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A systematic review of fantasy driven vs contact driven internet-initiated sexual offences: Discrete or overlapping typologies?

Abstract

Within the literature individuals who use the internet to facilitate the sexual abuse of a minor are generally classified as being fantasy or contact driven. Classification is based upon the intended location for sexual climax: fantasy driven individuals aim to reach sexual climax online, whereas contact driven individuals target minors to achieve physical sex offline. This review systematically investigates whether there is an empirical basis for the distinction between these two proposed discrete types. Comparison of tactics and behaviour are considered to examine whether the contact vs. fantasy distinction is useful. A two-stage literature selection process, considered against pre-determined inclusion criteria, identified a total of twenty-two studies. As methodological heterogeneity limited the ability to conduct pooled analysis, a narrative synthesis of data employing an interpretive approach was conducted. This showed that the contact and fantasy distinction is ambiguous, given that both groups engage in online behaviours that provide them with online sexual gratification that can also lead to offline contact. Furthermore, no clear pattern of behaviour was found to define contact and fantasy individuals idiosyncratically. The European Online Grooming Project typology is thus proposed as a better representation of this behaviour; *intimacy seeking, adaptable* and *hypersexualized* groups. The distinction between these groups focuses primarily on the intensity of the relationship, acknowledging that sexual abuse can occur with

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or without offline contact. This review also highlights the need for larger, methodologically robust studies that examine the behaviour of online child sexual offenders.

Keywords: online grooming, contact-driven offending, fantasy-driven offending, internet-initiated offenders, online grooming typology.

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DRAFT

A systematic review of fantasy driven vs contact driven internet-initiated sexual offences: Discrete or overlapping typologies?

Introduction

The later part of the 20th century was marked by the emergence of the digital age, a time when cyber technology rapidly grew to prevail as an integral part of life. Those that were children in the mid to late 1990s grew up with communications technology and became a generation of *digital natives*, whose way of socialising, learning, communicating and thinking was mediated by digital technology (Prensky, 2001). Within this technological advancement new threats to interpersonal and intergroup communications rose, including internet-initiated sexual offence against minors. An example of this is online grooming, understood as the process in which cyber technology is utilised by an adult to persuade a minor to engage in sexual activities (Lorenzo-Dus, Izura, & Pérez-Tattam, 2016). Lorenzo-Dus et al. (2016) identified online grooming as a communicative entrapment network, whereby groomers attempt to build an interpersonal relationship with the victim with the intent to lure them into online and/or offline sexual behaviour. Current definitions of online grooming focus on the way individuals develop an emotional connection with victims to prepare them for sexual abuse (Lorenzo-Dus et al. 2016; Lorenzo-Dus, & Izura, 2017; O'Connell, 2003). Yet there are documented cases in which requests for sexual behaviour are made within minutes (for example, DeHart et al., 2017; O'Connell, 2003; Webster et al., 2012), possibly preceding the development of a relationship. The term 'online solicitation offenders' is also used to define those who use the internet to communicate with victims for sexual purposes (i.e. Seto, Wood, Babchishin, & Flynn, 2012; Schulz, Bergen, Schuhmann, Hoyer, & Santtila, 2015; Ybarra, Espelage, & Mitchell, 2007). Online solicitation focuses on

the sexual nature of the interaction rather than the relationship. However, determining how to best categorise those individuals who use the internet to sexually exploit minors is still open to interpretation.

Determining with accuracy the frequency with which internet-initiated sexual offences occur against minors is unfeasible. Maalla (2009) reported the results of an international study, indicating that about 750,000 sexual predators are connected to the Internet at any one time. This figure is likely to have increased as online engagement has become an established childhood behaviour (Office of Communications (Ofcom), 2017). Annual occurrences of youth reported online sexual solicitations have been estimated to range from 5% to 34% across America and Europe (Jones, Mitchell, & Finkelhor, 2012; Gamez-Guadix, Santisteban, & Alcazar, 2017; Wolak, Mitchell, & Finkelhor, 2006). Yet the illegal and taboo nature of child sexual abuse, as well as the young age and vulnerability of the victims, prevents many children from reporting the abuse (Pasha-Robinson, 2017). This, coupled with the common *scatter-gun* approach of selecting multiple victims at the same time, means online predators' chances of success are high (Child Exploitation and Online Protection Centre (CEOP), 2013).

Most of the research into internet related sex crimes focuses on the creation, use and distribution of child pornography (Faust, Bickart, Renaud, & Camp, 2015; Long, Alison, & McManus, 2013; Ray, Kimonis, & Seto, 2014). Whilst we have recently seen a shift in research priorities to include that of online grooming and online solicitation, research in this area is still scarce and often relies on knowledge of offline abuse (Lorenzo-Dus et al., 2016). However, online and offline abuse are distinct. For example, there are evidenced differences in the speed of grooming. Whereas grooming in offline settings is known to occur over a long time (Craven, Brown, & Gilchrist, 2006; McAlinden, 2013), the time between the initial contact and the offending outcome in an online setting is often brief (CEOP, 2013; Webster et

al., 2012; Lorenzo-Dus et al., 2016). Another crucial distinction is that individuals who exploit the internet for the sexual abuse of children do not always intend to have physical contact with their victims. This leads Briggs, Simon and Simonsen (2011) to classify the chat room offender as either fantasy driven or contact driven, considering them as two distinct types.

A Typology of Fantasy and Contact Driven Behaviour

Aspects of fantasy and contact driven behaviour have been well documented in the literature. McLaughlin (1998), one of the first authors to offer a typology of cybersex offenders, coined the term *chatters* for those who groom their victims, engage in cybersex and often, but not always, try to contact them in person. The term *traveller* was used to describe those who use online chats as a tool to have face to face encounters with their victims for sexual gratification (McLaughlin, 1998). In an empirical study of online grooming chat logs, O'Connell (2003) described the online enactment of a sexual fantasy for gratification purposes. O'Connell (2003) introduced the concept of *cyberexploitation*, whereby adults induce children in sexually explicit talks which could lead, or not, to the enactment of a sexual fantasy.

Briggs et al. (2011) conducted an exploratory study on 51 participants convicted of an internet related sexual offence, and found that not all offenders were motivated by offline contact. Rather they identified a distinct subgroup of *fantasy driven* individuals who aimed to reach sexual climax online through behaviours such as cybersex, voyeurism and exhibitionism. In contrast to the fantasy driven subgroup, Briggs et al. (2011) described *contact driven individuals* as those who do not aim to reach sexual climax online. They engage victims in online sexual talk as a way of desensitising them to sexual material in preparation for their priority of an offline sexual encounter.

Briggs et al.'s (2011) typology has been empirically supported by DeHart, Dwyer, Seto, Moran, Letourneua and Schwarz-Watts (2017), who analysed chat logs, social media posts and emails from 200 offenders. Their analysis supported a distinction between contact driven and fantasy driven individuals, but included four subgroups; *cyber-sex only offenders*, *cybersex/schedulers*, *schedulers* and *buyers*. *Cyber-sex only offenders* can be likened to Briggs et al.'s (2011) fantasy driven group, in that they engage in sexual chat, expose themselves online and encourage reciprocal behaviour from victims. Discussions of offline contact may take place but with no specific plans to meet. *Cybersex/schedulers* also engage in online sexual behaviour, including explicit chat and exchanging explicit images/videos, but make specific plans to meet victims offline. *Schedulers* may be considered similar to Briggs et al.'s (2011) contact group, with offenders seeking what is described as a 'hook-up'. Fewer offenders in this group engage in online sexual behaviour or attempt to develop a relationship with their victims. Finally, *buyers* are a similar group to *schedulers* in that their primary intention is offline contact, but also involve elements of negotiation in terms of sexual favours and money. Offenders in this group also include those who respond to presumed adverts from pimps or family members featuring minors.

Briggs et al.'s (2011) typology is widely mentioned in online child sexual exploitation literature. However, to our knowledge no review has systematically evaluated whether an empirical distinction exists between *fantasy driven* and *contact driven* individuals. This is an important gap in knowledge. Whilst non-contact child sexual offending is an established concept in child sexual exploitation, we must consider how the internet has impacted the way in which "non-contact" is defined. Non-contact child sexual abuse can include viewing, generating, sharing and trading child pornographic images or videos, online grooming and any other forms of sexual exploitation not involving physical contact between perpetrators and their victims (Seto, Hanson, & Babchishin, 2011). Furthermore, the internet is an additional platform in which contact child sexual offenders, i.e. those who physically abuse

children (Elliot, Beech, & Mandeville-Norden, 2013), contact, access and abuse their victims. Examination of whether the fantasy vs contact distinction is useful is therefore warranted.

Methods

An extensive search, delimited to studies and grey literature published in English between January 1990 and October 2015, was carried out on the following databases to capture the multidisciplinary nature of this topic: Cochrane Library, PubMed, Medline, Scopus, ASSIA, Science Direct, Web of Science and PsychInfo. Peer reviewed journals (Sexual Abuse, Journal of Child Sexual Abuse, Child Abuse & Neglect, Aggression & Violent Behaviour and, Journal of Sexual Aggression) were searched, as well as reference lists of included studies (see results). Unpublished data (thesis, conference papers and reports) were identified through Open Grey, which is an open access repository for European research institutions. The search strategy was re-executed to capture relevant studies published between October 2015 and November 2017 as per the guidance in the Cochrane Handbook for Systematic Reviews (Higgins, & Green, 2011). The search strategy sequence was: 1) pedophil* OR sexual abuse OR child abuse OR sexual predat*; 2) communicat* OR internet OR online groom* OR linguistics OR language; 3) contact OR non-contact OR non contact OR fantasy OR fantasies; 4) 1 and 2 and 3.

A two-stage selection process was used for data extraction; two reviewers (Broome (LB) & Izura (CI)) carried out the initial screening of titles and abstracts against a list of predetermined inclusion/exclusion criteria (see Table 1 in Broome, Izura, & Lorenzo-Dus, submitted). Articles identified for full review were then independently assessed by the same two reviewers to ascertain if they met the inclusion criteria. Where information or data were unclear or missing, clarification was requested from the authors. Differences of opinion between the reviewers (LB & CI) were resolved through discussion; involving if necessary (Lorenzo-Dus (NL-D)). A data extraction form was developed based upon PRISMA

guidelines (Moher, Liberati, Tetzlaff, Altman, & The PRISMA Group, 2009) and piloted on a small sample of studies (n=5). When not explicitly defined in the data, contact and fantasy led behaviours were classified by the review authors according to Briggs et al.'s (2011) definition. Studies were selected and appraised in consideration of the Population, Interest, Comparisons and Outcomes (PICO) formulation (Falzon, Davidson, & Bruns, 2010) and against an order of hierarchy regarding study methodology (see Table 2 in Broome et al., submitted). Study quality was assessed against the STROBE checklist (Vandenbroucke et al., 2007). Please see the discussion section for issues relating to this aspect of the assessment.

Results

The process of study selection is presented in Figure 1 (see below). For a study to be included in this review, the population sample needed to be either identifiable or characterised based on Briggs et al.'s (2011) definition of fantasy and contact. If after contact with the author of the study the sample could not be thus characterised, the study was excluded. Additionally, studies that pooled their results together for contact and fantasy groups were excluded. Studies reporting findings from offenders under 18 were not included in this review to avoid behaviours associated with developmental sexual curiosity, and because significant differences in offender characteristics between juvenile and adult sex offenders have been reported (Finkelhor, Ormrod, & Chaffin, 2009; Miranda, & Corcoran, 2000; US Department of Justice, 2004).

[Insert figure 1 here]

Overall twenty-two studies were included for review: Barber, & Bettez, 2014; Bergen, Antfolk, Jern, Alanko, & Santtla, 2013; Bergen et al., 2014; Black, Wollis, Woodworth, & Hancock, 2015; Briggs et al., 2011; DeHart et al., 2017; Grosskopf, 2010; Gupta, Kumaraguru, & Sureka, 2012; Kloess et al., 2015; Krone, 2005; Lorenzo-Dus et al., 2016; Lorenzo-Dus, & Izura, 2017; Malesky, 2007; Marcum, 2007; O'Connell, 2003; Pranoto,

Gunawan, & Soewito, 2015; Quayle, Allegro, Hutton, Sheath, & Lööf, 2014; Shelton, Eakin, Hoffer, Muirhead, & Owens, 2016; van Gijn-Grosvenor, & Lamb, 2016; Williams, Elliott, & Beech, 2013; Winters, Kaylor, & Jeglic, 2017; Wolak, Finkelhor, & Mitchell, 2004; Wolak, & Finkelhor, 2013. The last two papers used the same population sample but reported separate results. This review therefore reports them as one single study.

Study Characteristics

Characteristics of included studies are presented in Table 3 (in Broome et al., submitted). Nineteen studies were published articles and three studies were published as grey literature (Barber, & Bettez, 2014; O'Connell, 2003; Prantono et al., 2015). All relevant studies were included, regardless of methodological variability, to maximise appraisal. Limitations of included studies are addressed in the discussion. Studies used a range of qualitative and quantitative methodology (see Table 4 in Broome et al., submitted). Those studies employing quantitative analysis used a wide range of statistical approaches, which limited our ability to pool studies for meta-analysis (see Table 4 in Broome et al., submitted). A narrative synthesis of the data was instead undertaken, employing an interpretative approach to infer meaning and understanding of the studies included (Gough, Thomas, & Oliver, 2012; Harden, 2010). Our narrative synthesis led to the identification of the following recurring themes: relationship forming, deception, risk assessment, sexualisation, threatening behaviour and a 'trade-off' between contact and fantasy behaviour (see Table 3 in Broome et al., submitted).

Of the twenty-two studies reviewed, two studies used chatroom transcripts from real victims (Kloess et al., 2015; Malesky, 2007). Sixteen studies used transcripts collected from decoy victims, i.e., adults posing as children/young people: Barber, & Bettez, 2014; Bergen et al., 2013; Black et al., 2015; Briggs et al., 2011; DeHart et al., 2017; Gupta et al., 2012;

Krone, 2005; Lorenzo-Dus et al., 2016; Lorenzo-Dus, & Izura, 2017; Marcum, 2007; O'Connell, 2003; Pranoto et al., 2015; Shelton et al., 2016; van Gijn-Grosvenor, & Lamb, 2016; Winters et al., 2013; Williams et al., 2013. Within these sixteen studies, two provided a descriptive analysis of behaviour using a mix of police sting operations and real child victims (Briggs et al., 2011; Shelton et al., 2016), and the remaining fourteen examined transcripts in which: authors posed as decoys (Bergen et al., 2013 [multiple authors]; O'Connell, 2003 [one authors]), undercover police officers acted as decoys (DeHart et al., 2017; Krone, 2005), and decoys were trained adult volunteers from the Perverted Justice Foundation (Barber, & Bettez, 2014; Black et al., 2015; Gupta et al., 2012; Lorenzo-Dus et al., 2016; Lorenzo-Dus, & Izura, 2017; Marcum, 2007; Pranoto et al., 2015; van Gijn-Grosvenor, & Lamb, 2016; Winters et al., 2017; Williams et al., 2013). The Perverted Justice Foundation is a non-profitable group dedicated to the capture of online predators (www.pjfi.org).

In the remaining four studies data comprised transcriptions of interviews with Law Enforcement (Grosskopf, 2010; Wolak et al., 2004; Wolak, & Finkelhor, 2013), convicted online grooming offenders (Quayle et al., 2014), and online self-report surveys with adults who had interacted online with young people (Bergen et al., 2014) (see Table 4 in Broome et al., submitted).

Quality and Outcomes of Included Studies:

Tables 3 and 4 (in Broome et al., submitted) highlight methodological variability between the studies. Sample sizes for contact (total N = 684) and fantasy (total N = 232) groups varied from 1-101, making it difficult to extrapolate findings. Not all studies were explicit when describing their methodology. For example, lack of clarification for qualitative coding/analysis (Bergen et al., 2013; Briggs et al., 2011; Malesky, 2007; Marcum, 2007; O'Connell, 2003; van Gijn-Grosvenor, & Lamb, 2016), interview analysis (Grosskopf, 2010; Krone, 2005) and participant numbers (O'Connell, 2003) were observed. O'Connell's study

referred to the number of hours spent by the decoy (the author) in chat rooms (50) but not the number of transcripts analysed. Two studies used questionnaire measures but did not report on their validation or reliability (Bergen et al., 2014; Malesky, 2007). Two studies used the Linguistic Inquiry Word Count (LIWC) to create a psycholinguistic profile of O'Connell's (2003) typology (Black et al., 2015; Gupta et al., 2012) but LIWC has not been validated for the analysis of sexual discourse.

Wolak and Finkelhor (2013) included a subgroup who knew the victim offline but committed an online offence. Whilst this review acknowledges the importance of examining this subgroup, it could be argued that as offline contact occurs prior, during and after online contact, comparing this group to other categorised fantasy and contact driven individuals may lead to information and measurement biases (Podaskoff, MacKensie, Lee, & Podaskoff, 2003). We therefore only report the study results relating to those individuals who met victims online. Finally, whilst Shelton et al. (2016) report findings for contact offences (e.g. penetrative sex, touching) resulting from online contact, individuals within this group also included those who knew the victim (e.g. family and acquaintances). Consequently, we only included data extracted for cases in which contact was made online and the offender organised travel to meet the victim for sexual purposes.

Categorising Contact and Fantasy Driven Individuals:

A higher frequency of studies reported tactics for behaviour that can be categorised as contact rather than fantasy driven. However, results overlapped throughout. A primary finding of this review is the ambiguity in the data when attempting to classify individuals following the defining characteristics of contact and fantasy. Briggs et al. (2011) defined contact driven individuals as those who seek sexual climax offline, and fantasy driven individuals as those who climax during online sexual behaviours. Yet the data showed an overlap of behaviour / tactics across the two categories, indicating that they are not discrete.

For example, three individuals defined as fantasy driven in Briggs et al.'s (2011) study had offline contact with victims, and not all (93.3%; n=28) of those classified as contact driven scheduled a face-to-face meeting. As per the study's own classification, all individuals within the 'contact' group should have attempted to schedule a meeting and, conversely none in the fantasy group.

Rather than this being an isolated case, and potentially a coding error, this overlap was recurrent across the studies. For instance, O'Connell (2003) proposed that contact driven intentions are part of the fantasy enactment rather than a primary intent, leading the current review to classify this study as fantasy driven. Yet we cannot be certain that fantasy led behaviour was not intended to achieve, or would not eventually lead to, offline sexual gratification. Similarly, DeHart et al. (2017) categorised individuals into four types which they compared to Briggs' contact vs fantasy groups. For the purpose of this review we excluded DeHart et al.'s (2017) category of 'Buyers', for individuals within this group included those who chat with adults for the purpose of child trafficking. Whilst DeHart et al. (2017) compared their cybersex group to Briggs et al.'s fantasy group, 54% (n=26) of individuals within the cybersex group spoke about offline contact, although did not schedule a meeting.

Grosskopf's (2010) study categorised individuals into four distinct groups. This review selected those who requested an offline meeting as being contact driven. 'Cautious, more restrained' and 'educational' individuals (i.e., those who offer to educate victims on sexual matters) who did not attempt to meet victims were defined as fantasy driven (see Table 3 in Broome et al., submitted). Grosskopf (2010) explicitly defined 'short-term gratification groomers' as wanting to meet offline, yet individuals within this group were also described as being satisfied with online sexual behaviour that may or may not lead to offline contact.

Krone (2003) categorised individuals based on whether they were satisfied with online behaviour (e.g. cybersex) or sought offline contact (see Table 3 in in Broome et al., submitted). However, the boundaries between these categories were imprecise; of the nine individuals who were reported to masturbate online to the victim, five also discussed offline contact (Krone, 2003). Individuals within Quayle et al.'s (2014) study were recruited if they met the criteria of the Sexual Offences Act (2003) in England and Wales. Our review therefore classified this study as contact driven. The criteria of the Sexual Offences Act (2003) refer to adults who attempt to meet a child in person for the intention of sexual abuse, yet Quayle et al. (2014) described online sexual behaviour as both a prelude to offline contact and a means of reaching arousal and masturbation through online sexual fantasies. Winters et al. (2017) identified their sample as being contact driven, with individuals discussing offline contact with all bar one victim.

Five other studies were categorised as being contact or fantasy driven by this review based on the definition proposed by Briggs et al. (2011). Two studies reported individuals who arranged or attempted to perpetrate a contact offence and were therefore defined as contact driven (Malesky, 2007; Shelton et al., 2016). These studies did not attempt to define or consider fantasy driven behaviour. Four studies reported a mix of behaviours that could be considered contact and fantasy driven, but did not explicitly specify how individuals should be categorised (Bergen et al., 2013; Bergen et al., 2014; Kloess et al., 2015; Wolak et al. 2004; Wolak, & Finkelhor, 2013). Clarification was received from the authors of three studies (Bergen et al., 2013; Bergen et al., 2014; Kloess et al., 2015), who confirmed those who arranged a face-to-face meeting or engaged in offline sexual contact could be defined as contact driven, with all other cases being fantasy driven.

Seventy-four percent (n=99) of individuals in Wolak et al.'s (2004) study attempted to meet their victim offline and were defined as contact driven by this review. Those cases that

did not involve offline contact (e.g. creating an explicit image or video) were defined as fantasy driven. Wolak and Finkelhor (2013) distinguish between those who committed a non-contact offence (e.g. creation of youth-produced sexual images) and those who committed contact sexual offences (inappropriate touching, oral sex, intercourse & sexual violence). We classified the former as fantasy driven and the later as contact driven (see Table 3 in Broome et al., submitted).

All studies using transcripts from the Perverted Justice Foundation website were categorised as being contact driven for this review (Barber, & Bettez, 2014; Black et al., 2015; Gupta et al., 2012; Lorenzo-Dus et al., 2016; Lorenzo-Dus, & Izura, 2017; Marcum, 2007; Pranoto et al., 2015; van Gijn-Grosvenor, & Lamb, 2016; Winters et al., 2017; Williams et al., 2013). All cases from this website involve discussion or intent for offline contact with the victim (www.pjfi.org).

Victim ages are presented in Table 3 (in Broome et al., submitted). Whilst there are cases which include victims as young as six, primarily the dataset represents individuals who may be better described as having hebephiliac, rather than paedophilic, attractions. Hebephilia refers to a sexual preference towards pubescent children aged 11-14 (Blanchard et al., 2009).

Behavioural Themes

Below we describe the behavioural themes identified by this review, with the aim of critically evaluating whether tactics can be considered discrete between the fantasy vs contact typology.

Relationship Forming

Contact driven individuals are reported to engage in relationship building strategies more frequently than fantasy driven. However, results were inconsistent across the studies. In

some studies, contact driven individuals invested time forming a relationship (Barber, & Bettez, 2014; Grosskopf, 2010; Gupta et al., 2012; Lorenzo-Dus et al., 2016; Quayle et al., 2014; Williams et al., 2013; Wolak et al., 2004). This was observed more frequently when the victim was female (van Gijn-Grosvenor, & Lamb, 2016). Yet other studies showed contact driven individuals focused on their immediate short-term sexual needs, quickly moving on from non-compliant victims and using sex to form the basis of the relationship (Black et al., 2015; Briggs et al., 2011; Grosskopf, 2010; Kloess et al., 2015; Krone, 2003; Pranoto et al., 2015; Quayle et al., 2014). Whilst Winters et al. (2017) did not explicitly categorise the development of a relationship within their study, the authors identified that most offenders introduced sexual content before the development of a relationship could occur; 98% (n=98) during the first conversation and 69% (n=69) within the first thirty minutes.

A similar overlap is seen for fantasy driven individuals. For example, an aggressive sub-group of fantasy driven individuals in O'Connell's (2003) study who committed cyber-rape did not invest in a relationship with the alleged victim, or aim to organise a return encounter. Yet Briggs et al. (2011) and DeHart et al. (2017) found that fantasy driven individuals invested more time in the online relationship; 14.3% (n=3) of fantasy cases lasted longer than 3 months compared to 3.3% (n=1) of contact cases (Briggs et al., 2011), and nearly half (n=19) of those in the contact group (schedulers) in DeHart et al.'s (2017) study communicated for less than 24hours.

Deception

Studies reported on both identity deception (e.g. age, location or appearance) and trust deception, which refers to the development of an intimate relationship aimed to conceal the primary intention to sexually abuse a victim (Lorenzo-Dus et al., 2016).

When reported, frequencies of identity deception were low (5% - 33.6%) (Bergen et al., 2014; Briggs et al., 2011; Malesky, 2007; Williams et al., 2013; Winters et al., 2017;

Wolak et al., 2004; Wolak, & Finkelhor, 2013) for both contact and fantasy groups. Two studies suggested contact individuals were more likely to disguise their age (Briggs et al., 2011; Quayle et al., 2014), and van Gijn-Grosvenor and Lamb (2016) reported contact groomers targeting boys take more years off their actual age than those targeting girls (M of 8.58 years vs. M of 5.74 years). However, the actual number of individuals engaging in this form of deception within van Gijn-Grosvenor and Lamb's (2016) study is unclear. O'Connell (2003) acknowledged victim selection may involve identity deception but also reported that individuals can be truthful about their age. Nevertheless, the proportion of fantasy individuals engaging in identity deception within this study is unclear. Furthermore, Bergen et al. (2014) suggested identity deception reduced the odds of achieving an offline meeting, implying - in direct contrast to Briggs et al. (2011) - that identity deception or *identity play* is an intrinsic part of cybersex (Bergen et al., 2014).

Both fantasy (Krone, 2005; O'Connell, 2003) and contact (Krone, 2005; Lorenzo-Dus et al., 2016; Marcum, 2007; Shelton et al., 2016; Winters et al., 2017; Williams et al., 2013) individuals engaged in deceptive tactics to manipulate and develop trust with victims. This included mirroring victims' interests and passions with the aim of achieving a sense of mutuality to advance their relationship. Deceptive Trust Development is identified as a core grooming process within a new Online Grooming Communicative Model (OGCoM) presented by Lorenzo-Dus et al. (2016). They proposed online grooming involves a communicative process of entrapment, whereby groomers disguise their main intention to engage victims in sexual behaviour by developing a false online personal relationship. Similar strategies were observed for contact individuals within Black et al. (2015), Lorenzo-Dus et al. (2017) and Shelton et al. (2016), who found individuals created a deceptive relationship with victims using tactics such as flattery and taking non-sexual pictures to desensitize them to sexual behaviour. Wolak et al. (2004), in contrast, found a majority of

individuals were honest about their intentions, with only 21% (n=26) lying about their sexual motives.

Risk Assessment

Risk Assessment was a term used across the reviewed studies to refer to strategies aimed at determining risk of detection. This included assessment of the victim's environment, family, school life and likelihood of behaviour being detected by parents/guardians (Barber, & Berrez, 2014; Black et al., 2015; Lorenzo-Dus et al., 2016; Lorenzo-Dus, & Izura, 2017; O'Connell, 2003; Williams et al., 2013). Such strategies were reported for both contact (Barber, & Berrez, 2014; Black et al., 2015; Lorenzo-Dus et al., 2016; Lorenzo-Dus, & Izura, 2017; van Gijn-Grosvenor, & Lamb, 2016; Williams et al., 2013) and fantasy driven conversations (DeHart et al., 2017; O'Connell, 2003). Within Dehart et al.'s (2017) study cybersex/schedulers (fantasy and contact driven) were more likely to assess risk and cancel offline meetings than those with either fantasy or contact specific intentions.

Risk assessment was identified as a frequently occurring strategy within some studies describing contact (Barber, & Berrez, 2014; Black et al., 2015; Williams et al., 2013) and fantasy interactions (DeHart et al., 2017; O'Connell, 2003). Particularly in the case of contact individuals conversing with female victims (van Gijn-Grosvenor, & Lamb, 2016). This is proposed to be due to increased awareness of online sting operations as well as a continued assessment of compliance, trust, victim vulnerability and environment (Black et al., 2015; Williams et al., 2013). Yet other studies found risk assessment made up less than 8% of the conversation for contact individuals (Gupta et al., 2012), or nothing at all in the case of contact and fantasy grooming of male victims (Grosskopf, 2010).

Verification techniques were used in both the fantasy (Grosskopf, 2010; Kloess et al., 2015) and contact groups (Barber, & Bettez, 2014; Grosskopf, 2010; Gupta et al., 2012;

Kloess et al., 2015; Lorenzo-Dus et al., 2016). Forty eight percent of individuals in Krone's (2004) study used verification methods. However it was not possible to determine the proportion of those being fantasy or contact driven. Techniques included talking on the phone, receiving a picture of the child (Krone, 2003; Lorenzo-Dus et al., 2016), gaining an understanding of the victims' environment and ability to keep the interaction a secret (Gupta et al., 2012; Kloess et al., 2015; Lorenzo-Dus et al., 2016), and verification of sexuality (Barber, & Bettez, 2014; Grosskopf et al., 2010).

Sexualisation

No clear patterns of behaviour were identified for fantasy and contact individuals when introducing sexual content. Some studies found both contact (Black et al., 2015; DeHart et al., 2017; Grosskopf, 2010; Kloess et al., 2015; Krone, 2005; Lorenzo-Dus et al., 2016; Lorenzo-Dus, & Izura, 2017; Marcum, 2007; O'Connell, 2003; Quayle et al., 2014; Winters et al., 2017) and fantasy (Kloess et al., 2015; Krone, 2005; O'Connell, 2003) individuals introduced explicit sexual content quickly. Yet, contact (Barber, & Bettez, 2014; Grosskopf, 2010; Gupta et al., 2012; Kloess et al., 2015; Lorenzo-Dus et al., 2016; Quayle et al., 2014; Williams et al., 2012; Wolak et al., 2004) and fantasy individuals also engaged in more subtle and manipulative approaches (DeHart et al., 2017; Grosskopf, 2010; Kloess et al., 2015; O'Connell, 2003; Wolak et al., 2004).

O'Connell (2003) proposed the intensity of introducing sexual content is mediated by the individual's intention of developing an online relationship with victims. Fantasy individuals within her study, who attempted to maintain an online relationship, appeared to introduce sex more subtly than the aggressive cyber-rape groomers. Whether this was mediated by the gender of the victim is unclear. A faster and more direct approach was reported for both male (Grosskopf, 2010) and female victims (van Gijn-Grosvenor, & Lamb, 2016) when offline contact is intended. Yet a subtle and educational approach for contact

(van Gijn-Grosvenor, & Lamb, 2016) and fantasy individuals (Grosskopf, 2010) talking to perceived male victims was also observed.

A majority of studies, regardless of the intent for contact, found a non-sequential pattern of behaviour (Black et al., 2015; Grosskopf, 2010; Gupta et al., 2012; Krone, 2003; Lorenzo-Dus et al., 2016; Williams et al., 2012). O'Connell (2003), however, proposed an ordered pattern of progression, identifying several stages through which the individual aims to facilitate abuse: friendship forming, relationship forming, risk assessment, exclusivity and sexual and fantasy enactment. This model suggests individuals aim to develop an intense relationship before testing risk and making the relationship exclusive. Once trust has been established, sexual content is introduced, the type and intensity of which are mediated by the intentions of the individual.

O'Connell's (2003) sequential processes have been empirically challenged. Relationship forming, for example, did not always appear in the introductory stage of the grooming process (Black et al., 2015; Gupta et al., 2012) for contact groomers. In fact, it was suggested to mediate the end of the conversation (Gupta et al., 2012).

Threatening Behaviour

Coercion (e.g. promoting intimidation and reducing negative outcomes) and aggression (e.g. a controlling and hostile approach) were reported in some contact driven (Krone, 2003; Marcum, 2007; Pranoto et al., 2015; Williams et al., 2013) but also fantasy driven interactions (Krone, 2003; O'Connell, 2003). Various methods were described with a direct and controlling cyber-rape approach for both groups (O'Connell, 2003; Pranoto et al., 2015), masked with moderate levels of intimacy and friendship for fantasy individuals (O'Connell, 2003). A rapid and aggressive approach may suggest individuals aim to achieve immediate sexual gratification regardless of the intent being contact or fantasy driven.

Infrequent use of coercive or threatening tactics was also reported, with non-compliance ending the conversation. Sixteen percent (n=18) of contact cases in Wolak et al.'s (2004) study involved coercion, and 9% (n=9) in Wolak and Finkelhor's (2013). It is unclear precisely how many cases in Wolak and Finkelhor's (2013) study involved offline contact, however the authors note that a considerable number did not commit an offline offence. Two studies found no evidence of coercion in contact cases (Barber, & Bettez, 2014; Grosskopf, 2010).

Trade Off Between Contact and Fantasy Behaviour:

A study conducted on adult male chat room visitors in Sweden and Finland reported a potential trade-off between fantasy and contact driven behaviour, with requests for offline contact moderating the intensity of online fantasy behaviour (Bergen et al., 2013). An example of this trade-off includes a reduction in requests for instant messaging and pictures when individuals had the intent of offline contact with male victims (aged 16-18). Nevertheless, correlations were weak to moderate and referred to those victims perceived to be above the age of consent (Bergen et al., 2013). Conversely, a weak to moderate positive correlation was observed between chatting and offline contact for both male and female victims aged 10-14.

Briggs et al. (2011) reported a reduction in online fantasy behaviour for contact individuals, and overall a relatively smaller number of individuals in Wolak et al.'s (2004) study engaged victims in cybersex (20%, n=25) and the exchange of sexual pictures (18%, n=23). DeHart et al. (2017) reported that, compared to schedulers (contact driven), the cybersex group (fantasy driven) were more likely to expose themselves to victims (75%, n=36 vs 14%, n=6), seek explicit photos (42%, n=20 vs 23%, n=10) and engage in child specific/incest themes (35%, n=17 vs 30%, n=13). A higher number of cybersex/schedulers

(fantasy and contact driven) within DeHart et al.'s (2017) study also engaged in online sexual behaviour compared to the schedulers' group (i.e., contact driven) (47%, n=31 vs 14%, n=6 exposed themselves; 48%, n=31 vs 23%, n=10 sought and explicit picture).

Whilst there is an indication that lower occurrences of fantasy driven behaviour are observed when offline contact is intended (Bergen et al., 2013; Briggs et al., 2011; DeHart et al., 2017; Wolak et al., 2004), online fantasy behaviours from which sexual gratification may be reached are still present. Contact and fantasy driven intentions are defined by the point of climax, yet all studies reporting on contact driven behaviour demonstrated evidence that sexual gratification may have occurred through online fantasy behaviours (Barber, & Bettez, 2014; Bergen et al., 2014; Black et al., 2015; DeHart et al., 2017; Gupta et al., 2012; Grosskopf et al., 2010; Kloess et al., 2015; Krone, 2005; Lorenzo-Dus et al., 2016; Lorenzo-Dus, & Izura, 2017; Marcum, 2007; Pranoto et al., 2015; Quayle et al., 2014; Shelton et al., 2016; van Gijn-Grosvenor, & Lamb, 2016; Winters et al., 2017; Williams et al., 2013; Wolak, & Finkelhor, 2013). Importantly, DeHart et al.'s (2017) mixed group provided evidence that a distinct group exists outside the dichotomy of contact and fantasy.

Two studies explicitly argued against the concept of a fantasy subgroup; Kloess et al. (2015) suggested the term fantasy trivialises the crime, and Barber and Bettez (2014) suggested offline contact is not needed to abuse victims sexually. They instead proposed the term 'cyber-victimization,' whereby the process of grooming and victimisation occurs online before the prospect of an offline meeting is introduced.

Patterns of online fantasy rehearsal, masturbation and arousal are observed in both fantasy and contact driven interactions. Furthermore, offline contact can be used to facilitate the online fantasy, making it difficult to establish the true intent of the individual. Importantly in determining whether individuals are fantasy or contact driven, the current review, or indeed the included studies, cannot confidently determine the time and space of sexual

climax. Regardless of intent, the digital environment is used to facilitate and perpetuate the abuse of young people both in an offline and online context.

Discussion

The primary objective of this systematic review is to provide a critical review of the literature examining the strategies of so-called fantasy and contact driven internet child sexual offenders. An accurate typology, supported by the identification of distinct behaviours, is an important step forward in the detection and prevention of this type of abuse. This review identified twenty-two relevant studies. Considering these studies against Briggs et al.'s (2011) concepts of fantasy and contact behaviour, eight reported on both fantasy and contact driven individuals, thirteen on contact only and one on fantasy driven behaviour (see Table 3 in Broome et al., submitted). A primary finding of this review is the difficulty in unambiguously classifying individuals as being contact or fantasy driven. This leads us to challenge the usefulness of the current definitions of contact and fantasy in an online context.

It is not always possible to determine where, or even if, sexual climax was reached. This classification does not account for the high probability that contact individuals may reach sexual climax online through fantasy driven behaviours. It is unclear whether intent or detection prevents online sexual fantasies from developing offline. Furthermore, prolonged online fantasy engagement, particularly if recurring, may eventually lead to an offline contact offence. Importantly, the dichotomy of fantasy and contact disregards the classification of mixed offenders, which refers to those individuals who engage in online and offline abuse.

Research has shown that the pathway from online (the so-called *fantasy driven*) to offline (*contact driven*) abuse is sexual grooming (McManus, Long, Alison, & Almond, 2015). DeHart et al.'s (2017) cybersex/schedulers offending group may be considered the omitted category of mixed offenders. The cybersex/schedulers' group are considered similar

to cybersex (fantasy) offenders in that they engage in sexual talk and activities online but include those offenders who also arrange to meet offline. Although a large portion of this group failed to show or cancelled offline meetings. It is difficult to determine whether offline contact would eventually be achieved by this group, or whether talk of offline contact is used to prolong the online interaction or facilitate sexual gratification (DeHart et al., 2017). Kloess et al., (2015) proposed motivations and subsequent behaviours are mediated by victim responses, therefore victim compliance both online and offline could potentially lead to increased deviance and risky behaviour from individuals with fantasy driven intentions. This indicates that the same individual could act upon both fantasy and contact driven intentions as a consequence of the offender-victim interaction.

The current review did not identify any clear patterns of behaviour characterising fantasy or contact groups. Online child sexual offenders, regardless of intent, use technology as an enabler for sexual abuse, achieving contact with victims in the virtual environment with the aim of achieving sexual gratification either online or offline. A more useful typology might be that presented by the European Online Grooming Project, which does not distinguish so precisely between contact and fantasy behaviour (Webster et al., 2012). Its authors identify three distinct groups: '*intimacy seeking*,' '*adaptable*' and '*hypersexual*'. *Intimacy seeking* groomers view contact with victims as being consenting and intimate. Conversations are prolonged and frequent with sexual content being introduced slowly, leading to the arrangement of offline meetings to develop the relationship. *Adaptable groomers* view victims as being mature and capable, they limit the development of an online relationship and focus on risk management. Much like DeHart et al.'s (2017) cybersex/schedulers group, they adapt their communication style to the victim and so length of contact varies depending on victim response. This group engage in both online fantasy behaviour and offline sexual behaviour. The *Hypersexual* group not only introduce sexual content very quickly (seconds), but are often in possession of child pornography and extreme

adult pornography. They engage in identity deception and do not attempt to develop a relationship with victims. Sexual chat is used to desensitize victims to reach immediate online sexual gratifications, with suggestion of offline contact occurring less frequently than in the other groomer types (Webster et al., 2012).

Unlike the more commonly cited fantasy vs contact typology, the European Online Grooming Project typology demonstrates how internet-initiated child sexual offenders engage in behaviours that may or may not lead to offline contact. There is an implicit acknowledgement that sexual gratification can be reached online regardless of the intention to sexually abuse their victims offline. In terms of tactics, their distinction primarily focuses on the intensity of the online relationship and the desensitization of victims to sexual content (Webster et al., 2012).

The present review faced several limitations. Firstly, cross-comparison between studies was difficult due to low levels of methodological quality, as observed against the STROBE checklist of study quality. Several studies neither specifically identified what qualitative analysis their study was grounded upon (Bergen et al., 2013; Briggs et al., 2011; Malesky 2007; Marcum, 2007; Grosskopf, 2010; Krone, 2005; O'Connell, 2003; van Gijn-Grosvenor, & Lamb, 2016), nor reported on validity and reliability of questionnaire designs (Bergen et al., 2014; Malesky, 2007). Failure to incorporate methodology and questionnaire design into a study may lead to difficulties interpreting and implementing findings (Braun, & Clark, 2006; Rattray, & Jones, 2007). Population variation was evident with small sample sizes being used throughout, which may limit the reliability of study outcomes. Many studies lacked sufficient data, reporting findings from less than five individuals within which presentation of fantasy and contact driven behaviour was included (see Table 3 in Broome et al., submitted).

Confounding factors were present within studies, too, affecting their reliability and validity (Pourhoseingholi, Baghestani, & Vahedi, 2012). A major confounding factor in many studies was the use of decoy victims (see Table 3 in Broome et al., submitted). When researchers do not have access to real child/adolescent grooming/solicitation cases, they are required to simulate these conversations, or access chat corpora from organisations such as *perversed-justice.com*. The aim of a decoy is to close the investigation and secure an arrest. Decoys may therefore engage in sexual behaviours more willingly and be more compliant than a real victim. A recent study compared trends in word usage, including total word count, frequency of sexual words and a measure of social dominance (clout), between decoy victims and online groomers (Drouin, Boyd, Hancock, & James, 2017). Results indicate that online groomers used more words overall, 91% used higher frequencies of sexual words and 82% displayed increased dominance (Drouin, Boyd, Hancock, & James, 2017). Additionally, within Winters et al.'s (2017) study, groomers introduced the idea of an offline meeting a majority of the time (89%), with 77% of groomers initiating contact with decoy victims. Whilst there is suggestion that decoys may be encouraging a sexual conversation, this distribution may be evidence that it is the groomer rather than decoy leading the conversations. Furthermore, Mitchell et al. (2005) found that 13% of individuals identified through proactive investigations using decoy victims committed similar offences against actual minors, and 41% were in possession of child pornography.

Another confounder may be the gender and sexual preference of victims and offender. Only three studies explored the relevance of gender on tactics (Bergen et al., 2013; Grosskopf, 2010; van Gijn-Grosvenor, & Lamb, 2016), with conflicting results. Future research needs to explore gender specific risks and potential differences in behaviour depending on gender sexual preferences. Additionally, due to the lack of studies reporting on different victim age groups, this review is unable to determine differences in behaviour between those with hebophile tendencies and those with paedophile tendencies.

Included studies may have described individuals/groups as online groomers, even though grooming, which involves the development of a relationship, has not occurred. There are instances whereby individuals attempt to sexually exploit victims very quickly (for example, DeHart et al., 2017; Lorenzo-Dus et al. 2016; Lorenzo-Dus & Izura, 2017; O'Connell, 2003). We know the process of grooming, and the development of a personal relationship, occurs at faster rate online compared to offline (Craven et al. 2006; McAlinder, 2013; Internet Matters, 2018). However it is unclear at what point an interaction should be defined as solicitation or grooming. This review highlights the need for a more robust classification of online sexual behaviour, which considers the speed with which individuals introduce sex.

This review highlights the fact that online sexual predators not only achieve sexual gratification by meeting victim's offline, but do so through various cyber-rape and online exploitation approaches that may or may not result in offline contact. Barber and Bettez (2014) suggest the overall intent of such individuals is not to use technology to groom or desensitize victims for offline abuse, but to create cyber-victims through online sexual behaviours. That is, to victimise the child during the online interaction. The concept of cyber-victimisation within an online context suggests sexual abuse can occur both online and offline (Barber, & Bettez, 2014), a view supported by this current review.

We acknowledge our findings synthesise data collected using a variety of methodological approaches and we must consider how this may affect interpretation of outcomes. We do not aim to pool findings but rather to conceptualise patterns across studies to provide meaningful interpretation relating to the behaviours of contact and fantasy driven individuals. The interpretation of mixed-methods research approaches enables this review to offer a contextual perspective of behaviour without being limited by methodological heterogeneity between the studies (Gough, 2015; Harden, 2010). Furthermore, a narrative

approach allows for exploration of emerging themes previously undefined (Pettigrew, & Roberts, 2006). A majority of included studies report results from data collected from the same online source (Perverted Justice). We must contemplate how this impacts the findings of this review. Collaboration with law enforcement should be promoted, in which access to transcripts from real victims is facilitated to validate current findings and strengthen knowledge in this field.

Data from included studies have been generated primarily from the UK, America and Australia. We must consider whether differences in how the law defines internet-initiated crimes against minor's affects outcomes, and how the legal system responds to behaviour considered *fantasy* or *contact*. The law in America makes it possible to arrest someone before an offline offence is committed, in cases where an online platform has been used to entice or persuade a person under 18 into sexual behaviour (18 U.S.C. 2422: Coercion and Enticement). Similarly, in Australia an offence has been committed when a child under the age of 16 has been enticed for 'immoral purposes' (Northern Territory of Australia Criminal Code Act, s.201, para 3.4.2). Until recently, the same level of protection was not offered in the UK. Until 2003 it was illegal in England and Wales to meet a child following sexual grooming online (Sexual Offences Act 2003, s.14 and s.15). This only referred to those individuals with the intention of meeting the child offline, but we know that the sexual encounter can occur entirely online. The Serious Crime Act (2015) has recently been passed, making it a criminal offence for an adult to send explicit messages to a minor (National Society for the Prevention of Cruelty to Children (NSPCC), 2017). This change is a step towards UK law offering children further protection from online predators, and this current systematic review offers evidence based support for this change.

This review may be used to guide future research examining the behavioural patterns of individuals who use technology to sexually abuse minors. Adults that are sexually attracted

to children represent a heterogeneous group of individuals (Whittle, Hamilton-Giachritsis, Beech, & Collings, 2013) varying, among other things, in the degree of their sexual desire towards children and the extent to which they act on their desires. Research has found that the internet can result in escalating offending behaviour for child sexual offenders (Sheehan, & Sullivan, 2010), particularly when coupled with masturbation (Gifford, 2002). Results from the present review highlight that contact driven individuals engage victims in online sexual activities, and fantasy driven behaviour is often coupled with talk of offline meetings.

Considering the way in which children and young people can become cyber-victims of sexual abuse may be more beneficial than an attempt to distinguish between two sets of individuals (fantasy vs contact) whose behaviours overlap. Furthermore, this distinction fails to consider those individuals who engage explicitly in both online and offline abuse (mixed offenders). The issue here is that typologies should be generated when they can lead to a clear distinction between subgroups. Only then they can help make informed decisions in many areas such as policy making and police investigations.

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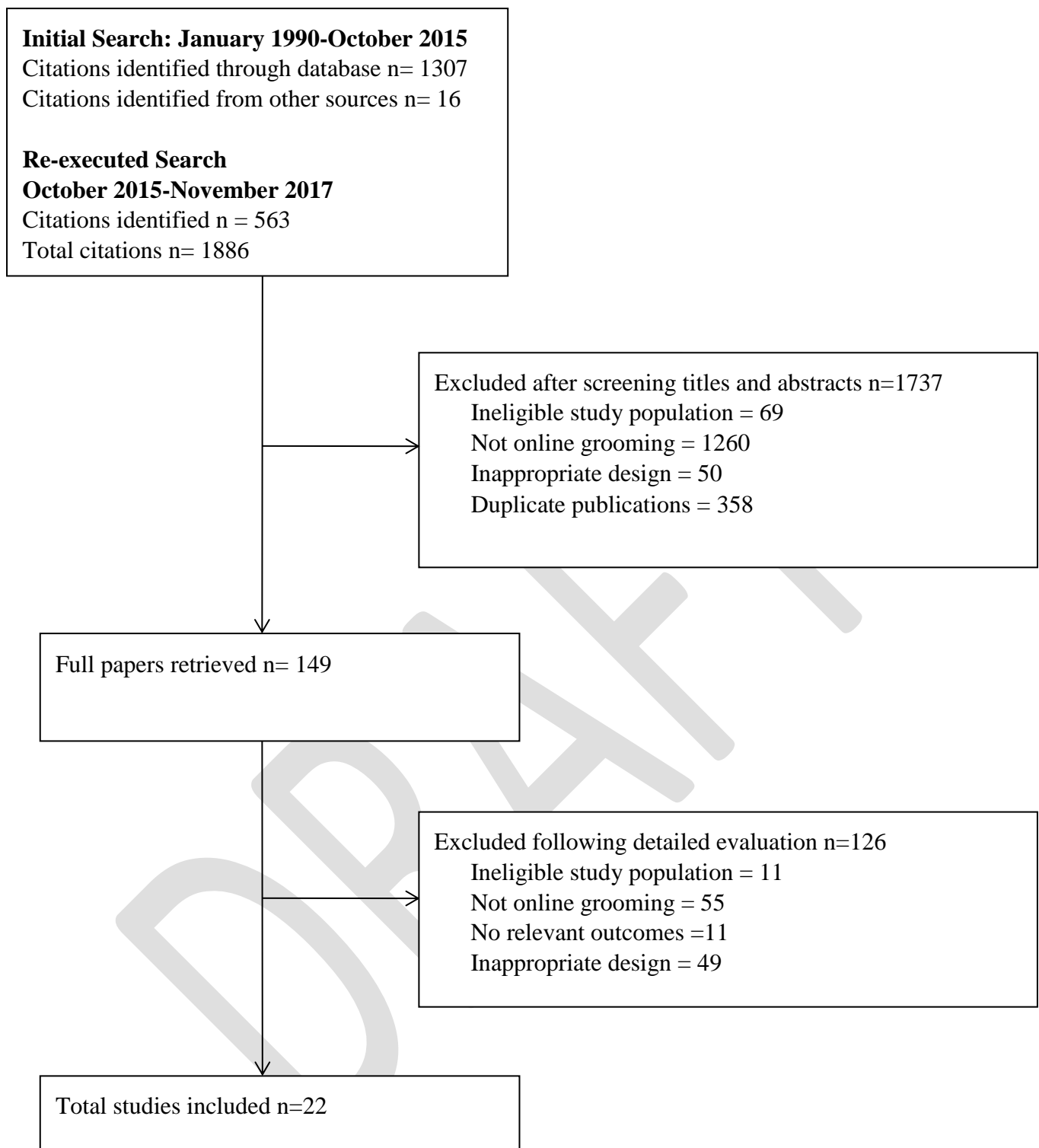


Figure 1. Flow diagram of study selection adapted from “Preferred reporting items for systematic reviews and meta-analyses: the PRISMA statement,” by Moher, D., Liberati, A., Tetzlaff, J., Altman, D. G., & The PRISMA Group (2009), *PLoS Medicine*, 6 (7). Copyright 2009 by Creative Commons Attribution Licence.