimes (Fischer, 1984; Janoff-Bulman & Frieze, 1983). A variety of themes were identified, including loss of identity, power, and self-esteem (Reynold & Shepherd, 2011), emotional responses, a desire to make sense of their experience, victims' own roles in their experiences, and desire for retaliation (Janoff-Bulman & Frieze, 1983). Similarities are likely, but they are not anticipated to be identical as previous research lacks the context of online dating, and therefore the important nuances of the budding online relationship and hopes for what lies ahead that are likely also to influence victim interpretations of their experiences.

One primary candidate for a possible emerging theme is romance. One of the few studies into online dating experiences links romantic beliefs to likelihood of victimisation from online romance scams (Buchanan & Whitty, 2014). This area will be specifically investigated within the current study, using the same methods as Buchanan and Whitty (2014) to determine whether romantic beliefs increase the risk of FSODEs.

Research aims

This study is a qualitative exploratory analysis of FSODEs. It is anticipated that gaining an understanding of what victims experienced during FSODEs will allow us to provide the most appropriate support for them. Additionally, victim experiences may direct research efforts for prevention by determining what precedes FSODEs. Therefore, research aims are as follows:

- a) To understand the impact of forensically significant online dating experiences (FSODEs) for female victims.
- b) To consider what implications this has for providing support to victims.
- c) To consider whether romantic beliefs could be a useful predictor of who may become a victim of adverse online dating experiences.
- d) To consider details of FSODEs that may have relevance for predicting and preventing adverse and abusive dating experiences.

Method

Participants

Participants from a previous study on FSODEs (Davis & Browne, 2017; See Chapter 3) were invited to be interviewed about their experiences. Nine females who reported a previous FSODE were contacted, and 3 agreed to be interviewed. Participants were 3 females aged 24 to 30 years old. Two were heterosexual, whilst one female described herself as asexual. Participant details are presented in table 11.

Table 11. Participant details

Participant	P1	P2	P3
Gender	Female	Female	Female
Sexuality	Asexual	Heterosexual	Heterosexual
Age at interview	30	24	25
Age at time of victimisation	23-29	22	14
Education level	Postgraduate degree	Postgraduate degree	Undergraduate degree
Marital status	Single	In a relationship	Married
Assault reported to the police	No	No	No

Participant 1 (P1) experienced multiple instances of verbal and sexual assault.

Participant 2 (P2) experienced rape and possible date-rape drug use. Participant

3 (P3) was the victim of sexual activity with a child. None of the participants chose to report their experience to the police.

Materials

A semi-structured interview schedule was designed to focus on what happened on face to face dates, the online messages and protective strategies used, and background information about the participant and their past relationships. The interview schedule is included in appendix 16.

The Romantic Beliefs Scale (RBS; Sprecher & Metts, 1989) was used to measure the romantic beliefs of participants, and is included in appendix 17.

Procedure

The lead researcher contacted participants to invite them to be interviewed. Those who agreed were given a choice of being interviewed face to face, via a voice call with or without video, or by an online instant messaging application. All participants chose to be interviewed using an online instant messaging application. The benefits and drawbacks of this interview method are discussed elsewhere (Meho, 2006; Volda, Mynatt, Erickson & Kellogg, 2004). Informed consent was gained and participants were given a chance to ask questions, then the semi-structured interview was completed. Each interview took 2-3 hours. After the interview, participants were emailed the RBS to fill in and return. Finally, a pre-prepared debrief was sent to each participant.

Data analysis

Interview transcripts were copied from the online messenger application and anonymised. Transcripts were then subjected to interpretive phenomenological analysis (IPA; Smith & Osborn, 2008). IPA was selected because the research aim was to understand victims' experiences of FSODEs and IPA was designed to assess "the participant's lived experiences" (Smith & Osborn, 2008).

Each transcript was read several times for the researcher to become familiar with them. Then, working on one transcript at a time, comments were made on the content of the transcripts including perceived meaning, language use and tone, and any other relevant comments. Next, these comments were used to determine emergent themes, which were then clustered together to form superordinate themes. Transcripts were read again with the knowledge of these themes to ensure they were relevant to the raw data. Finally, similarities and differences between participants were considered within each theme.

IPA is, by definition, an interpretation of what participants say, and is influenced by a double hermeneutic – the interpretation by the researcher affects results as well as the interpretation of events by the participant. It is important to acknowledge any preconceived ideas the researcher carries about the subject at hand in the name of transparency (Brocki & Wearden, 2006), so it is noted that the lead researcher in this study was a 25-year-old heterosexual female with experience in researching online dating as well as personal experience using online dating.

Interpretative phenomenological analysis (IPA) is an increasingly popular approach to qualitative research (Hefferon & Gil-Rodriguez, 2011). It is particularly useful for “giving voice” by reflecting on experiences of the participants, and “making sense”, by interpreting these experiences to consider deeper meaning (Larkin & Thompson, 2012). IPA is most often used to investigate “significant life transforming or life-threatening events” (Smith, 2004), on “something that matters to the participants” (Larkin & Thompson, 2012), making it highly applicable to considering criminal victimisation. IPA has

three key characteristics (Smith, 2004). Firstly, IPA is ideographic, meaning data is analysed person by person as well as all together, thus providing information about individual experiences as well as shared themes from a small number of cases. It is also inductive, using flexible research techniques such as open-ended questions to allow discussion of factors not considered in the initial research question or hypotheses. Thirdly, IPA is interrogative, considering the themes discovered in relation to pre-existing literature on relevant topics. This characteristic of IPA is particularly limited in the current study as there is virtually no literature on face to face crimes resulting from online dating. However, other relevant studies are discussed.

IPA is not without its limitations, many of which apply to the current study. Notably, it is difficult to achieve comparison within IPA (Hefferon & Gil-Rodriguez, 2011), therefore no control participants were used. It is therefore unclear how these participants experiences compare to those who experience other forms of online dating crime, and those who experience crime victimisation in offline relationships. Another limitation of IPA related to its generalisability is the importance of speaking English for an in-depth analysis of experience (Smith, 2004). This is particularly meaningful when investigating crimes resulting from online dating, considering the cultural differences in related areas such as online dating scams (Huang et al, 2015), sexual behaviour (Feldman, Turner, & Araujo, 1999), and online relationship development (Yum & Hara, 2005). Not only is there likely a cultural difference in those considered fluent in English and those not, but the need for fluency and general ability to eloquently explain themselves could be seen as elitist (Tuffour, 2017), taking a sample from middle-class, highly educated individuals – participants in the current study

were all university educated. Therefore, the need for participants fluent in English reduces the generalisability of results of this study, especially in relation to transference and counter-transference issues as language choice has been seen to affect these processes (Foster, 1992; Kitron, 1992).

IPA is also a complex procedure, whereby simply describing the content of transcripts is not enough to achieve the depth of analysis needed for good IPA (Hefferon & Gil-Rodriguez, 2011), and careful consideration of language use such as metaphor and temporal references must be included (Smith, 2004). Although the lead researcher had undergone formal qualitative data analysis training, it is possible that their ability to reach such depth was limited due to a lack of specific training on IPA. However, Smith (2004) highlights a “good enough” stance, which is likely to be adequate in such early stages of research into this specific area. Hefferon and Gil-Rodriguez (2011) suggest the principle of “less is more” should be applied to all areas of IPA in order to achieve the necessary depth of analysis. Specifically, good IPA should have a small number of participants, a short interview schedule with broad questions, and fewer themes in analysis to achieve the greatest depth. These principles have been adhered to as much as possible in the current study. Finally, it is often difficult to assess the validity of qualitative studies such as those using IPA (Yardley, 2008). Due to a lack of resources, data coding was only completed by the lead researcher so inter-rater reliability could not be established. However, participant feedback was sought, as recommended by Yardley (2008), and participants unanimously agreed that the interpretation of their experiences was appropriate.

Ethics

This study was approved by the Faculty of Medicine and Health Sciences Research Ethics Committee at the University of Nottingham. Participants were emailed the information form which can be seen in appendix 14 and the consent form in appendix 15. Obtaining consent online is broadly considered to be the same as using paper information and consent forms (Varnhagen, Gushta, Daniels, et al, 2005), and an emailed reply confirming the consent form has been read and agreed to is considered an acceptable form of indicating consent (Meho, 2006). The use of online instant messaging for interview leads to potential ethical issues, in that the interviewer could miss important signals of distress including body language and tone of voice (Volda et al, 2004; Meho, 2006). Participants were encouraged to report any distress and were regularly asked how they were feeling throughout the interview. The use of emoticons to indicate emotions and tone was also encouraged (Opdenakker, 2006; Meho, 2006).

Additional ethical issues specific to this study were considered. Firstly, all participants experienced crimes, but none reported them to the police. Each participant was asked if they would like support to report their experience to the police, but all declined. In particular, P3, who was sexually assaulted aged 14, declined due to her current circumstances and not wanting to share her experience with people close to her. The lead researcher and supervisor discussed this, and it was felt that due to the lack of identifying information from the participant, this would could not be reported to the police or Multi-Agency Safeguarding Hub, without causing considerable distress to the participant.

It was acknowledged that the subject matter of the interview was distressing, so efforts were made for participants to be as comfortable as possible. All interviews were conducted with the participants being in their own homes at times that suited them, as recommended by the World Health Organization (2001). For example, P3 selected a date and time where her partner would be out. Participants were reminded throughout the interview that they may withdraw at any time and were regularly asked if they wanted to take breaks from the interview, as per “ongoing participant consent” guidance from the World Health Organization (2016). Only P2 requested a break, thus her data was collected during 2 separate interviews.

Due to the ‘snowballing’ method used, participants were all known to the primary researcher. This has both positive and negative implications. On the one hand, the rapport building phase has already been completed, allowing for rich data due to a lack of time “wasting” (McConnell-Henry, James, Chapman, & Francis, 2010) and counteracting the difficulties of building rapport through online messaging (Volda, Mynatt, Erickson, & Kellogg, 2004). However, too much trust could lead the participants to disclose information they later regret sharing (Kvale, 2006). In a pre-interview discussion, they were reminded that they had the right to withdraw at any time and they should not feel obligated to participate due to their existing relationship, due to the importance of ensuring voluntariness of consent (World Health Organization, 2016). In addition, the primary researcher only used information taken directly from the interview transcripts, not pre-existing knowledge, as this was not covered by the consent participants gave (McConnell-Henry et al, 2010). This pre-existing relationship

allowed easy follow-up and support for participants post-interview. The lead researcher spoke to all participants periodically and enquired about their mental state and whether they had experienced any problems or difficulties since their participation in the interview. In case participants felt uncomfortable talking to the lead researcher with particular concerns arising from the interview process, they were also given contact details for the research supervisor, University of Nottingham Ethics committee, and University of Nottingham Nightline. Nightline is an anonymous, confidential, listening and information service. Further advice and information about accessing counselling and other support was available to participants upon request, although none made such requests.

In order to protect confidentiality and anonymity as much as possible (World Health Organization, 2016), all names of participants were removed from the extracts provided in the study. Names were also removed from the interview transcripts, as well as other details that may allow identification, such as an anecdote about someone reminding the participant of a television show. However, the small sample size of 3 combined with the rich data resulting from qualitative research puts participants at risk of “deductive disclosure”. This is when readers can work out who participants are due to reported traits (Sieber & Tolich, 2013). Efforts were made to remove any identifying data such as occupation, locations, and ethnicity (Sieber & Tolich, 2013) through the process of “data cleaning” (Kaiser, 2009). This process is limited due to the nature of the data, as by definition these participants have experienced an unusual life event that may increase the likelihood of identification. This concept was also discussed with participants to ensure they were informed and understood the intended use of the data and the potential audience (Kaiser, 2009).

Finally, it was acknowledged that the lead researcher completing the interviews could experience significant distress whilst hearing about the abusive experiences (Johnson & Clarke, 2003; World Health Organization, 2016). This may have been even more severe due to the pre-existing relationship generating concern for both the friend and the friendship (Harris, 2002). The lead researcher was therefore supported throughout by the research supervisor.

Results

Four superordinate themes were identified: negative feelings; searching for blame; pressure; and self-identity. Emerging themes within super-ordinate themes are shown in Table 12.

Table 12. Themes elicited from victims' experiences of FSODEs.

Negative feelings	Searching for blame	Pressure	Identity confusion
• Discomfort • Pain • Long-term negative emotions	• The self • The perpetrator • A type of person	• To consent • To fit in	• Stupid-smart • Loss of self-identity

Negative feelings

Negative feelings were common across all three participants. They discussed discomfort, fear, and physical pain, and a further emerging theme indicated these effects lasted long-term. Discomfort was often seen early in the experiences, before any crime had been committed. This suggests that the perpetrators may have given indicators of what was to come.

All the guys I've had problems with have told me they "loved" me, way way too soon, and kept saying it even when I said I was uncomfortable.
[P1: 393-396]

I: Did you feel in danger at the time? or mainly uncomfortable?

P3: Mainly uncomfortable. I wasn't sure if I said no if I would be in danger. [P3: 264-267]

It is notable that, although the discomfort often appeared early in the face to face date, it did not appear to be present in the preliminary online messages. This suggests a vital piece of information to use for crime prevention is often missing prior to face to face meetings. P1 even appeared somewhat defensive, stating she would not have met her assailants had she been suspicious. However, an attempt to talk to her online partner via webcam resulted in suspicions for P3, but she later changed her mind and went ahead with the meeting anyway.

I never felt uncomfortable talking to him on the app. [P2: 770-771]

I: Can you remember much about the messages they sent before you met them?

P1: Yeah, I can. It was mostly friendly stuff that I enjoyed talking about, otherwise I wouldn't have wanted to meet them. Like movies and music and stuff.

I: So, were there any indicators they might try to pressure you into anything?

P1: Not at all, 'til I met them. [P1: 310-318]

I got him to go on webcam but it was really dark and I couldn't see any features. I remember being really worried after that and found it really suspicious. I can't remember what made me change my mind but that made me suspicious for a while. [P3: 344-349]

Physical pain was present as well as the emotional discomfort. P3 experienced physical pain, which was ignored by her assailant. P2's assailant also did not appear to mind causing physical discomfort, as it is suspected that he used a date-rape drug.

I remember saying it hurts but he just ignored me and carried on. [P3: 252-253]

The last drink I had made me feel ill within the first few sips. [P2: 556-557]

I was feeling worse and worse, and just wanted to lie down. [P2: 616-617]

This experience was so intense for P2 that she experienced enduring physical discomfort associated with her thoughts about her assailant. This gives a concerning insight into the long-term effects of FSODEs as perceived by victims.

For a while afterwards every time I lay down in my bed I felt panicked, and when he messaged me I felt sick. [P2: 687-689]

The first time I was able to fall asleep in the same room as a guy that I wasn't extremely close to (like family, best friend) was a huge thing for me, because I couldn't. Even with [redacted] that I mentioned before that I was starting to know quite well, I'd think I was ok to stay over and spend the night so anxious I felt sick and I'd be sore from tensing all night the next morning. [P2: 867-875]

P2 wasn't the only person to experience long term effects; P3 also recounts the long-term psychological impact her FSODE had.

It has taken me years to become ok. [P3: 397-398]

It affected my next few sexual encounters it took me a long time to start enjoying sex and not consider it a chore. As in only past few years. [P3: 406-409]

Searching for blame

A second superordinate theme all participants identified was the search for blame. The search appears to have led participants to the three subthemes – “the self”, “the perpetrator” and “the type of person” - the latter suggesting

blame is abstracted from the person to the societal context. The inconsistency in the attribution of blame suggest the participants are eager to explain why their FSOE occurred, but have not yet come to terms with why this might be. The obvious place to lay blame is on the assailant. This was shown especially forcefully by P1, whose use of the words "ignored" and "tried" indicate intent. She takes the blame off herself in this extract, with the phrase "I even...".

I explained that I was anxious about anything sexual and didn't want to be pushed into anything, both ignored me. With the second, I even explained that I had been pressured before and found it difficult to be assertive - he still tried to push me into doing stuff I really didn't want to do. [P1: 264-270]

Despite also blaming her assailant, P2 is more forgiving and voices doubt about his intent due to ignorance. P2 suggests that this seems to be a wide-reaching problem, placing blame on society. This feeling even contributed to P2 choosing not to report her experience to the police, as she suggests it would be uncomfortable to point this out to him.

There's a part of me that wonders if he even realises that silence is not "ok go". [P2: 765-767]

I still don't think he really understands the gravity of what he did; he tried to date me after. And I can't imagine having to tell him why what he did was not ok. [P2: 816-820]

It is alarming how many people don't actually understand consent, especially that coercion doesn't have to mean holding a gun to your head. [P2: 777-780]

This may explain why P3's assailant blamed her – he was indeed unaware what he did was unacceptable, as P2 speculated about her assailant.

He messaged me once asking how I was and I said I was in a new relationship he asked if it was going well and I said yeah he said that's good that you keep one going after you ruined another one. [P3: 547-552]

P1 discusses a more abstract direction of blame by implying that there is a "type of person" to use online dating, and that type of person may also be more likely to be abusive in some way. In addition, P2 suggests that her online communication partner was self-deprecating, which may overlap with P1's suggestion that there was a pattern in her assailants – that they were "nerdy".

Just the usual "pick up artist" types who are clearly sending the same message to a million different people! [P1: 251-253]

The other two were quite similar, and fit in to the pattern I've been talking about really... Both identified as "nerdy" [P1: 259-261]

He was kind of self-deprecating in his humour [P2: 927-928]

As well as this contradiction between blaming and not blaming her assailant, P2 places blame on herself, and states this explicitly. P2's self-blame suggests a negative view of herself, as she also describes questioning herself.

I'm getting better at not blaming myself, but in hindsight I feel like the red flags are all over the place. [P2: 577-579]

I questioned it myself, especially when people asked me 'if I was sure' about what happened. [P2: 784-786]

P2 is not alone in her self-blame, although reasons for blame vary. P1 challenges her effectiveness of withholding consent, whereas P3 feels she placed herself in danger through being "desperate", and portraying herself as "vulnerable". With both participants, this self-blame led to them not reporting their FSODEs – neither really thought of the behaviour as non-consensual. This is similar to P2 not reporting her FSODE as she did not fully blame her assailant.

I: Did you think of going to the police about the other two?

P1: No, because I felt that I "let" them do what they did. Ultimately, they did things that were non-consensual but I could have been clearer. [P1: 293-298]

*At that point in time I didn't consider it rape. I was still so much in love.
Hindsight let me see how desperate I was for affection. [P3: 285-288]*

*I remember breaking down in tears when I reread the messages I had
been writing down for being stupid enough to not realise how
vulnerable I was coming across and there had been hints that was what
he was after. [P3: 316-321]*

Akin to self-blame, participants also indicate a regret at failure to protect themselves adequately. P3 is frank about her lack of precautions and how she made efforts to conceal the fact that she was meeting a stranger from the internet. P1 takes a similar stance. Conversely, P2 felt she took a lot of precautions but it just was not enough.

*I lied to my dad and said I was meeting a friend I had met and I had
gotten my cousin to pretend he was with us. [P3: 211-214]*

*I: Did you take any other precautions before deciding to meet them?
Like video chat or googling them?*

*P1: Nah I didn't do either, though I can see why that would be useful.
[P1: 285-289]*

I really thought I was pretty safe. Like I felt I had made an active effort to be in my comfort zone and put some safeguards in place. [P2: 540-543]

Pressure

All 3 participants gave a sense of being under pressure to engage in behaviours, and thus pressure often over-ruled the lack of consent, making victims feel there was nothing more they could do by refusing. P1 makes explicit reference to this pressure to engage in sexual activity, whilst P2 and P3 show that they were pressured into behaviours they were uncomfortable with. The pressure on P3 evoked concerns that if she did not comply she would be in danger.

I've been completely honest about the fact that I don't want to have sex, but the people I've met have tried to pressure me into it anyway. [P1: 190-193]

I said no several times, and I felt so shit that eventually I kind of felt that I didn't care anymore, I just wanted to sleep. So I stopped pulling at him and tried to fall asleep, just let him do whatever he was doing. [P2: 653-658]

He started again and I started to say I didn't want to but he said we were doing it before. [P3: 248-250]

I wasn't sure if I said no if I would be in danger. [P3: 266-267]

A second form of pressure was also present. Pressure to fit in appears to have motivated the decision to use online dating in the first place. P1 describes how she used online dating due to how she felt she “should” be. P2 hints at a similar angle, suggesting that her peers were having fun in relationships and she needed to join them.

I thought it was a "fake it 'til you make it" type thing.

*So, I've ended up forcing myself into some pretty terrible situations
[P1: 170-173]*

*I started on a very small course and most of them were in
relationships. Those that weren't were all on Tinder and it seemed they
were having a lot more fun swiping in stats class than I was with my
doodling. [P2: 250-254]*

P3's self-applied pressure to fit in also stemmed from societal norms, but also the more sinister experience of bullying. These factors, compounded with P3's internal romanticism and low self-esteem worked to pressure her into something that made her uncomfortable, and resulted in an illegal act with a lasting impact.

Not feeling loved at home and being told at school how ugly I was and feeling like no one could ever love me. Here was this guy who was interested in me and was planning a life with me. If I lost him I wouldn't ever find someone again. [P3: 288-293]

Identity confusion

A final theme running across transcripts of P2 and P3 was that of identity confusion. This took two separate forms: a sense of loss of understanding of self, as described by P2, and the contrast between the self as stupid and intelligent by P3. Both instances suggest a confused sense of identity.

P3 describes herself as stupid as part of her self-blame, then later suggests she should not have ended up in this situation due to being smart.

I remember breaking down in tears when I reread the messages I had been writing down for being stupid enough to not realise how vulnerable I was coming across and there had been hints that was what he was after. [P3: 316-321]

I had always seen on TV programmes and news stories about girls meeting people online and I thought how stupid they were for doing it. When it was happening to me though I just couldn't connect the two. [P3: 535-540]

The thing about my own experience that gets me is that I am smart enough that I should avoid it. Current media makes it seem like it is really obvious it will end up like that when it's not to those happening it is not obvious at all. [P3: 575-580]

P2's identity confusion took a more general form of inconsistency. All participants discussed self-blame but this seems to have caused more confusion in P2's identity than for other participants. In P2's early description of herself, she describes herself as "capable" and presents as generally aware of herself and her skills. However, when discussing her FSODE, P2 describes questioning herself a lot, and not knowing herself, as if this event made her lose her strong identity. P2 underwent physical and emotional turmoil, yet still suggested the "worst part" was not understanding herself. This demonstrates the importance of self-identity and sums up the sub-theme.

I've generally considered myself pretty capable if I set myself to something. [P2: 35-36]

The worst part was just not understanding myself. [P2: 877-878]

Romantic beliefs

Participants also completed the Romantic Beliefs Scale (RBS) for comparison with victims of online romance scams. Scores for participants in this study as well as norms from Buchanan and Whitty (2014) are provided in table 13. All

participants' scores were below the normative value for victims, and for non-victim online daters. Mean subscale scores followed the same pattern, other than for the *One and Only* subscale: the mean from the current study ($mean = 10.3$) was slightly higher than the mean found for non-victims, but still did not reach the mean of victims of online romance scams (Buchanan & Whitty, 2014). Furthermore, means for victims in the current study were more than 1 standard deviation below victim means from Buchanan and Whitty's (2014) study for total RBS score, the *love finds a way* subscale, and the *idealization* subscale. The most marked difference is found with the *idealization* subscale – this is 1.5 standard deviations below the norm for victims. For the three cases presented, romantic beliefs did not place them at risk.

Table 13. RBS and subscale scores, with normative values from online daters (Buchanan & Whitty, 2014: study 1)

	P1	P2	P3	Current study		Norm (victims)		Norm (non-victims)	
				Mean	SD	Mean	SD	Mean	SD
Total RBS score	30	53	54	45.67	13.58	64.07	13.67	58.45	13.96
Love finds a way	15	28	19	20.67	6.66	28.97	6.16	27.19	6.66
One and only	6	11	14	10.33	4.04	11.36	4.48	9.89	4.38
Idealization	4	7	6	5.67	1.53	11.81	3.95	9.96	3.85
Love at first sight	5	7	15	9.00	5.29	11.86	3.24	11.38	3.45

Discussion

Interpretive phenomenological analysis of interview transcripts from 3 female participants who had face to face forensically significant online dating experiences (FSODEs) found 4 superordinate themes. These themes – negative feelings, searching for blame, pressure, and identity confusion – are broadly consistent with previous qualitative explorations of victimisation (Janoff-Bulman & Frieze, 1983; Fischer, 1984). “Negative feelings” were expected to emerge, as psychological distress was determined to be important by Janoff-Bulman and Frieze (1983). “Searching for blame” was considered analogous to Fischer’s (1984) finding of a desire to make sense of their experience. Similarly, “identity confusion” is not too distant from Reynolds & Shepherd’s (2011) theme of “loss of identity, power, and self-esteem”. “Pressure” was not identified in previous literature, but is unsurprising at least in terms of pressure to consent, but also suggests the pressure victims put on themselves in the first place. However, high levels of romantic beliefs, which have found to be statistically significant when looking at victimization of online romance scams (Buchanan & Whitty, 2014) did not appear to be a factor of victimisation in the current study.

Implications for support

None of the participants of the current study reported their FSODE to the police, suggesting that some victims of FSODEs often go under the radar. This means they cannot be identified to be offered beneficial support and advice through formal channels. This is a concern as FSODEs appear to be characterised by

negative feelings, self-blame, and identity confusion. Furthermore, long term negative impacts were discussed, suggesting that FSODEs mean more to people than just a single bad day, and lead to long term impacts on mental wellbeing. It could be that counselling or even therapy for post-traumatic stress-disorder would be appropriate for victims with long-term negative feelings.

Self, societal, and assailant blame replicate results by Breitenbecher (2006), who found that characterological self-blame links to psychological distress and depression (Janoff-Bulman, 1979), and support is indicated in such cases. However, behavioural self-blame was not correlated with psychological distress (Breitenbecher, 2006), and appears to be a mechanism used for coping (Perriloux, Duntley, Buss, 2014) – victims gain a sense that they can avoid repeat victimisation. Therefore, self-blame is not only common in sexual victimisation, but can be adaptive. Support sending the message that blame lies with the assailant and there is nothing the victim could have done could be detrimental to victims, placing them at risk of revictimization.

Identity confusion can be distressing for victims, and is commonly seen in those who experience intimate partner violence (Reynolds & Shepherd, 2011).

Reynolds and Shepherd suggest that taking responsibility for themselves and focussing on working towards aspirations may help victims re-connect with their own identities. This may be applicable also to victims of FSODEs. In the case of smart-stupid identity confusion, it is clear from the participants of this study that well-educated people can still become victims, and it does not mean they are “stupid”. This could be considered similar to characterological self-blame, which is non-adaptive (Perriloux, Duntley, and Buss, 2014), so this may be an

important point to consider with prevention – people should not have a false sense of security due to considering themselves “too smart” to be victimised.

Implications for prevention

Victims’ interpretations of their FSODEs could direct us towards factors that influence them: their search for blame can supplement these same desires from researchers. Self-blame indicates that participants wished they had taken more precautions, but these have previously been shown to be unrelated to likelihood of FSODEs (Davis & Browne, 2017; see Chapter 3), so this may not be a useful area for prevention.

Insights from P2 identifying her assailant as self-deprecating, and maybe even P1 suggesting people were “nerdy” fits in with the findings of Davis and Browne (2017; see Chapter 3) – those who received self-deprecating message content were more likely to find themselves victims of an FSODE. Education into the possible link between self-deprecation and crime perpetration should therefore be considered. Although Davis and Browne’s (2017; see Chapter 3) other findings about message content were not observed, these predictors may still have been present, but FSODEs happened a number of years ago and exact details about messages may not have been remembered.

The suggestion of assailants being unaware of what they have done and blaming their victims, combined with the presence of pressure to consent, suggests prevention may require education at a societal level. The suggestion of education on consent to reduce rates of sexual assault is not new (e.g. Kitzinger

& Frith, 1999), but the understanding of what means “no” is apparently still inconsistent. Furthermore, victims should be encouraged to report their experiences to the police, as assailants with this mentality may become repeat offenders. Legal repercussions would at least raise awareness to the perpetrator if not the wider group of online daters that abusive behaviour will not be tolerated.

The theme of “self-pressure” also suggests areas for societal improvement. Young women such as P1 and P3 feel they must be in a relationship, but they are likely entering a relationship with mismatched expectations of intimacy compared to those who date purely of their own volition. This is like the “mismatched intentions” rape script described by Littleton and Dodd (2016) – the assailant had been expecting a sexual encounter but the victim had not. Although not condoning the behaviour, this mismatch of expectations combined with a lack of knowledge of what indicates non-consent is likely to contribute to sexual FSODEs. Therefore, a combination of education around consent, and messages that it is OK to be single would be advised.

Victims in the current study did provide some support for message content predictors of FSODEs in that the assailant was self-deprecating in their previous online communications (Davis & Browne, 2017; see Chapter 3). In addition, P1 and P3 reported feeling uncomfortable prior to the assault being committed, and P3 felt suspicious when talking to her partner via webcam. This may indicate that online daters should trust their instinct more and should be encouraged to leave situations at the earliest feelings of discomfort. Further research could

explore exactly what partner behaviours cause discomfort and at what point they occur.

Finally, high romantic beliefs were not found to be prominent for the three FSODE victims described in this case study, unlike victims of online romance scams (Buchanan & Whitty, 2014). Scores on the RBS were generally lower than the mean for online daters who were not scammed. These results suggest that high levels of romantic beliefs may not be a predictive factor for face to face FSODEs in the same way they appear to be for online romance scams. However, the current study has no control group for comparison, and the non-victims in Buchanan and Whitty's (2014) study were of a higher mean age than those in the current study so may not be a comparable control group. Repetition of the RBS with victims of FSODEs and comparable non-victims may even reveal that females with lower levels of romantic beliefs are more likely to have a FSODE, suggesting a vast difference between victims of scams and victims of face to face crimes. This is particularly important to consider as the greatest difference is from the *idealization* subscale – the primary subscale predicting scam victimisation (Buchanan & Whitty, 2014).

Limitations

Participant memory may potentially bias the findings of the study. Participants were recalling past events that they can remember. Trauma may affect the details that the victim can recall. All three participants suggested, FSODEs go widely unreported. This makes finding victims for research participation challenging, resulting in small sample sizes. The sample of 3 cases in the current

study were heterosexual experiences. This is a limitation as FSODEs encompass different offences, that may occur across genders and sexualities. Vastly different themes could be drawn from research into FSODEs experienced by male victims, same sex partners, or non-binary individuals.

Conclusion

Analysis of 3 female FSODE victim transcripts suggests they find these adverse experiences distressing and may experience conflicts in their self-identity. This was found whether the participant had a sexual FSODE or one consisting of verbal threats. Participants described experiencing pressure during the FSODE, and in some cases felt pressured to date in the first place.

Victims place blame on themselves as well as the perpetrators of their experience, and appear to not fully realise what could have prevented the FSODE. Additionally, it appears that perpetrators and victims may have mismatched expectations of sexual activity and continued societal education on consent may help to reduce sexual FSODEs. There are no clear targets for prevention other than education, as victims of FSODEs are not characterised by high levels of romantic beliefs like victims of online romance scams. The significance of non-sexual FSODEs should not be underestimated. Further studies would benefit from looking at victims of different FSODEs to consider differences and similarities to sexual FSODEs described in the current study, and also to try to isolate predictive factors.

Overall, sexual FSODEs have negative effects on victims, which last for a significant amount of time. Support for these victims in dealing with emotional and physical pain, as well as potential identity crises would be beneficial. It could be hard to identify those who need support, as it appears that many victims do not report their FSODEs. Support should therefore take the form of a service accessible without the need for a police referral. Support information should be provided by online dating sites and apps to target the appropriate population.

Chapter four has discussed the Romantic Beliefs Scale as a factor of interest when looking at victim vulnerability to online dating crimes. It has been suggested to have a role in victimisation of online dating scams (Buchanan & Whitty, 2015), and has now been explored in victims of sexual assaults perpetrated by online dating partners. When using psychometric measures such as the RBS to explore vulnerabilities, it is important to know that the measure is appropriate to be used in this way. Chapter five therefore explores the properties and uses of the RBS, and how it is used in research related to crime prediction.

Chapter Five - A critique of the Romantic Beliefs Scale and its use in crime prediction

Abstract

The Romantic Beliefs Scale (Sprecher & Metts, 1989) has been used as a measure of how romantic individuals are in a variety of circumstances. This scale has been used to examine victimisation of crimes linked to romance. This has included stalking, intimate partner violence and, most recently, online romance scams and crimes that occur when online partners meet face to face. This critique looked at the psychometric properties of the Romantic Beliefs Scale and considers its use in crime victimisation prediction. It found that the scale is reliable and valid, and has been used across cultures. Although one subscale has lower reliability scores and should be used with caution. Other scales measuring romance look at somewhat different concepts, so the Romantic Beliefs Scale has an important part to play in measuring specific romantic beliefs. This scale is valuable to those researching crime victimisation, which has implications for crime prediction and prevention.

Introduction

Romantic beliefs, like other beliefs, are thought to have an impact on behaviour – particularly within interpersonal interactions. Measures of attitudes to romance and love have been created to examine this. This review focusses on one such measure: The Romantic Beliefs Scale (RBS; Sprecher & Metts, 1989). Sprecher and Metts (1989) originally intended to look at how romantic beliefs differed

between genders and gender roles, but since then the RBS has been used to consider romantic beliefs as an independent variable affecting relationships (e.g. Sprecher & Metts, 1999), and how stimuli such as media affect romantic beliefs as a dependant variable (e.g. Lippman, Ward & Seabrook, 2014). The precipitating factor for this review is the use of the RBS to consider factors associated with victimisation of interpersonal crimes (e.g. Papp, Liss, Erchull et al, 2017; Buchanan & Whitty, 2014; Dunlap, 2010). The RBS could provide important information on reducing crime victimisation if romantic beliefs are found to play a role, and thus must be a reliable and valid measure. This review considers the psychometric properties of the RBS, and its uses in forensic research.

The RBS was created to modernize previous assessments of romanticism (e.g. Hobart, 1958) and to measure romantic beliefs in isolation from other aspects of love, such as passion (Sternberg, 1986; Lee, 1973). Sprecher and Metts (1989) developed the RBS from concepts used in content analysis of romantic literature (Lantz, Britton, Schmitt, & Snyder, 1968; Lantz, Schmitt, & Herman, 1973). Five categories have been drawn from this, which have been incorporated into the RBS. These categories, as discussed by Sprecher and Metts (1989) are displayed in table 14. However, factor analysis of the RBS items suggested a four-factor model of romantic beliefs. This brings the content validity into question, but Sprecher and Metts (1989) suggest that "*follow the heart*" and "*love conquers all*" have been amalgamated into the single factor "*love finds a way*", therefore suggesting the RBS still covers all 5 areas.

Table 14. Categories of romantic beliefs

Category of romantic beliefs (Lantz et al, 1968)	Description	RBS factor
Love at first sight	True love can occur without previous interactions	Love at first sight
The one and only	There is only one person we can truly love – a “soulmate”	One and only
Love conquers all	True love can overcome any obstacle	Love finds a way
Follow the heart	We should follow our feelings rather than more rational considerations	
Idealization	True love will be perfect	Idealization

The RBS is the only scale to use Lantz et al’s (1973) concepts as the basis for understanding romantic beliefs, with other scales favouring other dimensions of love. The subscales of other measures demonstrate this: Lee (1973) considered 6 types of love that were included in the Love Attitudes Scale (LAS; Hendrick and Hendrick, 1986) – passionate (Eros), game-playing (Ludus), friendship (Storge), logical (Pragma), ambivalent (Mania), and selfless love (Agape); whereas Sternberg (1986) listed 3 components of love – intimacy, passion, and commitment, in the triangular love scale. It is therefore difficult to compare the RBS with other measures, as no measure may be considered directly comparable. This also raises questions about content validity, as we cannot be sure that the RBS measures romantic beliefs when there is no consensus on what romance and romantic love may be. Indeed, the RBS was not included in Graham and Christiansen’s (2009) meta-analysis of measures of romantic love.

As well as modernizing the perspective on romance and using elements related solely to romantic beliefs, Sprecher and Metts (1989) specifically designed RBS items to reflect the self rather than a hypothetical other, e.g. "If I love someone..." rather than "If a person loves someone...". They reported that this was to measure "personal attitudes rather than normative expectations about romanticism". Sprecher and Metts (1989) identified this as a limitation of the Romantic Love Complex Scale (RLCS; Spaulding, 1970) and other scales with items referring to a hypothetical person, which may reflect how the individual assumes people as a group feel rather than their own beliefs.

Since the RBS was published in 1989, several other measures of romance have been developed. However, none appear to measure romantic beliefs in the same way as the RBS, and many add another dimension alongside. Cobb, Larson, and Watson (2003) expand on the RBS to develop the romance and mate selection scale seemingly by removing the *love at first sight* subscale and adding additional beliefs thought to link to one's choice of partner – as the name suggests. Although it undoubtedly has its uses, this extra facet is superfluous to many investigations into romantic beliefs alone. Similarly, Hendrick and Hendrick (2002) consider romance and its relation to beliefs about sex to generate the love and sex scale – again adding another component that may not be necessary in many studies. This suggests the RBS is better for looking at romantic beliefs alone. An overview of 33 scales measuring love in some form, including the RBS, can be found in Hatfield, Bensman, and Rapson (2011) for further information.

Scale development

Sprecher and Metts (1989) describe an iterative development process starting with 32 items based on Lantz et al (1973), and a 5-point response scale tested with 145 students. This original scale saw many items added and removed over several studies with 1152 participants. The final scale is comprised of 15 self-report questions to be answered with a 7-point scale, which is scored as follows: Agree strongly = 7, Agree a good deal = 6, Agree somewhat = 5, Neither agree nor disagree = 4, Disagree somewhat = 3, Disagree a good deal = 2, Disagree strongly = 1. Therefore, scores range from 15 to 105. The RBS generates ordinal data, with higher scores representing more romantic beliefs. There is no manual to speak of, and therefore no procedures for common variations found when administering psychometrics such as what to do when a question is omitted, or if a participant requires material to be read aloud. There is also no guidance for who it is appropriate to use the RBS with.

The structure of the RBS is broadly similar in structure to other psychometrics, although improvements could be made. It is noted that earlier versions of the RBS contained reverse-scored items, but none were included in the final scale. This is problematic because some individuals are thought to show a bias towards agreement or disagreement for all items regardless of content (Cronbach, 1946). It would therefore be preferable to have some reverse-scored items to counteract this bias (Kline, 1998). The scale itself also presents a risk of bias. Literature suggests that a 7-point scale is equally as valid as a 5-point scale (Dawes, 2008). However, there are thought to be individual differences in the tendency to pick a neutral response (Cronbach, 1946). For example, people

unwilling to commit to an opinion to avoid giving a socially undesirable answer (Garland, 1991). Therefore, it may be beneficial to use scales with an even number of responses to remove the tendency to be non-committal – particularly the *love finds a way* and *idealization* subscales, as they were found to correlate with the Marlowe-Crowne Social Desirability scale (Crowne & Marlow, 1960).

Reliability

Sprecher and Metts (1989) provide a Cronbach's alpha coefficient of 0.81 for the total RBS. Cronbach's alphas for the subscales ranged from 0.57 to 0.80 and are presented in table 15. Similar values were obtained in further testing (Sprecher and Metts, 1999). Ideally, values for Cronbach's alpha should not fall below 0.70 (Kline, 1998), so *love at first sight* and *idealization* show below desired levels of internal reliability. However, Graham and Christiansen (2009) note that there is no universally accepted benchmark of reliability and some studies consider 0.50 to be acceptable. Additionally, it has been seen that the RBS shows good reliability across cultures, with a Cronbach's alpha of 0.78 for a Japanese sample, and 0.77 for a Russian sample (Sprecher, Aron, Hatfield, et al, 1994). Despite the acceptable reliability of the RBS, it is noted that other measures of romantic love mainly score above 0.70, with the Passionate love scale (PLS; Hatfield & Sprecher, 1986) and triangular love scale (Sternberg, 1986) even hitting a Cronbach's alpha of 0.9 (Graham & Christiansen, 2009), so the RBS is not as reliable as some of its predecessors.

Table 15. Reliability of the RBS (Sprecher and Metts, 1989)

	Cronbach's alpha N= 714-724*	Test-retest reliability N = 153-156*
Total score	0.81	0.75
Love finds a way	0.80	0.66
One and only	0.71	0.73
Idealization	0.64	0.66
Love at first sight	0.57	0.49
* n varies depending on missing data		

The low reliability of the *love at first sight* scale suggests it may not be appropriate to use, particularly when making important inferences such as crime prediction. Buchanan and Whitty (2014) determined that this scale did not show suitable levels of reliability, with a Cronbach's alpha of 0.55 in their sample, so was excluded from their use of the RBS with victims of romance scams. Conversely, Buchanan and Whitty (2014) reported slightly higher internal reliability coefficients for the RBS and other subscales compared to Sprecher and Metts' (1989) earlier analysis.

Sprecher and Metts (1989) provide a test-retest reliability coefficient of 0.75 for the full RBS and from 0.49 to 0.73 for subscales, as displayed in table 2. As with internal reliability, coefficients for test-retest reliability should reach 0.70, so the test-retest reliability is below the desired level in 3 out of 4 subtests. These figures are similar for different time periods measured up to 6 months (Sprecher & Metts, 1999), and suggest that interpretation of the scores is not definitive due to the potential for an individual's score to differ when measured at different times without intervention.

Validity

The validity of the RBS is generally good. The concurrent validity of the RBS is supported due to its' correlation with the RLCS. However, this correlation is not so high as to suggest the RBS and RLCS are too similar to necessitate the use of both. The RBS is thought to measure more aspects of romanticism than the RLCS. Further, the RBS shows good construct validity as it correlates with the Sex, Love, and Marriage Scale (SLM; Weis, Slosnerick, Cate, & Sollie, 1986), and other similar measures (Sprecher & Metts, 1989). However, the *love at first sight* subscale did not often correlate with scales other than the Eros love style from the LAS. This brings the subscale into question, as it may measure something other than romantic beliefs, or at least an obscure facet of romanticism unlike other aspects. The relationship between the LAS and RBS appears more complicated than the relationship with other measures; Storge, Mania and Pragma did not correlate with the RBS, Eros and Agape did, and Ludus had a negative correlation with the RBS. This suggests romantic beliefs may only be similar to passionate and selfless love, and it is nonsensical to compare the RBS to the overarching concept of "love" due to such variation.

Norms

As with many psychometrics, the RBS was developed and validated with primarily white, middle class, university students (Sprecher & Metts, 1989). However, in this introductory paper on the RBS, Sprecher and Metts do not report means and standard deviations for the full scale score or subscale scores so it is difficult to compare. Mean item scores out of 7 are often presented by the

RBS authors (Sprecher et al, 1994; Sprecher & Metts, 1989; Sprecher & Metts, 1999) as opposed to full scale and sub-scale scores, which implies an intention to average out the 15 items – a viable yet unusual method of scoring.

Appropriate norms for different cultures may be particularly important to consider, as Graham and Christiansen (2009) found that participant ethnicity affected the reliability of several previous love scales. This supports the idea that there are cultural differences in concepts of love, and likely also of romantic beliefs (Dion & Dion, 1996). The RBS has been used in Russia and Japan (Sprecher et al, 1994), as well as China (Song & Fox, 2016), and a Polish version has been created (Adamczyk & Metts, 2014). However, the RBS has been found to be affected by ethnicity within an ethnically diverse American sample (Regan & Anguiano, 2014), and an alternative three-factor structure has been suggested as more appropriate for African-Americans (Weaver and Ganong, 2004). The lack of normative values for such samples is therefore a problem for interpretation of the RBS with individuals of non-white or non-western origin.

The use of the RBS in forensic literature

Although only used in a small number of studies thus far, the RBS has developed a role in forensic research, as romantic beliefs have been examined in victims of interpersonal crimes. It is thought that romantic beliefs link to an assumption that love will fix any problems in relationships including abuse (Hayes, 2015), and thus allow people to tolerate more aversive interpersonal behaviour, and forgive it more easily (Lloyd, 1991). Confirmation of the link between romantic

beliefs and victimisation allows the guidance of interventions for such crimes, as it suggests that education on what constitutes abuse may be useful for those with strong romantic beliefs, who would have otherwise overlooked or excused such behaviour.

High RBS scores have been found in those who were more likely to accept stalking myths, particularly victim blaming (Dunlap, 2010), suggesting a higher tolerance for perpetration of stalking behaviour in both males and females. Similarly, high RBS scores have been linked to women's acceptance of controlling behaviour, and to their likelihood of experiencing physical and psychological intimate partner violence themselves (Papp, Liss, Erchull, et al, 2017). Romantic beliefs may partially explain tolerance of intimate partner violence and provide a reason for remaining in abusive relationships (Hayes & Jeffries, 2003). However, Bondurant (2001) found that RBS scores failed to predict acknowledgement of the acceptability of rape in rape victims. The reason for this contradictory finding is unclear, so it would be beneficial for further research examine the difference in association of romantic beliefs and tolerance of stalking and intimate partner violence, and the lack of association between romantic beliefs and tolerance of rape. Further research may also address whether romantic beliefs play a role in tolerance of emotional abuse and manipulation. Further, this tolerance of interpersonal criminal behaviour linked to romantic beliefs sounds not unlike the role of Stockholm Syndrome in victims of intimate partner violence. The Stockholm Syndrome Scale has already been shown to correlate with the PLS, suggesting a link with passionate love (Graham, Rawlings, Ihms, et al, 1995) and could be compared to the RBS.

More recently, Romantic beliefs have been measured in victims of crimes linked to online dating. Buchanan and Whitty (2014) found victims of online romance scams had higher RBS scores, particularly *idealization*, compared to non-victims. Again, this links to a tolerance of the wrongful behaviour, and the disbelief their partners can do anything wrong. This study is also valuable for future research looking at romantic beliefs and online dating-related crimes, as Buchanan and Whitty provide means and standard deviations for their sample of 853 online daters. These can be used as norms in future research, as separate values have been provided for both victims and non-victims. Indeed, these norms were used by Davis & Browne (unpublished-b, See Chapter 4) when looking at females who were sexually assaulted when meeting an online dating partner face to face. However, contrary to Buchanan and Whitty's (2014) findings, romantic beliefs were not high for these victims, and they reported levels of romantic beliefs lower than norms for non-victimised online daters from Buchanan and Whitty's (2014) study. It may be that a high level of romantic beliefs makes people more susceptible to online romance scams but a low level of romantic beliefs predicts sexual assault victimisation during face to face dates.

The RBS is not alone in its use for measuring romantic beliefs of crime victims. The LAS has been used to consider both perpetrator and victim love styles in relation to sexual coercion (Russell & Oswald, 2002). Male victims of sexual coercion were more likely to score highly on Pragma and Storge subscales, neither of which were found to correlate with the RBS (Sprecher & Metts, 1989). Additionally, Russell and Oswald (2002) found that female perpetrators of sexual coercion scored lower on scales that correlate with the RBS (Agape and Eros), and higher on the Ludus scale which has been seen to negatively correlate with

the RBS. These findings suggest that male victims and female perpetrators of sexual coercion may not score highly on the RBS, as seen in those who tolerate interpersonal crimes previously mentioned. The lack of correlation between the LAS and RBS suggests there are attitudes to romance and love that are important to crime victimisation which are not identified by the RBS. However, this does not negate the important findings that higher RBS scores are linked to victimisation of online dating romance scams, tolerance of stalking, and perceptions and experiences of intimate partner violence.

Conclusion

The RBS remains the only scale specifically designed to measure personal romantic beliefs with the subscales described above. It is therefore undoubtedly a useful addition to the collection of measures centred around love. Further, the RBS can be considered reliable and valid despite the concept of romantic beliefs being poorly defined. The RBS has been used across cultures and in different studies, and has been shown to be useful when looking at attitudes relating to the acceptability of interpersonal criminal behaviour, and likelihood of victimisation. Most recently, the RBS has been used to look at victimisation of crimes related to online dating, and through this examination, Buchanan and Whitty (2014) have provided a set of norms for the RBS in a group of online daters. This will be valuable to future researchers, as the rate of crimes relating to online dating is increasing (Readhead, 2016), and research into prevention has begun.

The RBS is not without limitations. The *love at first sight* subscale is particularly concerning as it has a lower internal and test-retest reliability than the other subscales, and does not correlate with other measures. Researchers may be wise to omit this scale from their analysis, as done by Buchanan and Whitty (2014). Another important point to note is that Sprecher and Metts (1989) stated they wanted a more modern test of romantic beliefs, but this was now nearly three decades ago and it is possible that modern views of romance have moved on from the concepts measured by the RBS. It may therefore be useful to explore romantic beliefs in younger generations.

As well as addressing these concerns, future assessments of romantic beliefs and interpersonal crimes could include the LAS as well as the RBS, due to the lack of correlation between these two measures and the independent link between acceptability of sexual coercion and LAS score. This would allow a more robust investigation into how all beliefs about romantic love are related to interpersonal crime. However, the decision may remain to use the RBS alone due to the focus on personal beliefs rather than the hypothetical other.

Chapter Six – General discussion

Despite the vast numbers of people using online dating (Dutton & Helsper, 2007), and concerning rises in crimes related to this practice (Readhead, 2016; National Crime Agency, 2016; BBC, 27 November 2015), very little research has been carried out in this area. This thesis aimed to rectify this. Research into online romance scams has been collated and reviewed systematically, which helped inform not only of the factors contributing to these scams but also to highlight what is still unknown in this area. Online dating crime research was limited to romance scams, so research was conducted to examine whether it is possible to predict crimes which occur during face to face online dates. Indeed, this study produced promising results and indicated many more areas to explore. Additionally, perhaps the most concerning and rapidly rising area of crimes related to online dating (Readhead, 2016; National Crime Agency, 2016) – sexual assaults – have been explored by researching the lived experiences of victims of these distressing events. Only in understanding this area fully, can we truly hope to learn how to support these victims, and consider prevention methods. Finally, a method of measuring a potentially important victim characteristic linked to online dating crimes was evaluated. The Romantic Beliefs Scale has been shown to be a useful psychometric measure, particularly when thinking about online romance scam victimisation (Buchanan & Whitty, 2015).

Summary of findings

Chapter 2, a systematic review of literature discussing both victim factors and perpetrator techniques of online romance scams, identified a number of repeating themes across studies. These victim and perpetrator themes were seemingly intertwined to produce a successful scam. It is likely that some individuals – those with romantic and/or traditional beliefs, who are lonely, amenable to long distance dating, middle-aged and lack computer experience – are more susceptible due to specific processes used by the scammers. These include the use of a high volume of messages, making victims feel addicted and find it hard to cut contact; the use of religious keywords; creation of gender stereotyped fake profiles; and specific targeting of older people. This review also alerts us to the fact that literature in this area is limited to small studies, many of which are qualitative, and that online romance scams and dating-related crime in general would benefit from larger scale research studies with statistically tested hypotheses. The studies carried a risk of bias and there were no “gold standard” randomised control trials due to the nature of the research area. However, existing research should not be dismissed due to its qualitative nature, as qualitative studies such as chapter 4 can provide important information.

Chapter 2 suggested there was little empirical research into online dating scams – only 11 studies were identified. However, scoping searches revealed no studies related to face to face online dating crimes at all. Chapter 3 was designed to carry out such research. It confirmed that rates of adverse face to face online dating experiences were higher in females, thus only this population was used in

further analysis. No other demographic factors including age, employment status, or if participants reported a mental health problem or other disorder were linked to likelihood of adverse experiences. Within these female online daters, it was identified that message content containing sexual comments, or content pressuring people into meeting quickly were more likely to have been received by those who experienced crimes such as verbal, physical or sexual assault than those who were not victims of crime on their dates. The concept of perpetrators exerting pressure was echoed in chapter 4 – victims of sexual assaults reported experiencing a variety of pressures both before and during their adverse experience. Additionally, if the online dating partner was sending either arrogant or self-deprecating messages, they were also more likely to perpetrate a crime on a face to face date. The concept of predicting who is not advisable to meet from message content was not new to online daters, and all but one female participant stated there were certain messages that, if received, would stop them meeting their online partner. However, 70% of those who identified aversive message content went on to meet people who sent similar content, suggesting people do not trust their intuition or they give their online communication partner the benefit of the doubt.

Perhaps unsurprisingly, those who stated they went on a date because they had “nothing better to do” were more likely to become victims of crime on these dates – perhaps because they did not take adequate precautions due to their apathy towards meeting their online partner. The results of this study suggested that precautions taken by online daters may not be effective at preventing such experiences though, as those who had been using online dating sites for longer; who had met more people; or who wanted more messages before meeting were

no less likely to be victimised. Further, those who googled their online partner or spoke to them on the phone or via video message prior to meeting were also no less likely to experience crime on their date.

This thesis finds concerning factors when exploring 3 female online daters' lived experiences of sexual assaults, as shown in chapter 4. These experiences appear to have a detrimental effect on victim's sense of identity and they report a variety of negative emotions which have been long lasting and affected victims' future sex lives. Victims described feeling pressure to engage in sexual behaviours, but also pressure to date in the first place – suggesting the role society plays in insisting relationships are a primary aim may make people more vulnerable to adverse online dating experiences as their heartfelt desires are not consistent with those who wish to date of their own accord. Similarly, the concept of blame points to a societal influence on these experiences. Participants experienced self-blame. This is not unusual in victims as people attempt to explain their experiences (Fischer, 1984) and utilise blame as a coping method to assure victims that by changing their behaviour they can easily avoid repeat victimisation (Perriloux, Duntley, & Buss, 2014). However, self-blame in sexual assaults is also of concern if it relates to the concept of victim blaming (e.g. McCaul, Veltum, Boyechko & Crawford, 1990). This takes responsibility off the perpetrator, which could reduce the likelihood of rehabilitation as the perpetrator does not feel a need to change as their actions were not their fault. This victim-blaming stance is implied by victims questioning whether the perpetrator of the assault was to blame or not. Participants in chapter 4 suggested that perpetrators may not have known that what they did was wrong, and therefore

were not acting maliciously. This has important implications for societal education, as discussed presently.

Finally, chapter 5 looks at the RBS as a psychometric, and as a tool for prediction of online crime victimisation. The RBS was found to be valid and reliable, although the *love at first sight* scale was less so. The RBS has already been used successfully to measure romantic beliefs in victims of online romance scams, and it has been used in chapter 4 to explore whether similar levels of romantic beliefs are found in victims of face to face adverse online dating experiences. It appears that there is a difference between these two victim groups, with scam victims holding more romantic beliefs. The RBS is advised for further exploration of romantic beliefs in victims of crimes related to online dating.

Implications

This thesis has many implications for online dating crime prevention. In terms of romance scams, chapter 2 presents a range of scam techniques that victims can be warned to avoid. These are broadly consistent with current advice by online dating sites and companies such as ActionFraud UK, such as the use of attractive profile pictures, and the role of a fake persona seeking assistance. However, and most vitally, the findings from chapter 2 suggests some advice given to online daters is incorrect: contrary to current advice, interactions with scammers do not necessarily lack disclosure. Therefore, the presence of disclosure should not be used to assume the online communication partner is genuine. Scammer profiles have been seen to disclose pseudo-personal information (Koon & Yoong,

2011), which may also function as a driver for empathy or offers of assistance from the victim if the disclosure is of a past misfortune. This information should be distributed rapidly, as current advice may leave victims susceptible to being tricked by a scammer who they feel must be legitimate due to their level of disclosure.

Chapter 3 adds to prevention by providing information on prediction. It suggests that online dating sites and relevant third parties such as Getsafeonline.org, news outlets (e.g. Horwood, 2016), internet service providers (e.g. Bouckley, 2017) and magazines (e.g. Burton, 2013) should be warning online daters that people who send sexual, pressuring, arrogant or self-deprecating messages may be riskier to meet. As well as education, online dating sites could allow users to report such messages, as they do with hostile message content. However, more research should be done to clarify which messages indicate risk, as these types of comment are unlikely to precede criminal behaviour in every case.

In addition to education regarding message content, online dating sites and relevant third parties should advise people to only meet their online communication partners when they feel genuine interest, rather than on a whim, as this appears to link to victimisation. Finally, and dauntingly, online daters should be made aware that using uncertainty reduction strategies such as Googling their partner, speaking to them on the phone, or even just having a lot of online dating experience does not mean they are less at risk and they should not be lulled into a false sense of security in such cases.

A summary of all information gained from chapters 2 and 3 which could be provided to victims to help them identify scams or risky individuals to meet is displayed in table 16. This list is unlikely to be complete. It will also contain characteristics found in non-malevolent online daters too – such as making regular contact, sending messages with sexual themes, being attractive, and appearing trustworthy. However, this information is still vital to help people recognise when they are unsafe.

Table 16. Factors linked to risk of online dating crimes

	Victim factors	Perpetrator factors
Online romance scams	• Male • Middle aged • Hold romantic beliefs • Hold traditional beliefs • Hold religious beliefs • Adhere to gender stereotypes • Lonely • Interested in international/long distance dating	• Use attractive pictures • Personas are gender-stereotypical • Make regular contact • Request financial help/present in crisis • Present themselves as having a good, trustworthy character • May provide realistic-looking evidence such as official documents • May disclose a similar history to victim (online dating site user) • May introduce a third party,

		such as a mother or doctor
		character to support their story
		• Will be located far away and/or have excuses not to meet • Create intimacy early and emphasise how special the relationship is
Face to face	• Female	• Sends sexual messages
verbal,	• Choses to meet	• Sends messages pressuring the
physical or	partner due to having	partner to meet
sexual	nothing better to do.	• Sends messages which make
assaults		them come across as arrogant
		• Sends messages which make
		them come across as self-deprecating

Chapter 4 does not seek to identify traits of those who perpetrate or fall victim to online dating crimes. However, the victim experiences explored in this chapter suggest societal attitude change has an important role to play in reducing these experiences, and that education approaches for perpetrators may be the way forward. Indeed, educating perpetrators of domestic violence about the rights of their partners following the Duluth model (equality rather than power) has been shown to be effective in reducing intimate partner violence (Dobash, Dobash, Cavanagh, & Lewis, 1996). Similar approaches may be relevant to online dating.

The theme of “searching for blame” identified in participants’ accounts of their experience suggests areas for education for both perpetrators and victims. The idea that perpetrators may not have realised their behaviour was even aversive, never mind criminal, is of great concern and suggests education on consent must be improved. Individuals should be educated on what constitutes consent, and that ceasing to resist does not equal consent. If perpetrators genuinely were not aware of the problematic nature of their behaviour, such education should be broadly directed at anyone with potential to become a perpetrator of sexual FSODE. This could be anyone who is open to using online dating.

Education should be provided at a high-school and college age, as most online dating sites accept users from age 18, although using high schools and colleges to distribute information may neglect education for a section of the working class demographic. The pre-existing literature regarding education on consent to prevent sexual assaults is likely to be highly applicable when planning education on consent as applied to FSODEs. For example, education with an activity component may be more effective than education on consent that features only a presentation of information (Borges, Baynard, & Moynihan, 2008).

This education may also require content specific to FSODES. Online dating has a unique dynamic providing exclusively online communication until the first arranged meeting. It is common for online partners to not meet expectations on face to face dates – particularly if the period of online-only contact is long (Ramirez & Wang, 2008). A useful avenue of exploration into FSODEs would be to investigate perpetrators’ expectations of sexual activity prior to the first face to face meeting based on their interpretation of online contact. It may also be

useful to consider how this may be influenced by the media and gaming entertainment (e.g. Emmers-Sommer, Pauley, Hanzal & Triplett, 2006; Ybarra, Strasburger & Mitchell, 2014; Brown & L'Engle, 2009).

Perpetrators may have incorrectly interpreted consent during the online exchange, particularly if there had been some sexual content in the conversation. They may have then had problems adapting to the perceived new signals during the face to face date and continued to assume consent was given and expect sexual contact. Therefore, it may be that education asserting online daters not to assume transfer of consent from online to offline activity, and from one sexual activity to another, would be beneficial to reduce future FSODEs.

The second avenue for education is that of "victim blaming". Potential perpetrators may require instruction on taking responsibility for their own behaviour and not perceiving that their unwanted sexual advances were precipitated by the victim in some way. This may also relate to chapter 3's findings that arrogant message content predicts crime. It may be that these arrogant individuals believe they can do no wrong and fail to recognise when their own behaviour is the problem, thus blaming their victim instead. Education aimed at reducing victim blaming should be targeted at more than just potential perpetrators. Victim blaming can also affect the response by legal officials (Stewart & Maddren, 1997), and the recovery rate for victims (Campbell, Ahrens, Sefl, Wasco, & Barnes, 2001), so education should be provided for a variety of different groups. Although some self-blame can be adaptive for victims of sexual assault (Perriloux et al, 2014), it can also reduce coping if it takes the form of characterological self-blame. Therefore, potential and actual victims should also be informed about the inappropriate nature of victim blaming with an

aim to reduce the level of blame directed at themselves. For short-term reduction in sexual assaults linked to online dating, education must ensure potential perpetrators are aware of their own role in criminality, and take responsibility for their behaviour, particularly if they have already engaged in similar behaviours (Maruna & Mann, 2006; Ware & Mann, 2012). Research suggests victimology education can reduce victim blaming (Fox & Cook, 2011), so this is one avenue to explore. In addition to education on specific beliefs regarding whether consent has been given, or whether the victim put themselves in that situation, it is likely that broader oppressive beliefs will also need to be targeted. This is because they appear highly linked to the acceptance of rape myths (Suarez & Gadalla, 2010) and continued hostile, racist, classist, ageist and other such beliefs may undermine attempts to alter beliefs about consent and victim blaming.

It is acknowledged that this thesis focusses heavily on victim education due to the perspectives of victims being the primary source of data for chapters three and four, which look at face to face crime. Future research should therefore investigate the perspectives and characteristics of perpetrators to further guide primary prevention strategies. This should include factors discussed here, such as levels of understanding of consent, responsibility taking, rape myth acceptance, and mismatched expectations regarding sexual contact when meeting online dating partners face to face. Research on perpetrators should also be influenced by the “what works” literature on offender rehabilitation. For example, the presence of criminogenic needs such as antisocial associates or family relationship problems (Bonta & Andrews, 2007).

In addition to education, those who experience victimisation of such crimes should be encouraged to report them to the police, even if just to alert the perpetrator that they should reconsider their behaviour. None of the 3 victims interviewed in chapter 4 reported their experience. They are likely not the only ones to feel reporting was not necessary, so there may be many more perpetrators who have not been alerted to the fact that they have behaved inappropriately. Not reporting FSODEs also has implications for online dating sites. After public outcry (Finnigan 2016; Telegraph, 2011), online dating sites have started to complete background checks on their members in a bid to improve safety for their clients. However, if people are not reporting assaults then it is possible that their online communication partner will simply return to online dating and engage in similar behaviours again whilst still passing a background check. Victims may therefore be able to help prevent further victimisation of others by reporting their experiences to the police.

Further areas of research

Firstly, clear statistics about online dating crimes are still unavailable. It is not known what percentage of online daters have adverse experiences, beyond the figures found in chapter 3. It is also unclear what proportion of victims go on to report their experiences – none of the 3 participants discussed in chapter 4 reported their experiences to the police. This suggests true rates of online dating crimes are unknown. A study with a much larger sample would be required to obtain such figures. Alternatively, specific questions about online dating-related crimes could be added to the Crime Survey for England and Wales, as this is

thought to provide more accurate figures than police records due to the aforementioned under-reporting.

There is a deficit in research into online dating crime experiences of those with minority sexualities. Whitty (2015a) includes homosexual participants when looking at online romance scams, but we are still far from having a detailed understanding of how online dating scams play out for homosexual individuals or those with other minority sexualities. Additionally, chapter 3 does not discount non-heterosexual individuals, but also does not look at them specifically.

Chapter 3 found that there was no significant difference in the likelihood of the last face to face date including criminal behaviour between heterosexual and non-heterosexual individuals. However, it may be that "non-heterosexual" is too vague a population and differences could be seen between subgroups. Until more research is conducted that consider these populations, we cannot say definitively whether their experiences are the same or different from heterosexual online daters. Further, chapter 4 describes 3 victims of sexual assaults – all female victims with crimes perpetrated by males. This does not inform us at all about the experiences of male to male and female to female sexual assault, nor the female to male assaults that may occur in heterosexual relationships. However, it is noteworthy that one participant providing their lived experience in chapter 5 identifies as asexual, and shows similar thoughts and experiences to heterosexual participants who were sexually assaulted by their online dating partners.

As with sexuality, gender differences should be explored further in relation to online dating crimes. Chapter 3 found that face to face crimes were less common

for male online daters, but not completely absent. Their voices should be heard in terms of their lived experiences, and considerations should be made about whether the same predictors – i.e. sexual, pressuring, hostile, and arrogant message content – are relevant or if other factors should be advised as precautions for males to take. Additionally, due to small sample sizes, no analysis could be completed on individuals who identify as non-binary so this should be explored.

Another important area for research is the difference between face to face experiences. Chapter 3 considered verbal, physical and sexual assault together due to the low base rate of experiences. However, different types of crime have different predictors (Gudjonsson & Sigurdsson, 2000), and so analysing them separately would provide a richer understanding of predictive factors and provide more areas for prevention measures to address.

Although victim demographics have been considered in chapter 3, there is still little information on who is more likely to be victimised for a face to face online dating crime. Whilst we know that victims of online romance scams are more likely to hold romantic beliefs, this did not appear to be the case for participants in chapter 4. It may be that the opposite is true, and those who are less romantic may be more susceptible to assault victimisation. However, this should be explored further in a larger study with comparison to a control group. Other potential victim characteristics should also be explored, such as whether those who are assaulted on face to face dates adhere to gender stereotypes, as those who fall victim to scams do.

Finally, returning to the role of romantic beliefs in predicting victimisation, the RBS – and perhaps other similar scales such as the LAS – should also be used with perpetrators of face to face online dating crimes. Perpetrators of sexual coercion have previously been shown to score lower on scales of the LAS that correlate with the RBS (Russell & Oswald, 2002), and a similar finding may be found with perpetrators of FSODEs. Additionally, measure of perpetrator and victim romantic beliefs may be of use when understanding and predicting FSODEs, as it could be that one of the factors linking to such experiences is a mismatch of expectations which would be indicated by a large difference between victim and perpetrator scores. Chapter 4 indicates that victims feel pressured to date in the first place, which may indicate they are not dating for the same motives as their online communication partner, and thus have different expectations about the appropriateness of sexual contact. This may or may not relate to romantic beliefs of both parties, but would be of benefit to study in some form.

Limitations of this thesis

There is no doubt that this thesis has provided many important implications for prevention of crimes related to online dating. It has also highlighted gaps in the literature and areas for future research. However, the chapters are not without their limitations, and these limitations should be acknowledged.

Firstly, as noted frequently throughout this thesis, literature on online dating crimes is rare. This has limited the ability to draw implications from a systematic review. Eleven papers were found, and whilst there is no determined figure for

how many studies make a good systematic review, this number can be considered low. It is possible that studies have been missed, as online dating crimes are a new research area, thus keywords are not well defined. Additionally, only 3 of these studies provided quantitative data, with virtually no overlap in methods used or variables examined. This meant that there was no way to use more objective methods of comparing findings such as meta-analyses. The remainder of the studies were qualitative, so a thematic synthesis was utilised. There was also a high risk of bias within included studies. There were few controls over confounding variables, virtually no comparison between groups, and frequent sampling from a single source. The latter is particularly problematic, as different online dating sites often have different demographics. Additionally, although her work is greatly appreciated, the presence of Professor Monica Whitty's work is significant within literature on online romance scams. It is possible that her influence is so great that much of the research in this area is biased to her beliefs and values. However, in a similar vein, the lead research in for this thesis may have held biases when completing the interpretative phenomenological analysis of chapter 4 due to having already completed the research study in chapter 3. Finally, this thesis does not look at potential differences between people with different sexualities and there is minimal commentary on gender.

The primary limitation from chapter 3 was that message content was examined in categories rather than specific phrases. There is likely a huge variety of possible comments that could be in these categories. For example, a sexual comment could range from mildly flirtatious to highly explicit, and common sense would suggest that the more extreme comments would be more likely to

be linked to adverse experiences than more general comments. This could provide an explanation as to why 70% of female participants met people who sent messages from the same category as one they identified as aversive. The person they met may have used acceptable comments from the category where only some explicit comments were aversive. It would not have been possible in this study to include more specific message content as it was assumed that people would not be able to remember clearly. However, future studies could attempt to gain access to actual messages between victims and perpetrators with the cooperation of dating sites.

Information from chapters 3 and 4 may be somewhat unreliable as they use retrospective data collection. Participants were asked about their last online dating partner in chapter 3, but this was still not necessarily recent if they ceased online dating. There might be a bias whereby those with positive online dating outcomes are still with the last person they met and have been for months or years. This may have influenced what was remembered from message content, resulting in a lower frequency of all message content being reported in non-criminal experiences. However, as stated, this bias would be across all message content and should not have caused significant findings in only some message content types. In addition, participants in chapter 4 all had their experiences several years ago, thus virtually no information on message content could be provided to support the findings of chapter 3. It would be beneficial if more recent experiences could be examined in the future to increase the amount of information that can be recalled.

Conclusion

Overall, this thesis has provided important information to assist with prevention of online dating related crimes. Information from this study can be used by online dating sites and other organisations to help victims take appropriate precautions and keep themselves safe. Additionally, education around consent and victim blaming should be implemented at a societal level to target all potential perpetrators. Victims of crimes related to online dating should be encouraged to report their experiences, and should also be offered support due to the long-term effects such experiences have on their emotions and sense of identity.

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Appendix 1. Systematic review protocol

What factors lead to online dating scams? A systematic review protocol.

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This review is sponsored by The University of Nottingham.

Introduction

Rationale

Online dating is an activity that has only been in use for around two decades, and has been popular for an even shorter amount of time. Therefore, there is little research in this area. However, online dating is getting more common and the literature around the subject is growing at the same time.

As online dating becomes more common, the crimes linked to it are also increasing. There are two main areas of crime linked to online dating – face to face assaults, and scams/fraud that occur solely online without communication partners having to meet. To date, there has been little research conducted on face to face crimes that result from online dating and more research in this area should be carried out before a useful systematic review can be published. However, although the research is still limited, there is a wider array of literature discussing online dating scams. This research has not been synthesised in a systematic review as yet.

Online dating scams are an ongoing problem. A news report from February 2016 (Ward, 2016) stated that recent research indicates that roughly half of online dating site users had received spam or scam messages on online dating sites, with around 32% receiving requests for money, with the Metropolitan Police saying that £4 million was lost through online dating scams in 2015 (BBC, 2015). It would be beneficial to understand this problem more and therefore this systematic review can guide the research literature to help us understand online dating scams with a view to reducing the number that occur.

Objectives

The over-arching research question to be answered by this review is 'what factors contribute to the successful completion of online dating scams'.

The objectives of this review are:

1. To understand what the outcomes of online dating scams are for victims.
2. To understand what the outcomes of online dating scams are for society.
3. To understand what victim characteristics make people susceptible to online dating scams.
4. To understand what perpetrators do to successfully scam individuals using online dating sites.

Methods

Eligibility criteria

Population

The population considered in this review will be adults aged over 16 who have used online dating sites. Due to the limited nature of the literature, there will be no restrictions on ethnicity, sexuality, socio-economic status or geographical area.

Exposure

The exposure considered in this review will be the experience of either attempted or completed online dating scams.

Comparators

In studies with comparators, appropriate comparators are individuals who have not experienced online dating scams. A comparator will not be essential for inclusion in this study due to the limited availability of literature on this topic.

Outcomes

Outcome measures will be features that contribute to the successful completion of an online dating scam – i.e. when an individual loses money or experiences psychological harm/distress as a result of an attempted scam perpetrated via online dating. Initial scoping searches indicate that outcomes are likely to consist of both victim and perpetrator characteristics.

Study design

A scoping search indicates that the research into online dating scams is limited. Therefore there will be no specific restriction by study design, as it is not expected that there will be many studies of the higher methodological qualities and no randomised control trials are anticipated to be found. Included studies are expected to be observational in nature as it is not possible to allocate individuals to scammed vs not scammed conditions.

Time frame

This review will be completed over approximately one year, to be finished around December 2016. Any further information sent by authors or other sources after September 2016 will not be included in the final review.

Years considered

Online dating is a relatively new topic and therefore no studies will be included before the year 2000. This provides just over a decade of research and also helps to cut out irrelevant literature. Relevant articles found in the scoping search go back as far as 2002.

Language

All papers written in English will be considered. If there are relevant papers in other languages, efforts will be made to translate them using Google translate. If this does not provide an adequate translation, a request will be made for other students and staff members from the School of Medicine at the University of Nottingham to translate if they are able to.

Publication status

All identified published material will be included. Additionally, searches will be made for unpublished dissertations/theses. Prominent authors in the field will be contacted to request any unpublished research they have in the area.

Information sources

Databases that will be searched include: PsycINFO and PsychARTICLES via OVID; Web of Science; ASSIA via Proquest; ScienceDirect.

Searches will be conducted in the journals: Cyberpsychology, Behavior, and Social Networking; Psychology, Crime and Law; British Journal of Criminology. These journals were identified as publishing relevant studies in the initial scoping search. Other journals may be searched if more relevant studies are found from other journals.

Unpublished dissertations will be searched for via ProQuest. Google Scholar and NUsearch.ac.uk will also be used to check for additional papers. Authors from all studies to be definitely included after reading the final paper will be contacted to ask if they have any other research in the area of online dating scams. A scoping search indicates that Professor Monica Whitty has the most research in the area so she will be a primary author to contact.

Search strategy

This review will search for both qualitative and quantitative studies. There will be no limits on study design. There will be no limits on language, although studies will not be included if they are in other languages that cannot be translated using Google translate or by members of the University of Nottingham School of medicine.

A draft search strategy for use with OVID can be seen in table 1. Additional limits include "since year 2000 to current". Search item 4 indicates the words used to describe the type of dating. Search 4 and search 13 combine in order to get the population of people who have used online dating – a scoping search indicated that "online romance" is used as well as "online dating". Searches 10 and 11 were used rather than a single item of "dat*" because "dat*" allows for the word "data", which results in too many irrelevant articles to process. Search 9 defines the exposure condition of online dating scams. Search 7 allows for "deception" and "deceptive", and search 8 allows for "deceive", "deceit", "deceitful" etc.

Table 1. Proposed search strategy for use in OVID.

Identification number	Searches
1	Online
2	Cyber
3	Internet
4	1 or 2 or 3
5	Scam
6	Fraud
7	Decep*
8	Decei*
9	5 or 6 or 7 or 8
10	Dating
11	Date
12	Romance
13	10 or 11 or 12
14	4 and 9 and 13

Study records

Data management

Records will be managed using EndNote X7 for Windows. Citations, abstracts and full text of papers will be exported to this programme. Data will be managed by Review Manager 5.3 for Windows.

Selection process

Initial screening will take place from study titles and abstracts to determine whether studies may fit with the PICO. This will be completed by independently by two reviewers – the primary author and a peer from the Forensic Psychology Doctorate course at the University of Nottingham. Further screening will be conducted by reading entire papers identified by the initial screening process. This is anticipated to eliminate papers that are not relevant to the PICO but this was not apparent from just reading the title and abstract. For example, papers about dating scams that are from face to face dating rather than online dating may reach this stage. Two reviewers will also complete this screening process independently. If there are disagreements between reviewers at either stage which cannot be resolved by discussion, the paper(s) will be given to the research supervisor, Professor Kevin Browne.

Studies will also be excluded if they use the same sample population as another included study. If this occurs, the more recent study will be used.

Data collection process

Data will be extracted from included papers using the form in appendix 7. If any information is missing, the authors of the paper will be contacted.

The following will be extracted from each study:

1. Backgrounds and objectives
2. Methods: including how data was collected (assessor vs self-report, measurement tools); statistics used; controls for confounds

3. Participants: including eligibility and exclusion criteria; how participants were identified and contacted.
4. Exposure: the nature of the online dating scam – i.e. whether all participants were financial victims or whether some were psychological victims.
5. Comparison: whether there was a comparison group; the nature of the comparison group – e.g. not victims of dating scams, victims of other scams.
6. Outcomes: what outcomes were taken; how outcomes were measured.

Data items

All available details of the population will be extracted, including what dating site(s) they used, how long they used online dating for, gender, sexuality, age. The details of the online dating scam will be extracted, including the time the scam went on for, the amount of money lost, whether money was retrieved, and the psychological distress caused. Data simplifications are not anticipated to be necessary as multiple exposure groups compared to one control are not expected to be used in any study.

Outcomes and prioritization

Outcomes extracted will be the percentage of participants who experienced an online dating scam, any outcomes that describe victim characteristics and any outcomes that describe how victim and non-victims differ – e.g. indexes of loneliness, self-esteem etc. A final outcome that will be extracted is any perpetrator characteristics and techniques – e.g. perceived perpetrator gender, backstory for why money is required, geographical location of perpetrator. Outcome descriptions will be refined in the systematic review after relevant outcomes have been identified.

Risk of bias in individual studies

Two independent raters will assess studies for risk of bias. A form for assessment of risk of bias in individual studies can be seen in appendix 6. This form is based on the Newcastle-Ottawa Scale (NOS; Wells et al, 2000). This measure is designed for case-control studies – which most studies identified are anticipated to be. The NOS was adapted to fit the requirements of this review by incorporating relevant elements of the Cochrane Collaboration's guide to assessing risk of bias (Higgins, 2011), as well as elements from the Effective Public Health Practice Project quality assessment tool (Thomas et al, 2004).

Biases will be measured for selection of participants, comparability of groups if there are control groups, ascertainment of exposure, measures of outcome, attrition and statistics. A rating of risk of bias on each of the six categories will be made. A global rating for risk of bias will then be made and the paper will be classed as 'high', 'medium' or 'low' risk of bias.

Data synthesis

It is not anticipated that quantitative synthesis using meta-analysis will be appropriate. This is because studies are expected to be limited to case control

and case series designs. Poor heterogeneity is expected. It is also possible that studies will not look at the same specific outcome measures for why online dating scams occur. A systematic narrative synthesis will be used instead. Information from the studies will be presented in text and tables. The narrative synthesis will explore the findings for what factors affect online dating scams within and between included studies.

Characteristics of the studies will be discussed first. These will include how cases are obtained and the nature of these cases. This is because demographic data such as age, gender and sexuality are likely to be important characteristics in online dating activity and potentially even relevant to becoming a victim of an online dating scam. For example, older heterosexual women may be found to be targets of online dating scams, but this may also be the primary group to respond to questionnaires.

Victim characteristics will be discussed next. These will include the types of people that online dating scams target, and the kind of people who are susceptible to these scams. Information will then be provided on perpetrator characteristics for the types of people who perpetrate these scams, and the methods they use to scam people – such as grooming techniques. Finally, the outcomes for victims and society will be reported to look at the impact of online dating scams. This will include proportion of online daters who are scammed, the amount of money lost and the psychological harm done.

Few studies are anticipated to be found, so studies will not be omitted based on quality or risk of bias. Notes will be made by results if that area of synthesis has included studies with a high risk of bias or is limited to case series designs.

Confidence in cumulative evidence

The quality of evidence will be assessed for risk of bias and publication bias as discussed previously. Confidence in the evidence will be considered in line with the Grading of Recommendations Assessment, Development and Evaluation working group methodology (GRADE) guidelines adapted as far as possible for case-control studies. A commentary will be provided on the overall quality of the evidence.

Inconsistency will be measured by considering whether any studies find the same outcome measures are linked to online dating scams – i.e. the same victim and perpetrator characteristics. Heterogeneity will also be assessed in as far as this can be calculated depending on whether studies measure the same outcomes.

Indirectness will be measured by considering whether the population studied are the ones involved in online dating scams – i.e. victims/perpetrators, or whether they are from alternative sources. Whether the dating scam was completed or not will also be considered, as attempted dating scams that failed could be considered an indirect measure that is assumed to be similar to the completed dating scam.

Imprecision may be harder to evaluate in case-control studies but reported confidence intervals and effect sizes will be considered.

Appendix 2. Electronic search strategy for Ovid

Number	Searches	Results
1	online	958960
2	internet	152145
3	(cyber NOT bully* NOT stalk*)	2878
4	romance	8116
5	(dating NOT violence)	36735
6	fraud	11358
7	scam*	3707
8	1 or 2 or 3	1056309
9	4 or 5	43895
10	6 or 7	14826
11	8 and 9 and 10	101
12	Limit 11 to yr="2000-Current"	95

Appendix 3. Electronic search strategy for Web of Science

Electronic search strategy for Web of Science – advanced search option

TS=(online OR internet OR cyber) AND TS=(dating OR romance) AND TS=(scam OR fraud) NOT TS=(bully* OR violence OR stalk*)

With the range of years set to 2000-2016

Finds a total of 71 items

Appendix 4. Electronic search strategy for Science Direct

Electronic search strategy for Science Direct – expert search option
(online OR internet OR cyber) AND (dating OR romance) AND (scam* OR fraud)
AND NOT (bully* OR violence OR stalk*)

Refined search to Journals (All)

Fields selected limited to "computer science"; "psychology" and "social sciences"

Years limited to range "2000" to "present"

Finds 2427 results

Appendix 5. Electronic search strategy for Proquest

Electronic search strategy for Proquest

Databases included:

"applied social sciences index and abstracts (ASSIA)";
"international bibliography of the social sciences (IBSS)";
"national criminal justice reference service (NCJRS) abstracts database";
"proquest dissertations & theses: UK & Ireland";
"proquest dissertations & Theses A&I";
"sociological abstracts"

Advanced search

(online OR internet OR cyber) AND (dating OR romance) AND (scam* OR fraud)
AND NOT (bully* OR violence OR stalk*)

Specific date range

Any day, any month, year 2000

To

Any day, any month, year 2016

Source type

Conference papers and proceedings

Dissertations and Theses

Scholarly journals

This found 3,418 results

Results were then narrowed by excluding by database

Proquest Dissertations & Theses A&I: Literature & Language (893 results)

Proquest Dissertations & Theses A&I: History (627 results)

Proquest Dissertations & Theses A&I: The Arts (601 results)

Proquest Dissertations & Theses A&I: Business (534 results)

Proquest Dissertations & Theses: UK & Ireland: Business (8 results)

Proquest Dissertations & Theses: UK & Ireland: History (2 results)

Proquest Dissertations & Theses: UK & Ireland: The Arts (1 result)

Proquest Dissertations & Theses: UK & Ireland: Literature & Language (1 result)

Abstracts in New Technology & Engineering (1 result)

This left 1463 results

Then excluded subject types:

Higher education (95 results)

Geology (68 results)

School administration (60 results)

Philosophy (48 results)

Religion (43 results)

Geography (46 results)

Urban planning (36 results)

Teaching (31 results)

Curricula (29 results)
Climate change (28 results)
Geochemistry (27 results)
Educational leadership (23 results)
Teacher education (23 results)
Educational technology (22 results)
Archaeology (20 results)
Gerontology (20 results)
Paleoclimate science (20 results)
Spirituality (20 results)
Theology (20 results)
Geophysics (18 results)
Are planning & development (17 results)
Bilingual education (17 results)
Genetics (17 results)
Elementary education (16 results)
Higher education administration (16 results)
Ecology (14 results)
Molecular biology (14 results)
Secondary education (14 results)
American studies (13 results)
Continuing education (13 results)
Educational evaluation (13 results)
Electrical engineering (13 results)
Biblical studies (12 results)
Curriculum development (12 results)
Library science (12 results)
Energy (11 results)
Medicine (11 results)
Health education (11 results)
Religious education (11 results)
Atmospheric sciences (10 results)
Civil engineering (10 results)
Education (10 results)
Environmental studies (10 results)

Leaving 778 results

Appendix 6. Assessment for risk of bias

	Author(s):		Year:			
Item			Risk of bias			Notes
Indicate the study design						
Study Design	Cohort Design (cohort identified from exposure to event of interest and followed up to see if outcome occurs. If there is no unexposed group as a control then it is a case series)	Case control design (subjects identified from outcome e.g. distress, and controls are from the same population. Exposure is then determined retrospectively)	Case series	Single Case Study	Media Analysis	
Selection						
Is the case definition adequate? i.e. have cases used online dating/perpetrated online dating crime?	Yes, and there is independent validation that participants used online dating	Not applicable e.g. media analysis and all items are related to online dating	Yes, based on self-report	No	No description	

Representativeness of the cases	Cases are clearly representative of the population	Not applicable (media analysis)	There is potential for selection bias – e.g. by gender, sexuality, specific dating site	Not stated		
Selection of controls	Controls from the same population as cases	No control group	Controls from a different population to cases	No description		
Definition of controls	Have used online dating but have no experience of perpetration of online dating scams	No control group	Other definition of controls	No definition of controls		
What percentage of selected individuals agreed to participate?	80-100%	No consent – media analysis/data taken from dating profiles directly	60-79%	Less than 60%	No description	
Comparability						
Comparability of cases and controls on the basis of the design or analysis	The study controls for whether both case and control individuals have used online dating sites	No control group	This study does not control for whether both cases and controls have used online dating	Unable to tell if this study controls for whether participants have used online dating		
Comparability of cases and controls on the basis of important	The study controls for demographic factors that are important to dating, e.g. age,	No control group	This study partially controls for demographic factors that are important to	No control for comparability of cases has been used		

demographics	gender, sexuality		dating			
Exposure (dating scam)						
Ascertainment of exposure	Independent validation of experience/perpetration of an online dating scam, e.g. availability of message content, police reports etc.	Irrefutable exposure, e.g. transcripts of messages from perpetrator messages	Self-report experience/perpetration of online dating scam	No description of ascertainment of exposure	Media analysis where ascertainment methods are likely to be varied	
Same method of ascertainment for cases and controls	Yes	No control group	No	Not possible to tell		
Outcome (reasons for dating scam)						
Ascertainment of outcome measure(s)	Independent validation e.g. therapist or financial reports etc.	Measures where assessor blind to case/control status	Self-report measures	Measures where assessor is not blind to case/control status	No description	
Were data collection tools shown to be reliable?	Yes	No data collection tools used	No	No description		
Were data collection tools shown to be valid?	Yes	No data collection tools used	No	No description		
Were any measures discussed as important but then	No		Yes			

not measured?						
Attrition						
Non-response rate	Same rate for both cases and controls/no attrition	No control group	Different response rate for cases and controls	No attrition recorded		
Non-respondent characteristics	Described	No non-respondents	Not described			
Drop-out rate	0-25%		21-40%	More than 40%	Not recorded	
Were the reasons for drop-outs recorded	Yes	No drop outs	No			
Statistics						
Were the statistics appropriate for the study design?	Yes	None used (qualitative)	No	None used despite numerical data		
Were confounds controlled for statistically or in other ways?	Yes		No			
Other notable issues						

Appendix 7. Data extraction form

	Author	
	Year	
	Title	
	Journal/Source	
	Research design	
	Research question	
P	Participant type	e.g. victim, scammer
	Number of participants	
	Source of participants	
	Genders	
	Ages	
	Sexualities	
	Country of origin	
E	Online dating information	e.g. site
	Loss	e.g. money, emotional trauma
C	Number of controls	
	Source of controls	
	Genders	
	Ages	
	Sexualities	
	Country of Origin	
O	Method of measuring outcomes	
	Statistics used	
	Significant outcomes	
	P values	
	Non-significant outcomes	
	Notes	

Appendix 8. Online dating questionnaire

Online Dating Questionnaire

Information Sheet

1, Please confirm you have read and understood the information sheet
I have read and understood the information sheet

Consent Form

2, Please confirm you have read and understood the information provided, and consent to take part in this study.
I agree to take part in the above study

3, Please select where you heard about this survey:
Facebook Twitter Reddit From an online dating site
 From a friend Other

3a, If you selected other, please specify
[blank space]

Background Information

4, Please indicate how old you are:
16-25 26-35 36-45 46-55 56-65 66+

5, What gender do you most identify with?
Male Female Other

5a, If you selected other, please specify
[blank space]

6, What gender were you at birth?
Male Female

7, How would you describe your sexuality?
Heterosexual (straight) Homosexual (gay/lesbian) Bisexual
 Asexual Other

7a, If you selected other, please specify
[blank space]

8, How would you describe your relationship status?
Single living alone
Single living with family
Single living with friends

In a short term relationship with an intimate partner, living apart
In a long term relationship with an intimate partner, living apart
Cohabiting/living with an intimate partner
Married
Divorced
Widowed
Other

8a, If you selected other, please specify
[blank space]

9, How would you describe your job?
Professional
Semi-professional
Non-professional
Unemployed
Student

10, How would you describe your social class?
Upper class/upper middle class
Middle class
Lower middle class/lower class
No class
Other

10a, If you selected other, please specify
[blank space]

11, How would you describe your ethnic group?
White
Black
Asian
Arab
Mixed/multiple ethnic groups
Other

11a, If you selected other, please specify
[blank space]

12, Do you consider yourself to have any kind of mental health problem?
(e.g. depression, bipolar, schizophrenia, etc)
Yes No

12a, If you answered 'yes', please indicate whether this disorder has been professionally diagnosed or self-diagnosed.
[blank space]

12b, If you consider yourself to have a mental health problem, please provide details in the space provided. E.g. what disorder, whether you are receiving any kind of treatment/support.
[blank space]

13, Do you consider yourself to have any kind of personality disorder? (e.g. borderline personality disorder, etc)
Yes No

13a, If you answered 'yes', please indicate whether this disorder has been professionally diagnosed or self-diagnosed.
[blank space]

13b, If you consider yourself to have a mental health problem, please provide details in the space provided. E.g. what disorder, whether you are receiving any kind of treatment/support.
[blank space]

14, Do you consider yourself to have any kind of disability?
Yes No

14a, If you answered 'yes', please indicate whether this disorder has been professionally diagnosed or self-diagnosed.
[blank space]

14b, If you consider yourself to have a mental health problem, please provide details in the space provided. E.g. what disorder, whether you are receiving any kind of treatment/support.
[blank space]

9a, Do you consider yourself to have any kind of disability?
Yes No

15, Do you consider yourself to have any kind of developmental special needs? (e.g. autism, ADHD, etc)
Yes No

15a, If you answered 'yes', please indicate whether this disorder has been professionally diagnosed or self-diagnosed.
[blank space]

15b, If you consider yourself to have a mental health problem, please provide details in the space provided. E.g. what disorder, whether you are receiving any kind of treatment/support.
[blank space]

16, Do you consider yourself to have any kind of substance misuse problem? Please include problems with alcohol.

Yes No

16a, If you answered 'yes', please indicate whether this disorder has been professionally diagnosed or self-diagnosed.

[blank space]

16b, If you consider yourself to have a mental health problem, please provide details in the space provided. E.g. what disorder, whether you are receiving any kind of treatment/support.

[blank space]

Online Dating Background

17, Who do you search for online for dating? (please select all that apply)

Males

Females

Transsexual men

Transsexual women

I don't search for people to date

Other

17a, If you selected other, please specify

[blank space]

18, Who do you search for online for a long term intimate partner/relationship? (please select all that apply)

Males

Females

Transsexual men

Transsexual women

I don't search for people for a long term intimate partner/relationship

Other

18a, If you selected other, please specify

[blank space]

19, Who do you search for online for just sex/short term intimate partners? (please select all that apply)

Males

Females

Transsexual men

Transsexual women

I don't search for people for just sex/short term intimate partners

Other

19a, If you selected other, please specify

[blank space]

20, Who do you search for online to be just friends? (please select all that apply)

Males

Females

Transsexual men

Transsexual women

I don't search for people to be just friends

Other(s) (please specify)

20a, If you selected other, please specify

[blank space]

21, How long have you been using/did you use online dating for?

1 month or less 1-6 months 6 months- 1 year More than 1 year

22, What method of online dating do you use? (Please select all that apply)

Free general dating websites (e.g. OKCupid, Plenty of Fish)

Paid enhancements on free general dating websites (e.g. upgraded member on Plenty of Fish)

Paid general dating websites (e.g. eHarmony, Match.com)

Specialist websites for specific partners/dating (e.g. Uniform dating, Animal people, Pagan partners, etc)

Smartphone apps associated with a dating website (e.g. OKCupid app)

Smartphone apps with no associated website (e.g. Tinder, Grindr)

Specialist websites just for sexual partners

Other

22a, If you selected other, please specify

[blank space]

23, What do/did you use online dating websites/apps for? (please select all that apply)

Friends

Casual sexual encounters

Casual, short term dating

Long term dating

A marriage partner

Other

23a, If you selected other, please specify

[blank space]

24, Roughly how many people have you met using online dating sites/apps?

1 2 3 4 5 6-10 11-15 16-20 21+

25, Is there anything in the content of messages that would make you decide not to meet someone?

- Flirty comments
- Lack of flirty comments
- General sexual comments
- Sexual comments about particular fetishes
- Requests of money for sex
- Offers of money for sex
- Lack of sexual comments
- Messages limited to small talk (hi, how are you?)
- No small talk – all in-depth discussion
- Talking about hobbies and interests that you find boring
- No discussion of hobbies and interests
- Compliments
- Lack of compliments
- Romantic comments
- Lack of romantic comments
- Mild insults (I usually prefer someone taller/thinner)
- Derogatory comments about gender
- Derogatory comments about sexuality
- Derogatory comments about religious beliefs (including atheism)
- Derogatory comments about race
- Explicit threats/aggression
- Explicit blackmail (e.g. if you don't give me your number I will stop talking to you)
- Veiled blackmail (I'm going to close my account but I still want to talk to you, is there any other way to contact you?)
- Being pushy to meet
- Being pushy for you to give out contact information
- Arrogance
- Being negative about themselves
- Sending intimate pictures
- Refusing to send intimate pictures
- Sending a clear photo of their face
- Refusing to send a photo of their face
- Trying to talk you into dating them after you initially say no
- Talking about their past relationships
- Asking about your past relationships
- Talking about future plans for relationships
- Not talking about future plans for relationships
- Other

25a, If you selected other, please specify
[blank space]

26, What is the minimum number of text-based messages (i.e. online dating, social media, texting) required before you would be comfortable to meet someone?

- 1-10 messages
- 11-20 messages
- 21-30 messages
- 31-40 messages
- 41-50 messages
- 51+ messages

27, Would you need to talk to someone in a non-text-based way before meeting?

- Yes - on the phone
- Yes - via video chat such as Skype
- No - this is not necessary

28, Has anyone ever asked you for money on an online dating site?

- Yes, but I did not send them any money
- Yes, and I sent money which they then returned
- Yes, and I sent them money which they did not return
- Yes, and money was taken from my bank account without my knowledge
- No

29, Have you had any of the following adverse experiences during a face to face date with someone you met online? (please select all that apply)

- Sexual Harassment (unwanted sexual verbal remarks)
- Sexual Molestation (unwanted sexual contact not including intercourse)
- Rape
- Verbal aggression
- Physical aggression
- Other

29a, If you selected other, please specify

[blank space]

Last date – For the following items, please think about the last face to face date you had as a result of online dating sites or apps.

30, Who initiated the messaging?

- Me
- Them
- I can't remember

31, Please consider the online conversation before meeting. What was the content of the messages like? Please select all that apply.

- Generic content (e.g. hi, how are you)
- Personalised content - they mentioned something on my profile
- They were flirty
- They made sexual comments/sexting
- They did not respond to my sexual comments
- They made sexual comments related to a particular fetish
- They offered me money for sex
- They asked me for money for sex
- They made fun of me
- They talked about their hobbies and interests
- They asked about my hobbies and interests
- They told me personal details about themselves, e.g. where they worked, talked about their family and friends etc.
- They asked me about my personal details – work, friends, family etc.
- They gave me their number/Facebook/Whatsapp etc.
- They asked for my number/Facebook/Whatsapp etc.
- I did not want to give them my contact details and they accepted this
- I did not want to give them my contact details and they repeatedly asked or became hostile about this.
- They complimented me
- They made romantic comments other than compliments, e.g. I would like to take you to dinner, I would treat you like a princess
- Mild aggression/insults, e.g. I don't like that you think X, I would usually go for someone taller, etc.
- Aggression/threats
- Explicit blackmail, e.g. if you don't give me your number/meet me I will stop talking to you
- Veiled blackmail, e.g. I'm going to delete this account but I really want to keep talking to you so I need your number
- They made sexist comments
- They made racist comments
- They tried to persuade me to date them after I initially said no
- They made comments about my beliefs (religion, preferences etc.)
- They made homophobic/transphobic/other minority group based derogatory comments
- They sent me intimate photos
- They did not send a clear photo of their face
- They were very negative/pessimistic about themselves
- They were arrogant
- Other

31a, If you selected other, please specify
 [blank space]

31b, If you have any other details you would like to add, please write them in the space provided
[blank space]

32, Did you attempt to check any information about the person? (please select all that apply)

- I asked questions to find out about them, e.g. where they work, went to school, grew up, etc.
- I googled their name
- I googled information about them such as their place of work
- I looked them up on social media
- I asked mutual friends about them
- Other
- I did not attempt to confirm any information about them

32a, If you selected other, please specify
[blank space]

33, Why did you decide to meet them?

They were romantic

We had similar interests

They were nice

We both wanted casual sex

They were quite pushy about meeting

I didn't have anything else to do at the time

To get a free meal/activity

Other

33a, If you selected other, please specify
[blank space]

34, Did the date go well in your opinion?

Yes

No

Neutral

35, What happened on the date? (please select all that apply)

- Neutral conversation, e.g. hobbies, small talk, etc.
- Neutral activity, e.g. dinner, cinema, etc.
- Activity based on shared interests, e.g. horse riding, sporting activity, etc.
- Activity that they wanted to do but you didn't
- Activity you wanted to do but they didn't
- Sexual conversation that you wanted
- Unwanted sexual conversation

- Sexual contact that you wanted
- Unwanted sexual contact not including intercourse
- Rape
- Verbal aggression
- Physical aggression
- Alcohol use that you wanted
- Alcohol use that you did not want
- Drug use that you wanted
- Drug use that you did not want
- Other

35a, If you selected other, please specify
[blank space]

36, How many dates did you go on/have you been on with this person?

- 1
- 2
- 3
- 4
- 5
- 6-10
- 11+

37, How did the dating end?

- The dating/relationship is ongoing
- I stopped all contact without telling them why
- I ended the relationship and was polite
- I ended the relationship and was hostile towards them
- They stopped all contact and did not tell me why
- They ended the relationship and were polite
- They ended the relationship and were hostile
- Other

37a, If you selected other, please specify
[blank space]

38, Why did the relationship end? (please select all that apply)

- The dating/relationship has not ended
- They chose to end the relationship and I don't know why
- No chemistry
- No common interests
- They seemed boring
- They did not talk enough
- They talked too much
- They lived too far away
- Not as physically attractive as I had expected
- They lied about something on their profile

- They were verbally aggressive
- They were physically aggressive
- They verbally sexually harassed me
- They sexually molested me (unwanted sexual contact)
- They offered money for sex
- They asked for money for sex
- They wanted me to have sex with their friends
- We had differing beliefs, e.g. religion, politics, etc.
- They were not sexually experienced enough
- They did not act sexually enough
- They were too pushy
- They were too negative about themselves
- They were arrogant
- Other

38a, If you selected other, please specify
[blank space]

38b, If you are happy to, please provide details about any of the answers you provided
[blank space]

39, How did they react once the relationship ended? (please select all that apply)

The relationship has not ended

They were nice about it

They were neutral about it

They were verbally hostile towards me

They were physically aggressive towards me

They were sexually threatening towards me

They ceased contact

They carried on contact in a way that I would consider to be harassment

They tried to persuade me to carry on seeing them

We remained friends

Other

39a, If you selected other, please specify
[blank space]

39b, If you have any more details to add about the way the relationship ended, please write them in the space provided.
[blank space]

Thank you

Debrief Form

Appendix 9. Information sheet

Information Sheet version 2

15/04/16

School of Medicine, Division of Psychiatry and Applied Psychology

Centre for Forensic and Family Psychology
Psychiatry and Applied Psychology
School of Medicine
Yang Fujia Building
Jubilee Campus
Nottingham NG8 188

Can adverse experiences with online dating be predicted from message content?

Faculty of Medicine & Health Sciences Research Ethics Ref: Q15032016
SoM DFP

You are being invited to participate in a research study titled "can adverse experiences with online dating be predicted from message content". This is because you are aged 18 years or over and have met at least one person face to face whom you originally contacted via an online dating website or smartphone application. This study is being done by Megan Davis, Forensic Psychology Doctorate student from the University of Nottingham and supervised by Professor Kevin Browne from the University of Nottingham. The information we get from this study may help us to predict when people will have adverse face to face meetings from the types of messages people receive on online dating websites or smartphone applications.

The purpose of this research study is to find out more information about the message content used in conversations via online dating sites or applications, and whether it can be used to predict behaviours of the message sender during face to face meetings. It will take you approximately 40 minutes to complete with a total of 39 questions. Your participation in this study is entirely voluntary and you can withdraw at any time by clicking the browser exit button. The data will only be uploaded on completion of the questionnaire by clicking the SUBMIT button. You are free to omit any question.

We believe there are no known risks associated with this research study; however, this study will ask you about your online dating experiences and will talk about experiences such as sexual and physical assault. If you feel distressed by the discussion of these topics you have the right to withdraw at any time. Specific questions you do not want to discuss may

also be omitted. You may also contact your GP, college counselling staff or NOTTINGHAM NIGHTLINE on 01159 514985. We will do everything possible to ensure your answers in this study will remain anonymous. However, as with any online related activity the risk of a breach is always possible. We will minimize any risks by keeping all data in a secure database. Data will be kept for 7 years after the study as per research guidelines but after this point it will be destroyed.

The results of the study may be published in scientific journals and presented at scientific conferences. The data will be reported anonymously, with any identifying information removed.

If you have any questions about this project, you may contact the Lead Researcher: Megan Davis by emailing msxmd8@nottingham.ac.uk or if you have any concerns about any aspect of this study please contact the Research Supervisor: Professor Kevin Browne by emailing kevin.browne@nottingham.ac.uk. If this does not achieve a satisfactory outcome please contact: FMHS Research Ethics Committee Administrator, c/o The University of Nottingham, School of Medicine Education Centre, B Floor, Medical School, Queen's Medical Centre Campus, Nottingham University Hospitals, Nottingham, NG7 2UH. E-mail: louise.sabir@nottingham.ac.uk.

This study has been reviewed and given a favourable opinion by the University of Nottingham, Faculty of Medicine & Health Sciences Research Ethics Committee, Ref: Q15032016 SoM DFP.

I have read and understood the above information and consent form, I confirm that I am 18 years old or older and by clicking the NEXT button to begin the online questionnaire, I indicate my willingness to voluntarily take part in the study.

NEXT – I consent to take part

EXIT - I do not give consent

Thank you for participating!

Appendix 10. Consent form

Consent Form

Version 2.0: 15/04/16

Can adverse experiences with online dating be predicted from message content?

REC ref: Q15032016 SoM DFP

Name of Researcher: Megan Davis

I confirm that I have read and understood the survey information sheet version number 2 dated 15/04/16 (previous page) for the above study and have had the opportunity to ask questions.

I understand that my participation is voluntary and that I am free to withdraw at any time without giving any reason. I understand that should I withdraw then the information collected so far cannot be erased and that this information may still be used in the project analysis.

I understand that relevant sections of my data collected in the study may be looked at by the research group and by other responsible individuals for monitoring and audit purposes. I give permission for these individuals to have access to these records and to collect, store, analyse and publish information obtained from my participation in this study. I understand that my personal details will be kept confidential.

I understand that all data will be anonymous and confidential with the exception of information being revealed which is of concern and may need reporting i.e. potential risks to another person or myself.

I understand that information about me recorded during this study will be kept in a secure database. If the data is transferred it will be made anonymous. Data will be kept for 7 years after the study has ended and then will be destroyed.

Appendix 11. Debrief form

Debrief Form

Can adverse experiences with online dating be predicted from message content?

REC ref: Q15032016 SoM DFP

Name of Researcher: Megan Davis

Thank you for taking part in this research study. Please read the debrief and click the button to submit your responses.

The information you have provided will be used to complete research for partial fulfilment of the course requirements for the Doctorate in Forensic Psychology.

This research aims to investigate whether any association can be found between message content and adverse online dating experiences, particularly experiences related to criminal activity including verbal, physical and sexual assault.

The results of this research may be used to help inform others about risks regarding online dating and appropriate precautions to take.

If you would be happy to be interviewed about your online dating experience, please contact the lead researcher.

If you have any comments or questions about this project, you may contact the lead researcher, Megan Davis, by emailing msxmd8@nottingham.ac.uk. If you have any concerns about any aspect of this study please contact the research supervisor, Professor Kevin Browne, by emailing kevin.browne@nottingham.ac.uk. If this does not achieve a satisfactory outcome please contact: FMHS Research Ethics Committee Administrator, c/o The University of Nottingham, School of Medicine Education Centre, B Floor, Medical School, Queen's Medical Centre Campus, Nottingham University Hospitals, Nottingham, NG7 2UH. E-mail: louise.sabir@nottingham.ac.uk.

Appendix 12. How precaution messages were coded

How message content indicating that participants would not meet their conversation partners was categorised. Based on question 25			
		Message content item	Category
1	CY	Flirty comments	Romantic
2	CZ	Lack of flirty comments	None
3	DA	General sexual comments	Sexual
4	DB	Comments about particular sexual fetishes	Sexual
5	DC	Requests of money for sex	Sexual
6	DD	Offers of money for sex	Sexual
7	DE	Lack of sexual comments	None
8	DF	Messages limited to small talk	None
9	DG	No small talk	None
10	DH	Talking about hobbies and interests that you find boring	None
11	DI	No discussion of hobbies and interests	None
12	DJ	Compliments	Romantic
13	DK	Lack of compliments	None
14	DL	Romantic comments	Romantic
15	DM	Lack of romantic comments	None
16	DN	Mild insults (I usually prefer someone taller/thinner)	Hostile
17	DO	Derogatory comments about gender	Hostile
18	DP	Derogatory comments about sexuality	Hostile
19	DQ	Derogatory comments about religious beliefs	Hostile
20	DR	Derogatory comments about race	Hostile
21	DS	Explicit threats/aggression	Hostile
22	DT	Explicit blackmail (If you don't give me your number I will stop talking to you)	Pressuring
23	DU	Veiled blackmail (I'm going to close my account but I still want to talk, is there another way to contact you?)	Pressuring
24	DV	Being pushy to meet	Pressuring
25	DW	Being pushy for you to give out contact information	Prying
26	DX	Arrogance	Arrogance
27	DY	Being negative about themselves	Self-deprecation
28	DZ	Sending intimate pictures	Sexual
29	EA	Refusing to send intimate pictures	Lack of disclosure

30	EB	Sending a clear photo of their face	None
31	EC	Refusing to send a clear photo of their face	Omission of picture
32	ED	Trying to talk you into dating them after you initially say no	Pressuring
33	EE	Talking about their past relationships	None
34	EF	Asking about your past relationships	Prying
35	EG	Talking about future plans for relationships	None
36	EH	Not talking about future plans for relationships	None
37	EI	Other	None
Note: General message content such as small talk and discussion of shared interests was not analysed as it was assumed to be too common to be a significant predictor.			

Appendix 13. How messages prior to last date were coded

How message content from the last face to face date was categorised. Based on question 31.			
		Message content item	Category
1	FE	Generic content	None
2	FF	Personalised content	None
3	FG	They were flirty	Romantic
4	FH	They made sexual comments	Sexual
5	FI	They did not respond to my sexual comments	None
6	FJ	They made sexual comments related to a particular fetish	Sexual
7	FK	They offered me money for sex	Sexual
8	FL	They asked me for money for sex	Sexual
9	FM	They made fun of me	Hostile
10	FN	They talked about their hobbies and interests	None
11	FO	They asked about my hobbies and interests	None
12	FP	They told me personal details about themselves	None
13	FQ	They asked me about my personal details	Prying
14	FR	They gave me their number/Facebook etc.	None
15	FS	They asked for my number/Facebook etc.	Prying
16	FT	I did not want to give them my contact details and they accepted this	None
17	FU	I did not want to give them my contact details and they repeatedly asked or became hostile about this	Pressuring
18	FV	They complimented me	Romantic
19	FW	They made romantic comments	Romantic
20	FX	Mild aggression/insults	Hostile
21	FY	Aggression/threats	Hostile
22	FZ	Explicit blackmail	Pressuring
23	GA	Veiled blackmail	Pressuring
24	GB	Sexist comments	Hostile
25	GC	Racist comments	Hostile
26	GD	They tried to persuade me to date them after I initially said no	Pressuring
27	GE	Derogatory comments about beliefs (religion etc.)	Hostile

28	GF	Homophobic/transphobic/other minority group-based derogatory comments	Hostile
29	GG	They sent intimate photos	Sexual
30	GH	They did not send a clear photo of their face	Omission of photograph
31	GI	They were very negative/pessimistic about themselves	Self-deprecation
32	GJ	They were arrogant	Arrogance
33	GK	Other	None
Note: General message content such as small talk and discussion of shared interests was not analysed as it was assumed to be too common to be a significant predictor.			

Appendix 14. Information sheet

Information Sheet

School of Medicine, Division of Psychiatry and Applied Psychology

Centre for Forensic and Family Psychology

Psychiatry and Applied Psychology

School of Medicine

Yang Fujia Building

Jubilee Campus

Nottingham NG8 188

Can adverse experiences with online dating be predicted from message content?

Faculty of Medicine & Health Sciences Research Ethics Ref: Q15032016
SoM DFP

You have recently taken part in a research study titled "can adverse experiences with online dating be predicted from message content". This is because you are aged 18 years or over and have met at least one person face to face whom you originally contacted via an online dating website or smartphone application. During this research study, you have indicated that you have had a negative online dating experience featuring sexual violence, and that you are willing to be interviewed about this experience.

This study is being completed by Megan Davis, Forensic Psychology Doctorate student from the University of Nottingham and supervised by Professor Kevin Browne from the University of Nottingham.

The purpose of this research study is to find out more information about the experiences of victims of sexual violence that occurred in the context of online dating. You will be asked to discuss similar topics to the online questionnaire in more detail. You will be interviewed via your choice of online instant messenger service, telephone, video conference, or face to face interview. This interview will be conducted at a time specified by you. This interview is anticipated to take approximately two hours. You may have a break at any point and the interview does not have to be completed in one session.

Your participation in this study is entirely voluntary and you can withdraw at any time by informing the interviewer that you wish to stop the interview. You will be able to withdraw data collected so far as part of the interview process at this point or at a later point up until 1st May 2017, after which point the data will be analysed.

If you do not withdraw your data it will be kept in a secure database. If the data is transferred it will be made anonymous. Data will be kept for 7 years after the study has ended and then will be destroyed.

We believe there are no known risks associated with this research study; however, this study will ask you about your online dating experiences and will talk about experiences such as sexual and physical assault. If you feel distressed by the discussion of these topics you have the right to withdraw at any time. Specific questions you do not want to discuss may also be omitted. You may also contact your GP, college counselling staff or NOTTINGHAM NIGHTLINE on 01159 514985. We will do everything possible to ensure your answers in this study will remain anonymous. However, as with any online related activity the risk of a breach is always possible. We will minimize any risks by keeping all data in a secure database. Data will be kept for 7 years after the study as per research guidelines but after this point it will be destroyed.

The results of the study may be published in scientific journals and presented at scientific conferences. The data will be reported anonymously, with any identifying information removed.

If you have any questions about this project, you may contact the Lead Researcher: Megan Davis by emailing msxmd8@nottingham.ac.uk or if you have any concerns about any aspect of this study please contact the Research Supervisor: Professor Kevin Browne by emailing kevin.browne@nottingham.ac.uk. If this does not achieve a satisfactory outcome please contact: FMHS Research Ethics Committee Administrator, c/o The University of Nottingham, School of Medicine Education Centre, B Floor, Medical School, Queen's Medical Centre Campus, Nottingham University Hospitals, Nottingham, NG7 2UH. E-mail: louise.sabir@nottingham.ac.uk.

This study has been reviewed and given a favourable opinion by the University of Nottingham, Faculty of Medicine & Health Sciences Research Ethics Committee, Ref: Q15032016 SoM DFP.

If you have any questions, please ask the interviewer now.

Appendix 15. Online consent form for case study

Consent Form

REC ref: Q15032016 SoM DFP

Name of Researcher: Megan Davis

Thank you for agreeing to take part in this study on online dating experiences. You will be asked to confirm the following:

I confirm that I have read and understood the survey information sheet regarding this interview and have had the opportunity to ask questions.

I understand that my participation is voluntary and that I am free to withdraw at any time without giving any reason. I understand that should I withdraw then the information collected so far as part of the interview process can also be withdrawn up until 1st May 2017, after which point the data will be analysed.

I understand that relevant sections of my data collected in the study may be looked at by the research group and by other responsible individuals for monitoring and audit purposes. I give permission for these individuals to have access to these records and to collect, store, analyse and publish information obtained from my participation in this study. I understand that my personal details will be kept confidential.

I understand that all data will be anonymous and confidential with the exception of information being revealed which is of concern and may need reporting i.e. potential risks to another person or myself.

I understand that information about me recorded during this study will be kept in a secure database. If the data is transferred it will be made anonymous. Data will be kept for 7 years after the study has ended and then will be destroyed.

Please inform the interviewer that you have read the above statements and consent to participate in this interview.

Appendix 16. Interview Schedule

History Section

We are going to start with a few questions about you if that's OK? Remember if there is anything you don't feel comfortable talking about that's fine and we will move on.

Tell me a bit about you. I know that might sound quite vague but just a few things you think are important about yourself.

Age, nationality

What was your life like when you were a child?

What was your relationship like with your parents?

Siblings?

Friends?

Is the relationship with them still the same?

What about your first romantic relationship? How was that?

What is your mental health like?

Online dating section

What made you decide to try online dating?

How long have you been using online dating?

What dating sites do you use?

How do you find it in general?

How many face to face meetings do you think you had?

How many negative experiences have you had during face to face dates?

How early on in your dating site use did your negative experience occur?

So what was the bad experience like?

What can you remember about the message content?
Arrogant, self deprecating, pressuring, sexual

How did that compare to the non-bad ones?

What did their personality seem like?

Was there anything in the message content that made you unsure whether to meet that person?

With hindsight, do you think there were any warning signs in the message content?

Had you previously decided not to meet someone based on anything they said in messages?

Was this the last dating experience you had or did you carry on?
Did you take more precautions next time?

What kind of things do you think you would avoid from message content?

How did this man's message content compare to others you have spoken to?

Did you take any precautions before meeting?

Did you talk in any means other than text-based messaging before meeting?

Please tell me everything you can remember and are comfortable talking about to do with the face to face meeting?

Did you talk to the police? Why/why not?

Did this experience change how you approached online dating? Did you take other precautions?

If you still use online dating, since this event have you decided not to meet someone based on anything they said in messages?

In hindsight, do you think there is anything that would have helped you predict this was going to happen?

RBS section

Finally, I'm going to send you 15 questions about your attitude to romance. This is in general, not just with regards to your negative online dating experience. Please complete this and send it back to me by emailing msxmd8@nottingham.ac.uk.

Debrief

This interview was on negative online dating experiences. This was to consider the question "can adverse online dating experiences be predicted using message content?". There is some evidence from previous data collection that in some cases people who are hostile, pressuring, arrogant or self-deprecating are more likely to engage in behaviour which could be considered criminal activity in relation to online dating experiences.

The questionnaire was the romantic beliefs scale, which has been shown to link with the likelihood of becoming a victim of online dating scams where money is

given, but has not been considered with people who are victims of face to face criminal activity related to online dating

Thank you for discussing your experiences. Everything you have said will be kept confidentially and anonymously. If you have any questions or concerns you may ask them now or contact myself by emailing msxmd8@nottingham.ac.uk or my supervisor, Professor Kevin Browne, by emailing kevin.browne@nottingham.ac.uk.

Appendix 17. Romantic Beliefs Scale (Sprecher & Metts, 1989)

Indicate the extent to which you agree or disagree with each of the following beliefs.

Use the following scale: Agree strongly = 7, Agree a good deal = 6, Agree somewhat = 5, Neither agree nor disagree = 4, Disagree somewhat = 3, Disagree a good deal = 2, Disagree strongly = 1.

____ 1. I don't need to know someone for a period of time before I fall in love with him or her.

____ 2. If I were in love with someone, I would commit myself to him or her even if my parents and friends disapproved of the relationship.

____ 3. Once I experience "true love," I could never experience it again, to the same degree, with another person.

____ 4. I believe that to be truly in love is to be in love forever.

____ 5. If I love someone, I know I can make the relationship work, despite any obstacles.

____ 6. When I find my "true love" I will probably know it soon after we meet.

____ 7. I'm sure that every new thing I learn about the person I choose for a long-term commitment will please me.

____ 8. The relationship I will have with my "true love" will be nearly perfect.

____ 9. If I love someone, I will find a way for us to be together regardless of the opposition to the relationship, physical distance between us or any other barrier.

____ 10. There will be only one real love for me.

____ 11. If a relationship I have was meant to be, any obstacles (for example, lack of money, physical distance, career conflicts) can be overcome.

____ 12. I am likely to fall in love almost immediately if I meet the right person.

____ 13. I expect that in my relationship, romantic love will really last; it won't fade with time.

____ 14. The person I love will make a perfect romantic partner; for example, he/she will be completely accepting, loving, and understanding.

____ 15. I believe if another person and I love each other we can overcome any differences and problems that may arise.