

Literature review

A review of the risk posed by internet offenders



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Acronyms

AIM2	Assessment, Intervention and Moving on Project Version 2
AUC	Area Under the Curve (statistical measure)
CASIC	Correlates of Admission of Sexual Interest in Children
CEOP	Child Exploitation and Online Protection
CPORT	Child Pornography Offender Risk Tool
CSA	Child Sexual Abuse
CSAI	Child Sexual Abuse Imagery
CSAM	Child Sexual Abuse Material
CSEM	Child Sexual Exploitation Material
CSO	Contact Sexual Offenders
HMICS	Her Majesty's Inspectorate of Constabulary in Scotland
HSB	Harmful Sexual Behaviour
ICMEC	International Centre for Missing & Exploited Children
ICT	Information and Communication Technology
IIOC	Indecent Images of Children
IoT	Internet of Things
ISP	Internet Service Provider
IWF	Internet Watch Foundation
KIRAT	Kent Internet Risk Assessment Tool
KIRAT-2	Kent Internet Risk Assessment Tool Version 2
MAPPA	Multi-Agency Public Protection Arrangements
NSG	National Strategy Group
NSPCC	National Society for the Prevention of Cruelty to Children
OASys	Offender Assessment System
OGRS3	Offender Group Reconviction Scale Version 3
OSP	OASys Sexual Reoffending Predictor
PROFESOR	Protective + Risk Observations for Eliminating Sexual Offense Recidivism

RM2000	Risk Matrix 2000
RM2000R	Risk Matrix 2000 – Revised
RMA	Risk Management Authority
ROC	Receiver Operating Characteristics (statistical measure)
SAP	Sentencing Advisory Panel
SNS	Social Network Site
SORAG	Sex Offender Risk Appraisal Guide
TA-HSB	Threat Assessment - Harmful Sexual Behaviour
UK	United Kingdom
WoE	Weight of Evidence

Glossary of Terms

Actuarial tools: numerical tools intended to measure which 'predictor variables' lead to reoffending by calculating a risk score.

Child: this is a term that varies by countries and legal definitions. In this review, we refer to the definition of an individual under the age of eighteen years old pursuant to Scottish, United Kingdom and European Union laws.

Child Pornography: the term for depictions of children in real or simulated sexual practices or the portrayal of their sexual organs for primarily sexual purposes. This has been criticised (see Internet Watch Foundation, n.d.); however, the term does have international recognition (Meridian, 2012). This is also known as *indecent images of children*, *child sexual exploitation material*, *child sexual abuse imagery* and *child sexual abuse material*.

Child Sexual Exploitation Material: this is another term for any type of material depicting the sexual exploitation of children. This is commonly used by researchers and is quite broad, covering material out with legal definitions such as audio depictions, narratives, cartoons and drawings (Meridian, 2012). One cited reason for substituting 'child pornography' with CSEM is that it captures the harmfulness and illegality of this material (see Dervley et al., 2017).

Child Sexual Abuse Imagery: an alternative term to refer to sexual representations of children. The Internet Watch Foundation (n.d.) uses this terminology rather than child pornography in order to "reflect the gravity of the images and videos we deal with."

Child Sexual Abuse Material: similar to CSAI and CSEM, this is a term used in place of child pornography. CSAM is perceived to be less harmful or stigmatising to the victims (Interagency Working Group, 2016).

Contact Offenders: those individuals who have carried out sexual abuse against a child that involves physical contact (e.g. rape).

Dual Offenders: those individuals who have engaged in both internet offending *and* contact sexual offences and possibly other types, e.g. solicitation.

Exhibitionism: this tends to fall under the purview of a non-contact offence. It involves indecent exposure of oneself.

Grooming: this involves the manipulation of a child for sexual purposes. It tends to involve an adult 'befriending' a child in online and/or offline contexts for the purposes of sexual abusing that child. This can also be known as the enticement of children or solicitation.

Harmful Sexual Behaviour: this term refers to young people under the age of 18 engaging in sexual discussions or activities that are developmentally inappropriate for their age or stage in sexual development.

Index Offence: the most serious offence in a group of offences that are being dealt with in court.

Internet Offending: offences involving the downloading, production or distribution of indecent images of children.

Internet Offender: those individuals who have carried out a sexual offence involving the internet. This encompasses offences involving the downloading, production or distribution of indecent images of children; in addition to online solicitation.

Internet Service Provider: companies providing internet access to members of the public and businesses.

Internet Watch Foundation: an independent organisation tasked with the elimination of the online presence of child sexual abuse imagery. It works with the internet industry and other partners on a global scale.

Her Majesty's Prison and Probation Service: a criminal justice organisation responsible for the running of prisons and the delivery of probation services in England and Wales. This was previously known as the National Offender Management Service.

Indecent Images of Children: this is another term for child pornography commonly used in the UK and other European countries. Offences involve the making, distribution, showing and advertisement of such material. Whilst this usually involves the internet, such offences can take place in an offline context (e.g. physical photographs). It also includes pseudo-images such as doctored images (see Long et al., 2012; McManus et al., 2015).

Non-contact sexual offences: non-physical offences that do not fit into the categories of 'internet' or 'contact,' e.g. grooming online.

Online Sexual Behaviours: this refers to a range of behaviours including engaging with IIOC and cybersex.

Online Sexual Exploitation of Children: this is a broad term referring to the sexual victimisation of a child, including IIOC and contact offences.

Predictive validity/accuracy: the capability of a tool to discern the difference in the risk of re-offending between the recidivist and non-recidivist populations.

Risk Management Authority: this is a Non-Departmental Public Body established in 2005 by the Criminal Justice (Scotland) Act. Its duties involve overseeing the processes of the Order for Lifelong Restrictions and establishing effective risk practice.

Recidivism: the tendency of a convicted individual to reoffend.

Sexting: This is the practice of 'when someone shares sexual, naked or semi-naked images or videos of themselves or others, or sends sexually explicit messages' (NSPCC, n.d.). They may be sent using any device that allows the sharing of media and messages.

Solicitation: this is the practice of enticing a child for sexual purposes. Although commonly used interchangeably with grooming, it is slightly different in that solicitation will involve actually arranging to meet with a child for sexual purposes; whereas grooming could involve establishing a relationship with a child but never arranging to meet.

Technology-Assisted Harmful Sexual Behaviour: this tends to be used in the field to refer to online, sexual offending by adolescents that encompasses a broad range of behaviour from sexting, grooming and the consumption of indecent images of children.

Voyeurism: this behaviour involves spying for sexual purposes. This may be by watching someone undress without their consent via looking through their window or setting up a webcam to do so. This would tend to be classified as a 'non-contact' offence.

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Executive Summary

This literature review was conducted in response to a recommendation from the joint thematic review of Multi-Agency Public Protection Arrangements (MAPPA) in Scotland. The review recommended that additional guidance should be developed to enable staff to better assess the risk posed by internet offenders (Her Majesty's Inspectorate of Constabulary in Scotland, 2015). In order to contribute towards this recommendation, the Risk Management Authority (RMA) proposed that a literature review would be undertaken covering six aims.

Findings

Question One: What are the typologies and sub-groups of internet offenders?

- A range of typologies of internet offenders has been proposed. Typologies can offer an understanding of differences in the behaviours, characteristics and motivations of offenders.
- Several typologies distinguished between fantasy driven and contact driven offenders. Fantasy driven offenders are characterised as using the internet to engage in online sexual behaviours and facilitate sexual fantasy. Whereas contact driven offenders are characterised as using the internet as part of a broader offending process to facilitate the commission of contact sexual offences. This suggests there is a distinct group of internet offenders motivated to use the internet to engage in online sexual behaviours¹ without the intent to commit a contact sexual offence (fantasy driven offenders).
- The typologies reviewed highlight the diversity of the offending behaviours and motivations of internet offenders. The typologies indicate that internet offenders engage with IIOC for a variety of reasons including impulsivity/curiosity, having a sexual interest in children in addition to non-sexual reasons such as financial gain.

Question Two: What are the characteristics or profiles of those involved in internet offending?

- The studies reviewed for this question indicate that internet offenders tend to be Caucasian males. Additionally, it was found that internet offenders were likely to be well-educated and in some form of employment.
- The research reviewed suggests that internet offenders tend to be single. In some studies, however, a proportion of internet offenders were found to be married, with others

¹ This refers to a range of behaviours including engaging with indecent images of children (IIOC) and cybersex.

separated/divorced. Taken together, this indicates that internet offenders may have less stable intimate relationships.

- Several studies reported that internet offenders experience problems with intimacy, emotional loneliness, low self-esteem and social skills.
- It is proposed that as the internet continues to evolve, the demographic characteristics of internet offenders may similarly evolve over time.

Question Three: How do Internet Offenders Compare to Contact Offenders?

- The research indicates that there are more disparities between internet and contact offenders than parallels. Disparities were found across social and situational characteristics, cognitive distortions, personality traits, offending behaviours and sexual deviancy.
- Internet offenders tended to be single and live on their own; thus, giving them less access to children. Contact and dual offenders were more likely to be married, divorced/separated and live with children.
- Internet offenders and, to a lesser extent, dual offenders tend to be better-educated and in stable employment. Contact offenders are more likely to be unemployed and have fewer educational attainments.
- Internet offenders have fewer criminal histories in comparison to contact offenders. Moreover, their offending patterns also less versatile² (Henshaw, Ogloff & Clough, 2018).
- Out of all offending groups examined, dual offenders were found to have the greatest number of convictions.
- Internet offenders were found to be more likely to justify cognitive distortions related to their own offending (Merdian et al., 2014).
- Contact offenders were found to possess less victim empathy and more cognitive distortions relating to the sexual agency of children.
- Internet offenders had higher levels of paedophilia and were found to generate more fantasies involving children than those convicted of contact offences. Additionally, internet offenders were

² Within this study, offending versatility is defined as committing more offences across the eighteen offence types identified (Henshaw et al., 2018).

more likely to have problems with sexual preoccupation and deviancy than their contact counterparts; although dual offenders had higher levels again.

- Internet offenders were found to be under-assertive and display low levels of hostility, aggression and dominance. Conversely, contact and dual offenders possessed higher levels of aggression and antisocial values.
- Intimacy deficits, loneliness, depression and an avoidance of emotional closeness were found to be present in internet offenders. Impression management levels and self-esteem were found to be higher in internet offenders, suggesting they present themselves in a certain way (Bates & Metcalf, 2007).

Question Four: What are the Offending and Re-Offending Trajectories of Internet Offenders?

- Internet offenders reoffend at a lower rate than contact and dual offenders. Internet offenders who do reoffend tend to do so with further IIOC offences. The research found that only a very low number recidivated with a contact offence.
- The research indicated there are a number of factors believed to increase the risk of an internet offender progressing onto a contact offence. These include antisociality, access to children and having a criminal history. There is also some speculation about more extreme IIOC of children aged five years and under, predisposition and fewer pro-social factors facilitating the transition to contact offending.
- It is questionable in the case of dual offending which type of offence came first. The implication of this is the pathway to dual offending may not necessarily be linear going from internet to contact offences. Other activities such as the distribution of IIOC and becoming involved in an online peer community with similar interests may also be involved (Fortin, Paquette & Dupont, 2018).

Question Five: What are the risk factors and needs of internet offenders?

- Both sexual interest in children and sexual preoccupation are risk factors for internet offending; although sexual preoccupation was found to be highest amongst dual offenders.
- In comparison to dual offenders, internet offenders downloaded larger collections of IIOC over a longer period of time and these materials contained more extreme content. Dual offenders, conversely, were more likely to engage in other non-contact sexual offences like grooming a child online.

- Emotional loneliness and intimacy deficits were present in internet offenders.

Question Six: What risk assessment tools are available to assess the risk posed by internet offenders?

- Existing risk assessment tools for sexual violence may not be fully appropriate in measuring the risk of internet offenders. The modified RM2000 (RM2000-R) which omits two aggravating factors appears the most suitable for use with internet offenders but has limitations in its contribution to risk assessment.
- The KIRAT-2, a case management system, allows for the prioritisation of cases based on which internet offenders are perceived to be at highest risk of progressing onto contact offences. Although not a risk assessment tool, it has the value of allowing law enforcement casework to be prioritised.
- The CPORT has been developed to measure the risk of recidivism in internet offenders. The use of the CASIC scale alongside this tool can help to obtain an accurate measure of an individual's sexual interest in children. The CPORT holds the greatest promise as a risk assessment tool for estimating recidivism in internet offenders; although further empirical validation is required by external authors on non-Canadian data sets.

Introduction

Whilst the internet has brought many benefits to our lives, it has provided those with deviant sexual interests with a new means to offend. It has been noted that the internet can be considered to serve various functions for sexual offending (Gallagher, 2007). This can perhaps be attributed to the unique environment that the internet offers; free of social norms, boundaries and few controls, which enables people to offend from their home, at work or via any device with internet access (McCarthy, 2010). Alongside the development of technology, society has observed the emergence of a category of sex offenders, where there may not have been physical contact with a victim (Quayle & Taylor, 2003).

Noncontact sexual offending is not a new type of offence (voyeurism, indecent exposure) however the internet has changed the nature of this type of offending (Briggs, Simon & Simonsen, 2011). The use of the internet for deviant sexual purposes has been attributed to the 'triple A' engine of the internet: anonymity, accessibility and affordability (Cooper, 1998). For example, most people can access the internet in their home or on mobile devices; it is affordable in the sense that it is inexpensive; and it offers users perceived anonymity. These three factors have been proposed to increase the likelihood of an individual acting upon sexual interests or desires that may have been ordinarily suppressed or controlled. As a result, it has been argued that the internet has, in some cases, shaped this type of behaviour rather than solely facilitated it (Wortley & Smallbone, 2006).

Internet offending can encompass a range of different crimes which are facilitated by the internet. This includes possessing, exchanging and distributing indecent images of children (IIOC), producing IIOC, sexual solicitation (online interaction with minors for sexual purposes) and conspiracy crimes such as working with others to distribute IIOC or solicit children (Seto, 2015). Variations are evident in global legislation and the literature with regards to the terminology used to refer to content that depicts child sexual abuse. Examples of such terms include child pornography, child sexual abuse imagery, child sexual exploitation material, indecent images of children and child sexual abuse material. In 2016, an Interagency Working Group (IWG) published the 'Terminology Guidelines for the Protection of Children from Sexual Exploitation and Sexual Abuse.' Commonly referred to as the Luxembourg guidelines, it provides guidance on the use of terminology. For the purposes of this literature review, the term IIOC has been adopted as the main terminology, since that is what is used in Scottish, United Kingdom and international law. Other terms are used throughout this literature where appropriate, e.g. in cases where authors have adopted this term or it is part of a country's legislation. It is notable that some of the terms such as Child Sexual Exploitation Material (CSEM) encompass more than just images; this also includes audio depictions, narrative and other visual representations including drawings and cartoons (Meridian, 2012). For further information on terminology, please see the Glossary of Terms at the beginning of this review (see Page 5).

Scope of the problem

The internet is now easily accessible for most and this is reflected in internet usage statistics. For example, the Office for National Statistics (2018) report that 90% of adults in the UK have recently accessed the internet. The 2017 Scottish Household Survey (2018) reported that 85% of households had internet access at home, an increase from 82% the previous year. The survey reported that internet use varies across age ranges: 99% of 16-24 year olds use the internet in comparison to 37% of those aged 75 years and above. A recent Ofcom (2018) report examining adult's media use and attitudes highlights changing practices regarding internet use. For example, it is noted that internet use is becoming more mobile as more individuals are accessing the internet on their smartphone and using the internet in locations aside from their home or work.

The online sexual abuse and exploitation of children and young people³ has been described as one of the most insidious forms of modern cybercrime (WePROTECT, 2018). It is extremely challenging to estimate the scale of the problem which can be attributed to the often-hidden nature of this type of offending. Wager et al. (2018) conducted a rapid evidence assessment to examine the scale of online facilitated child sexual abuse (CSA). The authors note that the range of behaviours encompassed under the definition of online facilitated CSA is diverse and appears to be continuously growing. The review identified that there are gaps in understanding the scale of online facilitated CSA. Wager et al. (2018) propose that there are four ways in which online facilitated CSA can be measured: counting the number of offences committed, the number of perpetrators, the number of victims and the number of images that have been viewed, downloaded and exchanged. Since the various ways of quantifying internet offending typically involves assessing different aspects of it, this impacts upon the estimate calculated; henceforth, each measure produces very dissimilar figures (Wager et al., 2018). A comprehensive understanding of the scale of the problem comes from the use of multiple different sources; however, combining information from different sources is complex due to the lack of standardisation and consistency between the measures used (Wager et al., 2018).

The Internet Watch Foundation (IWF) operates a UK hotline for reporting child sexual abuse material and publishes annual statistics relating to the identification of child sexual abuse imagery (CSAI). Estimates of the scale of CSAI in the UK primarily come from the IWF. In their 2017 annual report, the IWF document that 78,589 URLs containing CSAI were identified and traced to 54 countries. The severity of images was found to have increased, with category A images⁴ depicting rape and sexual torture increasing from 28% in 2016 to 33% in 2017. The report also details an increase in the use of disguised websites. Disguised websites present different content depending upon how the website is accessed. The website will only display child sexual abuse imagery when accessed through a 'digital

³ Definitions of children and young people are provided on page 20.

⁴ Category A images - involving penetrative sexual activity, sexual activity with an animal or sadism
Category B images - involving non-penetrative sexual activity
Category C - other indecent images not falling within categories A or B.

pathway.’ If this pathway is not followed or the website is accessed through a browser, then the website will show legal content. Disguised websites undoubtedly make the process of locating and removing CSAI more challenging. In 2017, 2,909 disguised websites were identified, an increase of 86% from the 1,572 identified in 2016. The rise in the discovery of disguised websites suggests individuals are going to greater lengths to evade detection (IWF, 2017). This suggests that individuals are learning new methods of accessing and distributing CSAI in an attempt to lower their risk of identification.

Internet offending is a global problem and, therefore, requires a global response. INHOPE is the International Association of Internet Hotlines. INHOPE is a global network and as of 2017, the network was comprised of 48 hotlines operating in 43 countries. Members of the public can anonymously report internet content or activity that they suspect to be illegal through the hotlines. The content will then be reviewed and if deemed to be illegal, the location will be traced. If it is hosted in the country of the hotline it was reported to then it will be escalated to law enforcement and/or the internet service provider (ISP) for removal. However, if the material is found to be hosted in another country then it will be forwarded via the INHOPE platform to the hotline in the hosting country. In 2017, the INHOPE network identified over 259,000 images and videos of child sexual abuse material (INHOPE, 2018).

Advancement of technology

As technology has developed, it has changed the ways in which individuals access information, communicate with others and find material online. The internet has become accessible on a variety of devices which enables individuals to access a growing range of social media, chat and media sharing apps (Europol, 2017). Apps such as these may be used as a means of sharing and distributing child sexual abuse material in addition to locating and targeting potential victims. The internet has therefore created new channels of access and distribution which are regularly changing as technology advances (Krasodonski-Jones, 2018). In response to the increasing complexity of the internet, patterns of this type of offending behaviour are changing rapidly (Perkins & Merdian, 2017).

As a result of the evolving nature of the internet, individuals are finding new ways of using the internet to enable them to offend in addition to new methods to help them evade detection. Examples of this include the use of disguised websites which are used in an attempt to conceal illegal content and activity. Offenders may also use technological measures such as encryption technologies to protect their identity and minimise the risk of detection (Balfe et al., 2014). A review by Balfe et al. (2014) found that some offenders do not use security measures, which may be related to the belief that the internet provides ‘anonymity.’ Conversely, there are offenders who use technological measures to protect their identity online. As such, it is clear that risk perceptions and risk management behaviours vary amongst offenders (Balfe et al., 2014). It would appear that as technology continues to evolve, the means and methods used to commit online sexual offences will likely change in response. However, this might not occur in a linear way as some would expect. As an example, offenders may use technologies that are no longer commonly used by the general public such as newsgroups and chat rooms (Balfe et al. 2014;

O'Halloran & Quayle, 2010). It is important to obtain an understanding of how online sexual offences are being committed as this is integral to combating the problem (Krone, 2004).

The technological responses to this problem have advanced over time as technology has developed. A new innovative tool called Project Arachnid has recently been developed to identify websites hosting CSAI (Canadian Centre for Child Protection, 2017). The tool is able to search for known illegal images and issue notices to the hosting website to remove the content. During a six-week test, over 230 million webpages were scanned, 5.1 million were identified as hosting child sexual abuse material and 40,000 unique images were detected (INHOPE, 2017).

Children and young people

Children⁵ and young people⁶ are at the forefront of the digital revolution and the growth of technology has created both opportunities and risks for children and young people (Palmer, 2015). Children and young people may be exposed to pornography intentionally or unintentionally (Peter & Valkenburg, 2016). Peter and Valkenburg (2016) conducted a rapid evidence assessment and found that the most likely users of pornography were male, sensation seeking adolescents who were at a more advanced pubertal stage with weak/troubled family relationships. It is reported that age is an important factor in accessing sexual content online, as older youth are more likely to access sexual content and take risks online (Livingstone & Mason, 2015). It is difficult to identify the number of children and young people committing IIOC offences but research indicates that this is a potentially growing population (Lewis, 2018).

Barnardo's (2016) adopted the term 'harmful sexual behaviour' (HSB) to refer to children and young people under the age of 18 engaging in inappropriate sexual discussions or activities. The reasoning behind this is to avoid the stigmatisation that would likely arise from using a term like 'adolescent sexual offending.' Within this context, 'inappropriate' refers to what is developmentally appropriate for that age or stage in sexual development. When HSB involves the use of the internet, it is commonly described as 'technology-assisted harmful sexual behaviour' (TA-HSB). TA-HSB has been defined as:

“One or more children engaging in sexual discussions or acts – using the internet and/or any image-creating/sharing or communication device – which is considered inappropriate and/or harmful given their age or stage of development. This behaviour falls on a continuum of

⁵

The United Nations Convention on the Rights of the Child (UNCRC) defines a 'child' as a person below the age of eighteen, unless the laws of a particular country set the legal age for adulthood younger.

⁶ The United Nations (UN) defines 'youth' as those between the ages of 15 and 24 years. The WHO defines 'Adolescents' as individuals in the 10-19 years age group and 'Youth' as the 15-24 year age group. While 'Young People' covers the age range 10-24 years.

severity from the use of pornography to online child sexual abuse.”
(Hollis & Belton, 2017).

Hollis, Belton and Branigan (2018) carried out an in-depth analysis of nine case studies involving TA-HSB to investigate behaviours and characteristics. It was discovered that TA-HSB encompassed a wide range of behaviours ranging from sexting and making IIOC to the developmentally inappropriate use of pornography (e.g. using it when aged under 12, obsessive usage, viewing extreme or illegal material). Moreover, those who solely engaged in TA-HSB had more stable backgrounds, positive relationships with parents and less experience of trauma than those who only engaged in HSB in an offline context.

A growing volume of IIOC has been described as being ‘self-generated’ or ‘self-produced,’ since the images have been taken by the child or young person of themselves. Although such material may be produced in the context of a consensual relationship, it may also be produced as a result of coercion, grooming or extortion. The NSPCC delineate that ‘sexting is when someone shares sexual, naked or semi-naked images or videos of themselves or others, or sends sexually explicit messages’. They can be sent using any device that allows the sharing of media and messages, including mobiles, tablets, laptops and so forth. Leary (2009) has described ‘sexting images’ as ‘self-produced child pornography,’ in cases where images are produced without coercion or grooming. Livingstone and Mason (2015) reported that girls are under greater pressure to send ‘sexts’ and face harsher judgements when the images are shared without consent. Young people’s understanding of consent in relation to sexting and sharing pictures is unclear (Livingstone & Mason, 2015). Lewis (2018) notes that as online sexual behaviours are becoming more normative and with influences such as pornography minimising issues of consent, children and young people are at greater risk of being unintentionally sexually harmful. Although it is illegal to distribute images of those aged under 18 years old, it has been reported that many children and young people do not realise that sending self-produced sexual images is illegal (Martellozo et al., 2016).

Concerns regarding self-taken images not only relate to the motivation to create such images but how they may be used by others (Quayle, Jonsson, Cooper, Traynor & Svedin, 2018). Once an individual is in possession of such images, they may be used as a means to coerce or extort the victim, which may be achieved through threatening to distribute the images online (Europol, 2017). As noted, young people may take sexually explicit images or videos of themselves; however, they may be coerced, manipulated or forced into doing so by others. Therefore, sexting can create a blurred distinction between images that have been consensually taken and IIOC and it is challenging to identify coerced and non-coerced images (Horvath et al., 2013).

In their recent annual report, the IWF (2017) note that there is an increase in the imagery termed as ‘self-produced’ of 11-15 year olds. A recent study by Quayle, Jonsson, Cooper, Traynor and Svedin (2018) aimed to quantify the characteristics of children in identified illegal images from the UK International Child Sexual Exploitation (ICSE) Database. The study examined a sample of 687 cases and found that in terms of image producers, self-taken images were the most common. Of these, 34.4%

were taken in a coercive relationship and 9.9% in a non-coercive relationship. Those aged 12-17 were more likely to have self-taken images (coercive and non-coercive) in comparison to other age groups. Furthermore, Seto, Buckman, Dwyer and Qauyle (2018) analysed two datasets from the National Center for Missing & Exploited Children (NCMEC), one of which was historic to allow for an analysis of trends over time. The modern dataset contained 1965 cases involving one offender and one victim and 633 cases involving multiple offenders and/or victims. Of the cases involving one offender and victim, it was found that approximately 7% of those cases were actively traded. Of the cases involving multiple offenders and/or victims, approximately 12% were actively traded.

Legal Definitions

There is significant disparity with regard to what constitutes 'internet offending' and this is reflected in variances in legislation around the world. Although the term 'child pornography' is most frequently used in legislation, there is currently no universally accepted definition of child pornography. The International Centre for Missing & Exploited Children (ICMEC) has regularly reviewed the global legislation pertaining to child pornography. Whilst there has been significant legislative change, it is highlighted in their 2016 report that there are 35 countries which have no legislation specifically addressing child pornography (ICMEC, 2016). It is reported that despite having legislation with a specific focus on child pornography, 60 of the countries do not provide a definition of child pornography, 50 of the countries do not criminalise the possession of child pornography and 26 do not provide specifically for computer facilitated offending. As noted, internet offending is a global problem; however, differences in legislation may hinder international cooperation. The UK recently ratified the 'Lanzarote Convention' which came into force in July 2010. The convention is a legally binding global treaty pertaining to the protection of children against sexual exploitation and sexual abuse. The ratification of the convention will enable greater international cooperation and information-sharing across borders (EPCAT, 2018).

What constitutes 'internet offending' in Scotland falls under the legal purview of Scottish and UK laws, as well as European Union⁷ Directives. The UK 'Protection of Children Act' (1978) maintains it is an offence to produce or distribute IIOC, denoting five levels of imagery. Although IIOC offences usually involve the internet, this is not inherent in the offence, i.e. this could involve accessing IIOC from other means such as using physical copies of doctored photographs (Howard et al., 2014). Further to this, the 'Civic Government (Scotland) Act' of 1982 states 'It is an offence to take, distribute or have in your possession an indecent image of a children under the age of 18.' Two further Scottish laws help define the legal parameters of offending, acknowledging the role of the internet in the production, distribution and possession of IIOC: the 'Protection of Children and Prevention of Sexual Offences Act' (2005) and the 'Sexual Offences (Scotland) Act' (2009). These laws also extend to other types of behaviour like online solicitation, voyeurism and sexual coercion. Additionally, the UK 'Criminal Justice Act' (2003) provides guidance on sentencing in line with the quantity of images held. The 'Sexual Offences Act (2003)' created a new offence of sexual 'grooming' of a person under 16 by an adult aged 18 and over.

⁷ Despite the anticipated withdrawal of the UK from the European Union in 2019, previous laws from the bloc will be incorporated into UK laws.

Furthermore, the Sexual Offences (Scotland) Act (2008) made it an offence for an adult to send sexual communication to a child.

Further adding to this is the Directive 2011/92/EU of the European Parliament and of the Council about the sexual abuse and sexual exploitation of children. Within this directive, a 'child' means an individual aged under 18 years old. Moreover, 'child pornography' refers to material that involves the following: visually depicting a child engaged in real or simulated sexually explicit conduct; the depiction of the sexual organs of a child for primarily sexual purposes; material visually depicting a person appearing to be a child primarily for sexual purposes. Also included in this area are other forms of sexual abuse and exploitation of children facilitated by technology, such as the online solicitation of children for sexual purposes via social networking and chat rooms.

Response in Scotland

In response to this escalating global problem, numerous countries have developed a National Strategy or National Action Plan. In Scotland, the increasing number of registered sex offenders (RSOs) being managed by MAPPA has been partly attributed to an increase in convictions for internet offending. Practitioners have expressed concern regarding the increasing number of internet offenders and the challenge this poses in terms of risk assessment and management. The number of offenders convicted for internet offences — encompassing IIOC offences as well as online solicitation, live-streaming and grooming — increased 109% from 252 in 2012/2013 to 527 in 2014/2015 (HMICS, 2015).

The Scottish Government published their National Action Plan to Tackle Child Sexual Exploitation in 2014. The Scottish Government also published the National Action Plan on Internet Safety for Children and Young People in April 2017. Children are becoming teachers with regard to educating their parents and carers about new technologies which means that parents and carers may not always have the necessary knowledge to protect children when they are online (Palmer, 2015). It is therefore important that efforts are made to develop the public's understanding and knowledge of technology to ensure they are able to take steps to keep children and young people safe online.

Police Scotland launched their first national operation to tackle online child sexual abuse in 2015. Operation Lattise resulted in the recovery of over 30 million images of child sexual abuse and identified more than 500 children who were either victims or potential victims of internet offenders (Police Scotland, 2016). The identified victims ranged from 3 to 18 years old. A recent report examining cyber-crime in Scotland notes that technology has had an impact upon the scale and nature of sexual crime in Scotland (Scottish Government, 2018). It has been estimated that the internet was used as a means to commit at least 20% of all sexual crimes recorded by the police in Scotland in 2016/17 (Scottish Government, 2018).

Adolescents can be referred to the Scottish Children's Reporter Administration (SCRA) when their offending behaviour is a concern. For offence referrals, children and young people can be referred from the age of 8 to 16 years of age. Those over 16 can be seen in certain circumstances: for instance, if they had already been referred pre-16 and the matter was not resolved or they are on a compulsory supervision order. It is worth noting that Scotland's current age of criminal responsibility is eight which is the lowest in Europe. However, a bill has been published for an Act of the Scottish Parliament to raise the age of criminal responsibility to 12 years of age (Age of Criminal Responsibility (Scotland) Bill). In 2016/2017 there were 210 children referred to the Children's Reporter on 380 alleged sexual offence grounds. The disparity between the number of alleged offences and the number of children referred is likely due to some children being referred for multiple alleged sexual offences. The categories were for allegations of the following offences: sexual assault (n=45); sexual assault of a young child (n=43); the rape of a young child (n=20); communicating indecently with a young child (n=11), which can include sharing IIOC material with them (Bell, 2017).

Aim of the research

This literature review is being undertaken to assist with the fulfilment of one of the recommendations that emerged from the Joint Thematic Review of MAPPA in Scotland. A key finding of the review is that staff members require additional guidance relating to the assessment of risk posed by internet offenders (HMICS, 2015). As part of the RMA's role to review research and publish Standards and Guidelines, it was proposed that a literature review would be undertaken with the aim of reviewing and evaluating the literature relevant to the six aims listed below. One of the challenges of this review was the relative infancy of this type of offending and, thus, the empirical literature relating to it. After reviewing the available studies, the researchers of this report tend to agree with the statement that the literature about internet offenders is 'small in size and scope and, in some cases, characterised by mixed findings' (Henshaw et al., 2015).

A range of terms are used throughout the literature to refer to those who commit sexual offences using the internet. As an example, online offenders, indecent image offenders, child pornography offenders and cybersex offenders are only some of the terms encountered during this review. Additional terms suggested by Quayle and Newman (2015) include: paedophiles, online sex offenders, internet sexual offenders and internet-based sexual offenders. For the purposes of this review, the term 'internet offenders' will be adopted and this will refer to those who have committed a sexual offence involving the internet and where possible, the offences which have been committed have been delineated.

As noted, child pornography is a term that is commonly used in the literature and legislation. However, its use has been criticised as it fails to capture the abusive nature of the content. For the purposes of this review, the term 'indecent images of children' (IIOC) will be used to refer to such material. IIOC can also encompass self-taken sexual images that may not have materialised from sexual abuse (NSPCC, 2016). As previously mentioned, however, the researchers have in some instances utilised the terminology adopted by the authors of the study, e.g. CSEM, CSAI and CSAM. This means that there

is some variation in the terminology used throughout this review. For further information on definitions used in this literature review, refer to the Glossary of Terms provided at the beginning of this report (See page 5).

This review was conducted to meet six aims which are listed below.

1. To identify and review the typologies and sub-groups of internet offenders
2. To review the characteristics and profiles of internet offenders
3. To examine the differences between internet only offenders and contact offenders (dual)
4. To identify offending and re-offending trajectories of internet offenders (examine the risk of recidivism)
5. To examine the risks/needs of internet offenders
6. To identify and review the risk assessment tools used to assess the risk posed by internet offenders

The first question aims to explore the typologies and sub-groups that have been proposed in the literature. Whilst the second question aims to explore what research has found thus far in relation to the characteristics of internet offenders. Succeeding this is the third question, which examines the differences and similarities that have been identified between internet offenders and contact offenders. The fourth question about the offending trajectories of internet offenders is an issue which requires further investigation. Of particular interest is the relationship between contact and internet offending and how one becomes a dual offender (see Henshaw et al., 2015; Quayle & Taylor, 2002). The fifth question aims to explore the risks and needs of internet offenders. This is particularly relevant to explicate the differences between internet and other types of sexual offenders, as this will determine the assessment and management approach taken. The identification of risk factors informs the appropriateness of instruments used to predict risk of recidivism and escalation onto contact offending, as asked in Question Six. In addition to this, the review sought to answer two secondary research questions which are detailed below.

- What are the key issues arising from the research literature regarding risk assessment and management of internet offenders?
- What gaps exist in the research base which requires further investigation?

The structure of the report addresses each of the research questions in order. Prior to that, a methodology chapter is provided, detailing the methodological approach adopted to complete this review. The report will conclude with a discussion of the key findings from the review in addition to recommendations for research and practice.

Methodology

This literature review is being undertaken in response to one of the recommendations which arose from the Joint Thematic Review of MAPPA in Scotland. A literature review is a means to scope out the available literature on a topic and present this in a digestible format. The review aims to identify and examine the available research relevant to the six research questions. The review will conclude in the Discussion Chapter with an overview of the implications for practice as well as recommendations for further research. As such, it is hoped that this review will build upon the existing research base and support staff in their assessment of the risk posed by internet offenders. This chapter outlines the methodological approach that was adopted to produce this literature review.

Searching Strategies

Inclusion and exclusion criteria were firstly developed to guide the study selection process (see Appendix A). The purpose of these criteria was to help inform which studies were eligible for inclusion in this review whilst ensuring that the studies were capable of answering the six research questions. A total of four databases were searched with the developed search strings: PsycINFO, Web of Science, PubMed and Social Care Online (SCIE). Since these are some of the leading databases in psychological and social work studies, it was believed they would yield the most appropriate results. Following some background reading of the literature, search terms were developed for the main concepts of each research question to maintain scope and rigour.

These search terms were tested using different databases to appraise the quantity and quality of the results. The search terms were then combined and formed into a search string for each database. As there are six research questions, six separate search strings were devised. The databases were searched using Boolean connectors which were used to combine search terms. Wild cards and truncation were also used as a means of searching for variations of the search terms. If there were differences in the databases in relation to the controlled vocabulary and syntax rules, the search strings were adjusted to accommodate this. Details of the search strategies for each question can be found in Appendix I. Search parameters were applied to find research published in English only and from January 1990 - March 2018. The time limit from 1990 onwards was imposed due to the internet only becoming commercially available in the 1980s. Due to time constraints, grey literature was not searched.

Selection of Articles

After removing duplicates, the remaining papers were then subject to a screening process.⁸ The first level of screening involved reviewing the title and/or abstract of the article which was compared against the inclusion/exclusion criteria. Those which did not meet the inclusion/exclusion criteria were omitted. Of the remaining articles, full text copies were sought which were then reviewed in full and compared with the inclusion/exclusion criteria. When reviewing these articles, the reference list was also examined to identify references that may be of relevance. Articles identified as potentially relevant to a particular question through this hand-searching process were retrieved and assessed to determine whether they met the inclusion criteria. Again, if articles did not meet the inclusion criteria then they were excluded. If a full text article could not be easily obtained prior to this stage then it was excluded. Of the articles found to meet the inclusion criteria and therefore deemed eligible for inclusion in the review, key information was extracted and compiled in data extraction tables (Appendices J-O). The studies deemed eligible for inclusion were assessed using a weight of evidence (WoE) approach.

Quality Assessment

WoE is a framework used by the EPPI-Centre (2007) for appraising the quality of individual studies (Gough, 2007). The WoE analysis used for this review has been adapted from this framework. Consideration was given to various quality appraisal tools; however, due to time constraints; it was felt that adapting the WoE framework was the best approach to adopt. The studies deemed eligible for inclusion in this study were assessed according to three conditions: quality assessment, the appropriateness of design and analysis for the current research and the relevance of particular focus of study for the current research. To assist with this, a series of questions were developed to appraise the quality of the studies deemed eligible for inclusion in this review. The questions consider the aims of the research, the methodological approach, the clarity of the research and the relevance of the research to the literature review. The questions used for the process of quality appraisal are detailed in Appendix P. The weight given to the evidence depended upon various factors which were assessed through the questions mentioned above and a score was thereafter generated. All of the studies were assessed in accordance with the quality assessment process and were given an overall score of low, medium or high relevance. A scoring summary of the Weight of Evidence is provided for all seventy-three studies reviewed in Appendix Q.

⁸ Due to the number of questions, flow diagrams depicting the screening process and the number of papers reviewed at each stage have been provided for each of the six questions (See Appendices C-G).

Analysing and Synthesising Results

Once articles were selected for inclusion, they were reviewed and the information was synthesised. The emerging findings from each study were mapped out for each question. This approach helped to identify information relevant to each question and highlighted both the comparable and divergent findings across the research base.

Question One – Typologies of Internet Offenders

In order to address the question of typologies of internet offenders, this chapter will examine eight different typologies. A table detailing the research reviewed for this question can be found in Appendix J. One of the first typological approaches to distinguish different types of internet offenders was proposed by Lanning (2001). The typology was developed based upon Lanning's experience as an FBI agent and his experience of studying the criminal aspects of deviant sexual behaviour (Lanning, 2001). Lanning described three categories of internet offenders: situational, preferential and miscellaneous offenders.

Lanning proposed three types of situational offenders which are detailed below.

Situational offenders

'Normal' adolescent/adult – This includes adolescents searching for pornography and adults who are impulsive or curious with access to a range of pornography and sexual opportunities online.

Morally indiscriminate – These offenders often have a history of criminal behaviour and are usually motivated by power or anger.

Profiteers – This includes those who are motivated by the prospect of financial gain. These individuals might be motivated by the lowered risk of identification and increased potential for profit.

Lanning notes that the offending behaviour of situational offenders is not as long-term or persistent as that of preferential offenders. Preferential offenders include three types of offenders which are detailed below.

Preferential offenders

Paedophile – These offenders are sexually attracted to children.

Diverse – These offenders have a wide variety of sexual interests but do not have a strong sexual preference for children.

Latent – These offenders have potentially illegal interests that were previously latent. They offend when their inhibitions are weakened and their arousal may be fuelled and validated online.

The third category of internet offenders is referred to as miscellaneous offenders. This includes *media reporters, pranksters, older 'boyfriends'* and *overzealous citizens*. As an example, *older 'boyfriends'* refer to those in their late teens or early twenties who try to sexually interact with an adolescent girl or boy. *Overzealous citizens* include those who attempt to conduct their own private investigations.

Lanning (2001) outlined that IIOC can serve multiple functions and this can be seen from the typology proposed. As an example, it may be used for the purposes of sexual arousal but it may also be used in the process of grooming a child as a way of lowering their inhibitions. Another use of IIOC is to obtain profit in cases where individuals are involved in the sale and distribution of IIOC for the purposes of financial gain. Overall, Lanning produced a comprehensive typology which considers the different reasons why someone may use the internet to sexually offend.

Krone (2004) proposed a typology along an offending continuum of increasing seriousness. The typology considers the type of involvement in offending, the level of networking and the security measures employed. As these factors increase, the seriousness of the offending behaviour does too. Krone's typology differentiates between nine types of offenders which are outlined below.

Krone categorised the nine types of internet offenders as either indirect or direct abusers. The first five types (*browser, private fantasy, trawlers, non-secure collector and secure collector*) are all categorised as indirect abusers, since they commit non-contact sexual offences. Whereas the *groomer, physical abuser* and *producer* are categorised as direct abusers as their offending involves both non-contact and contact sexual offences. Krone's typology therefore suggests that there are two types of offenders, those who use the internet to view, exchange or distribute IIOC (indirect abusers) and those who use the internet to facilitate both non-contact and contact sexual offending (direct abusers). Krone's typology considers the level of networking between internet offenders and for some types proposed, the level of networking is high (non-secure and secure collectors). It is possible that this contact may reinforce distorted beliefs about the individual's behaviour.

Alexy, Burgress and Baker (2005) proposed a typology which was developed from an analysis of media coverage of internet offenders. A total of 225 media reports were reviewed, the majority (95.1%) of cases reported were male and less than 5% of cases were female. All had been convicted and sentenced for their offence. The authors found that the cases could be categorised as traders, travellers or combination trader-travellers. *Traders* include those who collect and trade IIOC online; they may obtain convictions related to the possession, production or distribution of IIOC. *Travellers* initiate contact with children online with the intention of meeting the child offline for sexual purposes; they may use manipulation and coercion to achieve this. Lastly, *combination trader-travellers* are those who collect and trade IIOC but will also travel to meet a child in person for sexual purposes.

This typological approach distinguishes offenders based upon the function that the internet serves in their offending. As such, the typology highlights that there are offenders who use the internet solely to collect and exchange IIOC; whilst other offenders use the internet as a way of facilitating contact offending. There is also a mixed group of offenders who use the internet to engage in both non-contact and contact offending. Of the 225 cases reviewed, the majority were classified as traders (59.1%) followed by travellers (21.8%) and then combination trader-travellers (19%). It is interesting to consider that the majority of media reports reviewed involved non-contact offending.

It is important to highlight that if an individual viewing or trading IIOC travelled to commit a contact offence against a child that they had solicited offline, they would solely be classified as a *trader*. Similarly, if an individual travelled to meet a child for sexual purposes but was also involved in trading child sexual abuse material offline, they would solely be classified as a *traveller*. As such, this is a clear limitation of this typology in terms of its ability to categorise.

Building upon typologies proposed by others including Lanning (2001) and Krone (2004), Elliott and Beech (2009) suggested that internet offenders can be categorised into four types: *periodically prurient, fantasy only, direct victimisation* and *commercial exploitation* offenders.

Periodically Prurient – Those who occasionally view IIOC due to impulsivity and/or curiosity.

Fantasy only – Those who view and exchange IIOC to fuel their sexual interest.

Direct victimisation – This includes those who use the internet for the purposes of contact and non-contact offending, including viewing IIOC and soliciting children to facilitate an offline contact sexual offence.

Commercial exploitation – Those who engage with IIOC for the purposes of financial gain.

Similar to other typologies discussed above, this typology highlights that the function the internet serves with regard to offending varies. Offenders may use the internet for the sole purpose of viewing, exchanging or distributing IIOC (*periodically prurient* and *fantasy only*). Whereas other offenders use the internet to facilitate both non-contact and contact sexual offending (*direct victimisation*). The commercial exploitation offenders include those who produce or distribute IIOC to obtain financial gain.

A review by Merdian et al. (2013) found that subgroups of IIOC offenders can be differentiated according to three dimensions, which includes the type of offending, the motivation to offend and the situational plus social engagement in the offending behaviour. The first dimension distinguishes offending as being either fantasy driven or contact driven. The second dimension considers the offender's motivation and the authors suggest four different 'motivational types': paedophilic motivation, general deviant sexual interest, financial motivation and other (which includes those whose motivation is based on other reasons such as curiosity). The third dimension focuses on the social component of the offending behaviour. Based on the proposed typology, Merdian et al. (2013) offered a conceptual model which aids in the categorisation of offenders based upon the function of IIOC in the offending process, the underlying motivation and the social networking involved in the offending behaviour. Whilst the conceptual model has been influenced by existing theories and typologies, research is required to validate the applicability of the model.

The distinction between fantasy driven and contact driven offending has also been applied to online solicitation offenders. These offenders use the internet to initiate and develop a relationship with a child or young person, with some progressing to meeting offline. Briggs, Simon and Simonsen (2011) examined a sample of 51 offenders referred to as 'chat room sex offenders' who had been communicating with undercover police officers posing as adolescents online. Behavioural data from the offender's case files was analysed and it was found that there were two identifiable sub-groups of offenders, a fantasy driven group and a contact driven group. Of the 51 offenders in the sample, 21 were categorised as fantasy driven and 30 were categorised as contact driven.

Offenders were categorised as fantasy driven if they had engaged the victims in mutual masturbation, cybersex and/or exhibitionism. Individuals were categorised as contact driven if they scheduled a

meeting and agreed to meet the victim. Three offenders who had been categorised as fantasy driven were arrested by police when they attempted to meet victims; however, it is noted that in two cases the offenders' conveyed intention was to exchange items with the victim for them to use to improve cybersex (i.e. web camera). As such, the contact driven group were motivated to engage in an offline sexual offence with an adolescent; whereas the fantasy driven group were motivated to engage in online cybersex with an adolescent. It was found that the contact driven offenders engaged in few online sexual behaviours except for grooming. In contrast, the fantasy driven group engaged in various online sexual behaviours including cybersex and exhibitionism.

It appears that contact driven offenders used the internet as a means of locating potential victims and arranging offline meetings. In comparison, the fantasy driven offenders used the internet to engage in online behaviours such as cybersex. As documented in previous typologies, the internet serves different functions for both types of offender. Ultimately, the typology highlights that the two subtypes of offender, contact driven and fantasy driven have distinct motivations. Merdian et al. (2013) proposes that the fantasy driven versus contact driven distinction can be applied to both IIOC offenders and online solicitation offenders.

Tener, Wolak and Finkelhor (2015) developed a qualitative typology of online solicitation offenders based upon 75 case reports completed by law enforcement officers. Analysis identified four types of offender: the experts, the cynical, the attention-focused and the sex-focused. These are outlined below.

The experts – These offenders mostly meet victims online and some progress to meeting the victim in person. Some present their true identity whereas others fabricate an online identity. These offenders have a high level of expertise and picked their victims systematically.

The cynical – These offenders often know the victim first. They may have an online only relationship or may also meet the victim offline. These offenders may or may not present their true identities and the relationship is often reciprocal in the early stages. These offenders have a moderate to low level of expertise.

The affection-focused – These offenders meet victims online but progress towards offline meetings. These offenders present their true identities and the relationship is thought to be reciprocal. These offenders are considered to have a low level of expertise.

The sex-focused – These offenders meet victims online but quickly progress to meeting them in person offline. Similarly, these offenders present their true identities and the relationship is reciprocal. These offenders have a low level of expertise.

Of the 75 cases, 24 cases were identified as the *expert* type, 26 were identified as the *cynical* type, 16 were identified as the *affection-focused* type and 9 were identified as the *sex-focused* type. The *experts* and the *cynical* offenders manipulated their victims; whereas the *affection-focused* offenders did not

coerce or manipulate victims and are characterised as having genuine feelings for victims. Likewise, the *sex focused* offenders did not use manipulation; they are primarily motivated to satisfy their sexual needs but not necessarily with adolescents.

The authors note that the *experts* and the *cynical* offenders appear to intentionally seek sexual contact with adolescents. For example, the authors note that some cynical offenders were interested in a particular age group and would abuse a victim until they got older, at which point the offender would seek an alternate victim. Whereas the *affection-focused* and the *sex-focused* offenders do not seem to be motivated by deviant sexual thoughts or beliefs. It is noted that *affection* and *sex-focused* offenders are not always aware that they are sexually involved with someone who is underage. The authors detail that there were *affection-focused* offenders who were not aware they were involved with a minor (i.e. a minor presented themselves as an adult). By the time they learned the victim's age, some felt too emotionally involved to end the relationship. The four types of offenders are characterised by the patterns of online communication, offline and online identity, relationship dynamics with the victim and their level of sex crime expertise.

DeHart et al. (2017) analysed the chat logs, email threads and social network posts of 200 men who had been communicating with undercover officers posing as children or adolescents. The authors identified four types of offenders: *cybersex* offenders, *schedulers*, *cybersex/schedulers* and *buyers*.

Cybersex only – These offenders often exposed themselves whilst communicating with the victim and half sought sexually explicit pictures. They may discuss meeting the victim but do not develop a plan to do so. They often communicate with victims for months.

Cybersex/schedulers – Almost half of the cybersex/scheduler offenders exposed themselves online and sought to obtain sexually explicit pictures. These offenders may plan to meet their victims but are likely to cancel or not show up. These offenders often communicate with victims for a prolonged period of time.

Schedulers – These offenders rarely exposed themselves but more often sought to obtain sexually explicit pictures of the victim. These offenders seek fast sexual gratification and only communicate with victims for a short period of time.

Buyers – These offenders focus on arranging to meet the victim and they negotiate the types of sexual behaviours they will engage in.

Of the 200 cases, 48 were *cybersex* only, 64 were *cybersex/schedulers*, 44 were *schedulers* and 23 were classified as *buyers*. Of the four types, *cybersex/schedulers* were the most likely to express child specific or incest interests. They were also the most likely to cancel or not show up to a scheduled meeting with the victim. There are various reasons why offenders may cancel or not show up to an arranged meeting. It is proposed that imagining the meeting may be part of the online fantasy and could

be sexually gratifying to the offender. Alternatively, the offender may fear that the meeting is a ruse and not show up or cancel due to a fear of being caught.

The study identified offenders that solely engaged in cybersex, offenders who engaged in cybersex and also arranged offline meetings, and offenders who arranged offline meetings without engaging in cybersex. As such, this typology provides support for the fantasy driven and contact driven distinction. *Cybersex* offenders can be classified as fantasy driven whereas *schedulers* can be classified as contact driven offenders. DeHart et al. (2017) extended upon Briggs et al. (2011) typological approach by including other types of online solicitation offenders. This includes cybersex/schedulers who engage in online sexual behaviours and may progress to meet a victim offline and buyers who negotiate terms including the cost and the type of sexual behaviours that they will engage in. The authors highlight that the cases reviewed for this study involved undercover officers who posed as minors online and it is possible that investigative techniques employed by the officers might have influenced offender behaviour such as attempting to schedule a meeting or engaging in masturbation (DeHart et al., 2017). In the review of qualitative data, it was found that some undercover investigators discouraged attempts to schedule a meeting or real-time sex acts; whereas other investigators encouraged such attempts.

Summary

As evidenced above, several typologies specific to internet offenders have been proposed. A table summarising the typologies can be found in Appendix R. It is interesting to consider that there are similarities between the typologies reviewed for this question. Several of the typologies outlined above include comparable subtypes such as those who are sexually interested in children, those who access IIOC due to impulsivity/curiosity and those seeking financial gain. As an example, both Lanning's (2001) *profiteers* and Elliott and Beech's (2009) *commercial exploitation* offenders are motivated by the prospect of financial gain. Likewise, the *normal adolescent/adult* proposed by Lanning (2001), the *browser* proposed by Krone (2004) and the *periodically prurient* offender proposed by Elliott and Beech (2009) are all examples of a type of offender who accesses IIOC due to impulsivity and/or curiosity. Furthermore, several typologies allude to the existence of two distinct sub-groups of internet offenders, fantasy driven and contact driven offenders (Briggs et al, 2011; DeHart et al., 2017; Merdian et al., 2013). The two-fold distinction has been applied to IIOC offenders and online solicitation offenders.

The typologies have been developed from a range of different approaches: for example, few have been developed from empirical data; with others being based upon reviews of the literature, clinical observation and opinions (Tener et al., 2015). As an example, Lanning (2001) developed his typology based upon his experience of studying deviant sexual behaviour; whereas Beech et al. (2008) developed their typological approach based on a review of previous typologies. It is important to emphasise that further research is required to validate the typological approaches outlined above. Tener et al. (2015) highlights that many typologies do not consider the offenders' motivations, characteristics

or their relationships with the victims. This suggests that typologies could be developed further to include additional factors considered to be relevant to offending behaviour.

Overall, the typologies reviewed provide an insight into the possible motivations underlying this type of offending behaviour. They also illustrate the diversity of the offending behaviours of this group. A review of the typologies highlights that different subgroups of internet offenders can be identified. These subgroups can be differentiated based upon their motivation to offend in addition to the way in which they utilise the internet to offend. However further research is required to empirically validate the typological approaches reviewed above. Ultimately, the typologies examined highlight the heterogeneity of internet offenders.

Question Two – What are the Characteristics of Internet Offenders?

Based upon the eleven studies reviewed for this question, the demographics and other characteristics of internet offenders will be examined. During the review, other factors were identified which have also been included within this chapter. A table detailing the research reviewed for this question can be found in Appendix K.

Demographic characteristics

Gender

Of the studies reviewed for this question, all excluding two were comprised of male only samples. The sample in the study conducted by Clevenger, Navarro and Jasinski (2016) was primarily (99%) male. In the Seigfried, Lovely and Rogers (2008) study, 307 individuals completed an online survey of which 181 were female and 126 were male. Of the 307 survey respondents, 30 self-reported using IIOC, 20 were male and 10 were female. The study conducted by Ray, Kimonis and Seto (2014) excluded 11 female survey respondents due to the small number. It is unknown if these respondents would have been pornography consumers or users of IIOC. This would have been interesting to know given that internet offending has been largely conceptualised as a male phenomenon (Seigfried et al., 2008).

Age

It was found that age varied across the research reviewed. Four studies reported a mean age that fell between 30 and 39 years of age (Henry, Mandeville-Norden, Hayes & Egan, 2010; Niveau, 2010; Price, Lambie & Krynen, 2015; Winters, Kaylor & Jeglic, 2017). Whereas three studies reported a mean age in the range of 40 and 45 years of age (Burges, Carretta & Burgess, 2012; Lulik, Allam & Sheridan, 2007; Middleton, Elliot, Mandeville-Norden & Beech, 2006). Of the two studies which examined a community sample of undetected, self-reported users of IIOC, one reported that the mean age of IIOC consumers was 28.9 years (Ray et al., 2014). The other study only reported a mean age for the entire sample (34.6 years) which was comprised of IIOC and non-IIOC users; however, it was reported that 80% of the IIOC users were 35 years or younger (Seigfried et al., 2008). When Winters et al. (2017) examined online sexual grooming between offenders and decoy victims, it was found that approximately one-third of the offenders lied about their age (33%). All but one, presented themselves online as younger than their real age. The average actual age of the offenders was 35.33 years and the average online age was 32.35 years.

One study found that age differed amongst three groups of internet offenders. Clevenger et al. (2016) found that the largest proportion of offenders possessing IIOC were aged 50 and above (77.2%); whereas for production/distribution of IIOC, the majority (8.4%) were aged between 30 and 39 years. The largest proportion of offenders not engaging in IIOC (attempted or completed sexual exploitation offence)⁹ were less than 30 years of age (56.9%). This suggests there may be variations in age amongst subgroups of internet offenders. It is possible that age may also influence the methods used to offend. As an example, for cases where the data was available, it was found that younger offenders were more likely to be detected through third parties and Internet Service Providers (ISP); whilst older offenders were more likely to be detected due to accessing known websites which hosts IIOC (Burgess et al., 2012).

Relationship status

The studies differed in the way in which the relationship status of the sample was reported. For example, most studies simply differentiated between 'single' and 'married'; however, one study included information regarding how many were currently in a relationship (Laulik et al., 2007). Several studies reported that the majority of offenders were single (Burgess et al., 2012; Clevenger et al., 2016; Laulik et al., 2007; Price et al., 2015). The two studies which examined a sample of undetected users of IIOC found similar results, with the majority of users reported to be single (Ray et al., 2014; Seigfried et al., 2008). Ray et al. (2014) found that users of IIOC were significantly less likely to report being in an intimate relationship in comparison to pornography users (non-IIOC users).

Conversely, numerous studies found that around a quarter of the sample were married (Burgess et al., 2012; Clevenger et al., 2016; Laulik et al., 2007; Seigfried et al., 2008). Middleton et al. (2006) found that an equal number of offenders were married or cohabiting (48%) and single or divorced (48%). Several studies also found a proportion of the sample were either divorced or separated (Burgess et al., 2012; Clevenger et al., 2016; Niveau, 2010). It is interesting that in two of the studies reviewed, a proportion of offenders reported that they had never been in an intimate relationship (Laulik et al., 2007; Niveau, 2010). It was also found that almost half (43.3%) had not lived with a partner for two or more years (Laulik et al., 2007).

Education

Not all of the studies reviewed included information pertaining to educational attainment. Those that did, however, indicated that internet offenders tend to be well educated. Niveau (2010) reported that most (72%) had completed secondary school or an apprenticeship but 20% had only a primary

⁹ According to the authors of this study, attempted or completed sexual exploitation includes cases where the offender and victim met first on the internet or the offender committed a sexual offence against the victim whilst online, or the offender attempted to solicit undercover law enforcement who were posing as a minor.

education. It is unknown whether any of the offenders had continued their education past secondary school. Seigfried et al. (2008) found that 82.1% of the sample of self-reported users of IIOC had some form of college education. One study found that almost one third (32.7%) of offenders had a high school or GED equivalent, a third (33.7%) had a college degree and almost a quarter (24.8%) were college graduates (Burgess et al., 2012). Most interestingly, the study found an association between an offender's education and their criminal history. It was found that those with an education level of high school or less were more likely than those with a higher level of education (some or completed college) to have a prior sexual offence. Stevens, Hutchin, French and Craissati (2013) found that of six adolescent internet offenders, all were in education or employment at the time of the offence.

Employment

Similarly, not all of the studies reviewed for this question included information relating to employment. Of those which did include this information, it was found that the majority of internet offenders were in some form of employment (Burgess et al., 2012; Clevenger et al., 2016; Laulik et al., 2007; Niveau, 2010; Price et al., 2015). Two of the studies provided information on the type of employment. Laulik et al. (2007) reported that 36.7% of the sample were in professional occupations and interestingly, 10% were employed in IT professions. Additionally, Niveau (2010) found that almost half (47%) were white collar workers, over a quarter (28%) were blue collar workers and 11% were employed in senior positions. One study reported on military experience and it was found that over a quarter had served in the military (21.6%) and most (19%) received honourable or general discharges (Burgess et al., 2012).

Ethnicity

The studies reviewed suggest that internet offenders are primarily Caucasian. One study reported that all offenders in the sample were of white European ethnicity (Laulik et al., 2007). Price et al. (2015) detailed that the majority of the sample were European (95.6%). The studies by Burgess et al. (2012) and Clevenger et al. (2016) both reported that the majority of the sample were Caucasian (88% and 92.2% respectively). Likewise, the two studies which examined a sample of self-reported users of IIOC found that the majority were white (57.1% and 64.9%) (Ray et al., 2014; Seigfried et al., 2008). Interestingly, Seigfried et al. (2008) found that a greater number of non-IIOC consumers were white (83.9%) in comparison to IIOC consumers (57.1%).

Criminal History

A few of the studies reported that the offenders had previous convictions which were for an array of offences including sexual and non-sexual offences. Out of 30 offenders, Laulik et al. (2007) found that

7 had previous convictions relating to contact sexual offences (n=2), internet-related offences (n=2), violent offences (n=1) and offences which were non-sexual and non-violent (n=3). Similarly, Burgess et al. (2012) found that of 101 offenders, a proportion of the sample had committed prior offences including an IIOC offence (n=5), a contact sexual offence (n=6) and both an IIOC and contact sexual offence (n=6). Price et al. (2015) reported that nearly 30% of the sample had a history of non-internet sexual offending including contact sexual offences and non-contact sexual offences such as indecent exposure.

Arrest for prior sexual offences were included as an indicator of low self-control in study conducted by Clevenger et al. (2016) and it was found that 7.5% of the sample of 755 offenders had been arrested for previous sexual offences. It is unknown whether this includes both contact sexual offences and IIOC offences. Similarly, Niveau (2010) also found that a proportion of the sample of 30 offenders had previous convictions which included a contact sexual offence (n=2), an IIOC offence (n=1) and convictions unrelated to sexual offending (n=3). Stevens et al. (2013) examined six adolescent internet offenders as part of a larger study examining subgroups of adolescent sex offenders (ASOs) and found that none had previous convictions.

Adversity

Only three studies reported on whether the sample had experienced adversity. Burgess et al. (2012) found that almost one-fifth of the sample (19.6%) reported sexual abuse and 10.8% reported physical abuse. Price et al. (2015) found that 17.4% reported experiencing sexual victimisation, 19.6% reported experiencing physical victimisation and one third (34.8%) reported emotional abuse and/or neglect. Conversely, of a sample of six adolescent internet offenders, none had been emotionally/physically neglected, physically abused or a witness of physical abuse in the family (Stevens et al., 2013).

Psychosocial Characteristics

Personality

Laulik et al. (2007) analysed scores obtained on the personality assessment inventory (PAI) from 30 internet offenders. The scores on the PAI were compared to a normative sample and it was found that internet offenders obtained significantly higher mean scores on the scales of Depression, Schizophrenia, Borderline Features, Antisocial Features, Suicidal ideation and Stress. Internet offenders scored significantly lower than the normative sample on the scales of Mania, Treatment Rejection, Aggression, Dominance and Warmth. The most significant areas of difference were on the interpersonal scales of Dominance and Warmth. The authors advocate that the low levels of dominance and warmth in relationships indicates that internet offenders are likely to be unskilled in asserting

themselves, be self-conscious in social interactions, lack empathy in personal relationships and are unlikely to place a high premium on close and lasting relationships.

Moderate positive correlations were found between the number of hours spent accessing IIOC and the scales of Somatic Complaints, Depression, Schizophrenia and Borderline Features. A moderate negative correlation was found between the numbers of hours spent accessing IIOC and Warmth. Furthermore, increased time viewing IIOC was found to be correlated with schizophrenic and borderline symptomatology in addition to reduced levels of warmth. Ultimately, the study found a number of significant differences between internet offenders and the normative population, indicative of interpersonal deficits. The authors suggest that interpersonal deficits may underpin a predisposition to commit online sexual offences.

Niveau (2010) found that the rate of diagnosed personality disorders was high amongst a sample of 36 internet offenders. Based on psychiatric evaluations, 78% presented with varying personality disorders. Diagnoses were determined according to the DSM IV-TR criteria (American Psychiatric Association, 2000). The majority (58.2%) of which were found to be Cluster C disorders (dependent, avoidant or obsessive-compulsive), which are comprised of anxiety and fear related traits. Interestingly, two out of the five participants who were classified as having cluster B (antisocial, borderline, and narcissistic) disorders had a prior record of sexual contact with children. Overall, the study found a high rate of personality disorders amongst the sample, something which merits further research.

Using Bandura's (1977) theory of reciprocal determinism, Seigfried et al. (2008) aimed to examine whether those who view, download or share IIOC differ from those who do not in their personality characteristics. Bandura (1977) proposed that behavioural, psychological and environmental factors all interact and influence behaviour. Interestingly, this theory postulates that the interaction of people's conceptions, behaviour and environment bestows upon them a degree of agency; though they are not completely free in their behaviour due to these forces (Bandura, 1978). It is unclear how much freedom this gives individuals in their decisions and actions.

The study only examined behavioural and psychological factors. Analyses were conducted to determine whether there was a relationship between the psychological factors (personality characteristics) and the behavioural factor (IIOC use). The study found that users of IIOC obtained significantly higher scores on the exploitative-manipulative amoral dishonesty (EMAD) total and lower scores on the Moral Choice Internal Values (IV) total. As such, the use of IIOC was found to be related to whether an individual has an exploitative-manipulative personality trait and lower moral choices internal values. The authors advocate that an exploitive-manipulative trait and lower moral choice internal values may be expected given that those viewing IIOC are engaging in an illegal activity and accessing such materials depends on the individual's ability to manipulate and exploit aspects of the internet (Seigfried et al., 2008). Overall, the results suggest that there is a relationship between personality characteristics (EMAD and IV) and behaviour (IIOC use).

Ray et al. (2014) examined whether there are personality traits which distinguish pornography users who report use of IIOC from those who do not. Interestingly, it was found that the groups did not differ significantly on measures of attachment avoidance/anxiety, loneliness or sensation seeking; however, IIOC users scored higher on the Antisocial Scale of the Personality Diagnostic Questionnaire-4 (PDQ-4). The study also found an interaction between the frequency of pornography consumption and the scores on a measure which assessed sensation seeking. As such, use of IIOC was found to be greater amongst those who scored high on a measure of sensation seeking and reported frequent pornography use. The results indicate that for individuals who scored high on sensation seeking, the risk of viewing IIOC increased with the number of hours spent viewing pornography online.

Psychological and Emotional Problems

Price et al. (2015) examined the rates of psychological and emotional problems amongst a sample of 46 internet offenders. The majority (93.5%) of the sample reported experiencing one or more emotional or psychological problems. The most common experienced included social isolation (60.9%), general relationship issues (43.5%), intimacy deficits (23.6%) and social skills deficits (19.6%). Mental health difficulties were also evident with over half (54.3%) experiencing depression and almost two-thirds of the sample reported some form of suicidal behaviour (history of self-harm, suicidal ideation/suicide attempts).

A study by Middleton et al. (2006) examined the applicability of the Ward and Siegert (2002) Pathways Model of Sexual Offending among a sample of 72 offenders convicted of an index offence involving IIOC. The model is comprised of five primary pathways and each of the pathways are associated with a set of primary psychological mechanisms which act as vulnerabilities and when these interact can lead to sexual offending. The pathways include intimacy deficits, distorted sexual scripts, emotional dysregulation, anti-social cognitions and multiple dysfunctions. Those assigned to the fifth pathway demonstrate deficits across all areas.

Scores on psychometric measures were used as a means to measure the primary deficits associated with each of the five pathways. It was found that 60% (n=43) of the sample reported elevated scores in one or more of the psychometric indicators. The most prominent pathway identified was intimacy deficits (n=15). Those assigned to this pathway evidenced high levels of emotional loneliness and some reported low levels of self-esteem. Ward and Siegert (2002) postulate that the sexual offending of this pathway is driven by insecure attachments resulting in low levels of self-esteem and social skills. The internet may, therefore, be utilised to avoid the perceived possibility of failure in adult relationships (Middleton et al., 2006). The second most prominent pathway was emotional dysregulation (n=14). Those assigned to this pathway reported challenges in managing negative emotions. It is proposed that difficulty in dealing with negative emotions may result in the use of adult pornography and IIOC as a way of coping with negative emotions. It is interesting to note that it was not possible to assign 40% of

the sample to any of the pathways as they did not obtain above average scores on the psychometric measures examined.

Similarly, utilising scores obtained from a battery of psychometric screening tests, Henry et al. (2010) found that their sample of 422 internet offenders fell into clear groups: the normal (n=166), the inadequate (n=108) and the deviant (n=148). The normal group were found to be more emotionally stable and held less pro-offending attitudes; although they scored higher for social desirability. The mean scores of the inadequate group fell within the normal range on the pro-offending measures however they were characterised by socio-affective difficulties such as deficits in levels of self-esteem and emotional loneliness. The deviant group were characterised by deficits across both the socio-affective and pro-offending measures, including a greater lack of victim empathy and greater cognitive distortions. The results found that victim empathy deficits were mostly concentrated in one group (deviant) and self-esteem and emotional loneliness in another (inadequate). The normal group obtained mean scores within the normal range aside from self-esteem, suggesting minimal or no deficits amongst this group. The results of this study suggest that there are subgroups of internet offenders who may be characterised by different deficits, something which may have significant implications for treatment and management needs.

Self-control

Clevenger et al. (2016) sought to explore the applicability of self-control theory in understanding internet offenders. The sample was comprised of three groups: offenders arrested for an attempted or completed sexual exploitation of a minor offence (SEM offence, 48%); offenders who possessed IIOC but not produce or distribute it (46%); IIOC producers/distributors (6%). According to Gottfredson and Hirschi's (1990) self-control theory, those who are lacking self-control engage in crime due to the instant benefits. However, self-control theory has been frequently criticised as being a tautological perspective of crime (Geis, 2000). Hirschi and Gottfredson (1993) advocate that self-control acts a barrier to prevent individuals from committing crime; the link between them is not deterministic. The authors incorporated three variables as indicators of low self-control: prior arrests for sexual offences (7.5%), previous use of violence (8.9%) and problems with drugs/alcohol at the time of the offence (17.2%). Lived with a minor child (18.4%) was included as an indicator of opportunity.

The study found that those arrested for production/distribution of IIOC were more likely to have had problems with drugs/alcohol at the time of their offence, having previously been violent and living with a child compared to those arrested for a SEM offence. The findings indicate that this group has low self-control in addition to opportunity, which increases the risk of arrest of the production/distribution of IIOC. The only indicator of low self-control which significantly increased the likelihood of arrest for possession of IIOC was prior use of violence. The results, therefore, suggest that possessors of IIOC have greater restraint than those who engage in the production/distribution of IIOC. However, the group which appeared to have the greatest level of self-control was those arrested for a SEM offence. Ultimately,

the results indicate that there may be differences in the level of self-control exhibited by internet offenders who possess IIOC in comparison to those who produce/distribute it.

Individual Factors

Sexual preoccupation

Niveau (2010) aimed to assess sexual preoccupation amongst a sample of 36 male internet offenders who had viewed and/or downloaded IIOC. The Sexual Compulsivity Scale (Kalichman & Rompa, 1995) is a self-report instrument assessing sexual preoccupation and hypersexuality. The sample obtained a mean score of 2.21; however, over half (55.6%) obtained a score between 2 and 2.9 which is indicative of compulsive sexual behaviour.

Internet usage

Based upon scores obtained on the Internet Addiction Scale, it was found that two thirds of internet offenders exhibited problematic internet use (Niveau, 2010). On average, Ray et al. (2014) found that users of IIOC spent more hours per week viewing pornography (M=12.85) in comparison to pornography consumers (M=7.05). Comparably, Laulik et al. (2007) found that offenders reported spending an average of 11.71 hours per week viewing IIOC. It appears that those consuming IIOC spend more time online than those who do not and their internet use may be considered problematic; however, further research is required to investigate this.

Situational Factors

Access to children

A few studies reported on whether the offenders had access to children, this includes through having children of their own or through other means such as employment. Burgess et al. (2012) found that over half (51.1%) of the sample had children. Clevenger et al. (2016) reported that 18.5% had lived with a minor child whereas Laulik et al. (2007) found that over a quarter (26.7%) had been living with children at the time of arrest. With regard to employment or recreational activities, it was found that almost half (42%) of the sample had direct contact with children due to their occupation or their hobbies such as sports coaching (Niveau, 2010). It was also noted that five of the sample had engaged in what was termed as 'questionable past behaviours,' which included frequent travel to countries recognised for sex tourism, promiscuity with children, disputes with neighbours regarding relationships with children and frequent address changes without reason.

Offenders may use the internet as a means of facilitating access to children. Winters et al. (2017) examined transcripts of adults who sexually groomed decoy victims using the internet and found that in 96% of the cases, the offender and decoy victim organised an offline, in-person meeting. The mean number of days before the proposition of an offline meeting was introduced was 3.4 days. However, more than two-thirds of cases introduced sexual content in less than 30 minutes from the start of the conversation with the decoy victim. Most of the offenders in these cases believed they were contacting females aged between 12-15 years of age. The study also found that although communication began in an online chat room, in 83% of cases the offenders and decoy victims were in contact via telephone or text message. This suggests that offenders are able to access victims online as well as through other means. A small number of offenders had sexually explicit usernames which may explicate the offender's sexual goals explicit before the conversation even begins (Winters et al., 2017). Since the decoy victims did not have sexual usernames, offenders did not target them. The study found that 88% of offenders lived in the same state as the decoy victim. This suggests that in terms of victim selection, offenders may target victims who live nearby in the event that they can persuade the victim to meet in-person. Given the majority of the sample initiated and arranged a meeting with the victim, it appears to represent internet offenders who contact children online with the aim of committing an offline sexual offence (i.e. contact driven) in comparison to those who engage in conversation with the goal of cybersex (i.e. fantasy driven) (Winters et al., 2017).

Summary

The studies reviewed provide interesting findings regarding the characteristics and profiles of internet offenders. A table summarising the key findings of the studies reviewed can be found in Appendix S. The studies differed in the samples they examined: some studies explored forensic or criminal samples; whilst two studies explored self-reported IIOC use in a community sample, undetected by law enforcement. This is an interesting approach and provides another means of examining internet offenders. Of a sample of 307 survey respondents, 30 (9.8%) self-reported consuming IIOC which equates to almost 1 in 10 using IIOC (Seigfried et al., 2008). Conversely, Ray et al. (2014) found that approximately 1 out of 5 pornography consumers who completed the survey reported consuming IIOC (21.1%).

Many noteworthy findings emerged from the research reviewed including the finding that of 30 self-reported users of IIOC, 10 were women (Seigfried et al., 2008). This means there was a 2:1 ratio of men consuming IIOC to women. Given the low sample size, this finding highlights the need for further research (Seigfried et al., 2008). Several studies reported similar findings with regard to the demographic profile or characteristics of internet offenders. For example, the majority of internet offenders were found to be in employment (Burgess et al., 2012; Clevenger et al., 2016; Laulik et al., 2007; Niveau, 2010; Price et al., 2015). It is also of note that several studies reported internet offenders as being predominantly single (Burgess et al., 2012; Clevenger et al., 2016; Price et al., 2015; Seigfried et al.,

2008). This finding is thought provoking as Ray et al. (2014) found an association between relationship status and IIOC consumption; although it should be cautioned that it was a weak association.

Several studies reported intimacy and social skills deficits. Middleton et al. (2006) found the most prominent pathway identified for a sample of internet offenders was the intimacy deficits pathway which reported high levels of emotional loneliness. Low levels of self-esteem were also reported by those assigned to this group. Price et al. (2015) found that 94% of a sample of New Zealand internet offenders experienced one or more emotional or psychosocial problems. It was found that social isolation (60.9%), depression (54.3%), intimacy deficits (28.3%) and social skills deficits (19.6%) were amongst the most common reported. The study also examined friendships amongst the offenders and found that 17.4% reported having no friends and nearly half (43.5%) had one to five friends. Price et al. (2015) report that this may be reflective of difficulties with social functioning and may contribute to the feelings of social isolation reported by the sample. Furthermore, Henry et al. (2010) found that the sample could be divided into three clear groups and the emotionally inadequate group was characterised by socio-affective difficulties such as deficits in levels of self-esteem and emotional loneliness. However, Ray et al. (2014) found that users of IIOC did not differ from pornography consumers on personality characteristics associated with emotional and intimacy deficits including loneliness and adult attachment styles. Studies on the mental health and other psychological factors amongst internet offenders is emerging; however, further research is required (Price et al., 2015).

Clevenger et al. (2016) found that levels of self-control may differ between sub-groups of internet offenders. It was found that producers/distributors of IIOC exhibited less self-control in comparison to possessors of IIOC. Interestingly, employment and marriage were found to be statistically significant in reducing the likelihood of arrest for possession of IIOC (compared with those arrested for a SEM offence). The authors note that this suggests those who are employed and/or married lead more stable lifestyles and have greater self-control. A study by Ray et al. (2014) examining a community sample found that for those who score high on sensation seeking, the risk of viewing IIOC increased with the number of hours spent viewing pornography online. This is interesting to consider given that Niveau (2010) found that two-thirds of offenders in the sample obtained a score on the Internet Addiction Scale indicating problematic internet use; 17% were categorised as being severely addicted to the internet.

Ray et al. (2014) compared users of IIOC and pornography consumers on their interest in sexual contact with a minor. They found that users of IIOC were significantly more likely to report that they would have sexual contact with a minor if they knew that they would evade detection. IIOC users were found to have almost six times the odds of reporting an interest in engaging in sexual contact with someone under the age of 18. Approximately one third (32.4%) of IIOC users reported that they would be interested in sexual contact with a minor in comparison to 7.5% of the pornography users. The authors note that this raises the question about what distinguishes users of IIOC who report an interest in sexual contact with a minor from those who use IIOC but deny such an interest (Ray et al., 2014).

The studies reviewed suffered from limitations which will be explored in more depth in the Discussion Chapter. There is, however, one limitation which is important to note in light of the findings reported.

Some of the studies used samples which included offenders who had been convicted of prior contact sexual crimes. Those who commit both contact sexual offences and internet offences are commonly known as dual offenders. This is a limitation as research suggests that dual offenders and internet only offenders differ in terms of their characteristics — this will be explored in-depth in Question Three. Research regarding the characteristics of internet offenders would benefit from utilising samples of offenders convicted solely of internet related offences. This is necessary to provide an accurate representation of the characteristics of internet offenders.

It is also worth noting that several of the studies utilised samples of offenders convicted of an array of internet related offences (possession, production and distribution). These subgroups may differ from each other in terms of their characteristics; however, further research is required. Ultimately, the studies reviewed for this question suggest that internet offenders tend to be Caucasian males who are single, employed and well educated. Seigfried et al. (2008) proposes that as technology continues to advance, it is probable that internet offenders will continue to change also. This emphasises the need for continuous research into this evolving area.

Question Three – How do Internet Offenders Compare to Contact Offenders?

This question examines the linkages between internet (referring to online grooming and solicitation and IIOC offences) and contact offenders. After reviewing the literature, it was found that a number of the studies also referred to other types of offenders: 'non-contact,' which encompasses offences like exhibitionism and voyeurism; 'dual,' where offenders have carried out both internet and contact offences. Although Question Three refers to similarities and/or differences between internet and contact offenders, the decision was made to include non-contact and dual offenders into the discussion here. The reasoning behind this is, first of all, non-contact is still a type of sexual offending against a child and the research on non-contact offending is even rarer than it is for internet offenders. In terms of dual offenders, these are individuals who have engaged in both internet and contact offences; thus, it would be invaluable to determine whether they have any commonalities or dissimilarities with internet or contact offenders. Moreover, this could feed into Question Four which discusses the offending trajectory from internet to contact offences.

This chapter discusses the results of the twenty-five studies relevant to Question Three (details of these can be found in Appendix L). The discussion commences with an overview of the similarities between internet and contact offenders. It will then move onto outline the differences between these two types of offenders and, where relevant, non-contact and dual offenders. This discussion is structured by the following categories:

- Individual factors, such as socio-demographic characteristics, violent and criminal histories, emotional and sexual problems, personality disorders and other related issues;
- Cognitive distortions, scrutinising the attitudes and interests of offenders;
- Victim factors, examining differences in the types of victims and how offenders view them;
- Engagement with IIOC in terms of how offenders collect and use these materials and their reasons for doing so.

All of the above discussion will thereafter be summarised. The implications for practice will be outlined in the Discussion Chapter.

Similarities

Reviewing the literature found there were a handful of similarities between the different types of offenders. The study most indicative of this was one carried out by Neutze, Seto, Schaefer, Mundt and Beier (2011), which found more similarities than differences between internet (usage of IIOC), contact (sexual abuse against a child) and dual (having partaken in both types) offenders. This study used self-reported data from 155 self-referred men, who had been diagnosed as either paedophilic (sexual interest in prepubescent children) or hebephilic (sexual interest in pubescent children) and were

classified into groups based on their offence history. Interestingly, most of the men were of 'undetected' status, meaning they are not yet known to criminal justice. Group comparisons were conducted on socio-demographic variables and measures of dynamic risk factors. Findings indicated there were no significant differences for emotional deficits, lack of conscientiousness, lack of task-orientated coping, lack of impression management, perceived ability to control sexual urges, maladaptive cognitions and victim empathy. The authors argued may be attributable to the measure used, the Bumby MOLEST scale¹⁰, for it may measure justifications more so than offence-supportive cognitions. The authors postulate that the similarities between the groups may be a result of the sample consisting of self-referred individuals who are, to some extent, motivated to change, given they have recognised the problem and sought help. A limitation of this study was the reliance on self-report, which meant the authors could not access criminal records.

Another study finds some commonalities between internet, contact and dual offenders. Aslan and Edelmann (2014) evaluated the demographic and offence characteristics of 230 offenders. Of the sample, 74 had been convicted of internet offences (possessing IIOC), 118 had been convicted of contact sexual offences and 38 had been convicted of both kinds. Excluded from the sample due to low numbers were those with index offences for online grooming. The majority of the sample had never made contact with mental health services: 66% of internet, 79% of contact and 66% of dual offenders. Likewise, 31% of internet, 28% of contact and 21% of dual offenders had a history of substance misuse in their offender files; thus, there is no significant difference between the three of them. Another commonality was ethnicity, with 94% of the sample of internet, contact and dual offenders being Caucasian.

Similarly, Babchishin, Hanson and Hermann (2011) carried out a meta-analysis to examine the extent to which internet/dual and contact offenders differ on demographic and psychological variables. Whilst the findings did indicate there were more differences between the groups than similarities, there were no significant differences in loneliness and self-esteem between the two groups. After examining differences between internet and dual offenders, Kuhle et al. (2017) found that the offender groups did not differ significantly on sociodemographic data like age, education, employment and relationship status. Having said that, this study focused on a sample of help-seeking and problem-aware paedophilebephiles who were seeking to change their behaviours, something which may make it unrepresentative of internet and dual offenders more generally.

Another study sought to determine whether the offending profile of internet offenders is distinct to that of contact and dual offenders. To meet this aim, 68 participants were recruited from community sex offender treatment centres and prison settings in New Zealand. Similar to other comparative studies, the results showed mainly differences between the three offending groups. A similarity evident between internet and dual offenders is they are more reliant on indirect means of achieving sexual stimulation.

¹⁰ This is a 38-item scale measuring offence-supportive cognitions about children and sexual acts with children, with higher scores indicating more attitudes and a greater tendency to justify offending.

It is hypothesised that accessing such materials online facilitates distal social and sexual engagement for users in addition to providing them with a way to escape the 'offline world.' By contrast, contact offenders are more reliant on the physical abuse of a child (Merdian et al., 2016).

Differences

The main consensus from the review of literature for Question Three was there are more differences than similarities between internet, contact and dual offenders. This sub-section will go through each of these by the type of various factors: those relating to individual, cognitive, victims, and engagement with IIOC issues.

Individual Factors

This section encompasses relationships/living arrangements, employment and education, age, ethnicity, substance abuse, adversity, histories of violence/offending, personality disorders and emotional problems, as well as sexual behaviours and other related issues.

Relationships and Living Arrangements

The most prominent difference between internet and contact offenders throughout the review was living situation, discussed in eleven of the studies. Internet offenders were more likely to be single and either live alone or with their parents, suggesting a more isolated lifestyle than their contact counterparts.

In their review of the case files of 74 internet, 118 contact and 38 dual offenders, Aslan and Edelmann (2014) found that internet and dual offenders were more likely to be single. Fifty-two percent of internet and 54% of dual offenders were single and/or have never have been married compared to 33% of contact offenders. Conversely, contact offenders tended to have previously been in a relationship, with 50% of them divorced or separated.

Similarly, Webb, Craissati and Keen (2007) found that internet offenders were more likely to have failed to establish intimate adult relationships. Forty-three percent of 90 internet offenders had never had a co-habiting relationship lasting longer than a year; this was only the case for 25% of 120 contact offenders. Furthermore, 56% of internet offenders were single compared to 41% of contact offenders. Contact offenders were more likely to be divorced or separated at a rate of 19% compared to 6% of internet offenders. Percentages of those who are married or cohabiting were relatively similar at 38% for internet and 40% for contact offenders.

Babchishin et al.'s (2011) meta-analysis found that compared to the general male population internet offenders were more likely to never have been married (50.4% vs. 30.9%) and to be unmarried at the time of assessment (69.6% vs. 44.8%). The majority of the studies included identified offenders by their convictions, arrests and/or charges; only two studies relied on self-report data. There were insufficient

studies, however, to compare the marital statuses of internet and contact offenders. The authors theorise that internet offenders may be less likely to act on their deviant urges towards children in order to avoid emotional closeness in sexual relationships. Alternatively, they may also be disinterested in embarking upon relationships with consenting adults.

Another meta-analysis contrasting internet, contact and dual offenders found that internet offenders were more likely to have never lived with a partner and to have problems with their sex life compared to contact and dual offenders. Moreover, a greater number of internet offenders had never been married or lived with a partner compared to dual offenders. A surprising finding was that internet offenders were more likely to report a sexual orientation that was homosexual or bisexual in nature. Similar to the previous meta-analysis, most of the studies grouped samples based on official charges or convictions (Babchishin, Hanson & VanZuylen, 2015).

Faust, Bickart, Renaud and Camp (2015) conducted a study looking at the demographic characteristics and offence types of internet and contact offenders who had been released from federal custody. The internet group was comprised of 428 offenders serving a sentence for the possession or distribution of IIOC. The contact group comprised of 210 offenders who had a history of one or more convictions for a contact sexual offence and no history of arrests or convictions for the possession or distribution of child pornography. It was found that 32.9% of the internet offenders were married at time of arrest compared to 23.4% of contact ones.

By contrast, a comparative analysis by Long, Alison and McManus (2012) of those convicted of IIOC (internet) and contact and internet offences (dual) found there were no significant differences in relationship status: 3% of both types had never had a relationship; whilst 27% and 26% of dual and internet offenders had a long-term partner. Where the two differed was in living arrangements: internet offenders were more likely to live on their own or with partners at 21% and 10% respectively; compared to 14% and 8% for dual offenders. Dual offenders, by contrast, were more likely to live with their partner and their own (13%) or her children (12%). This compared to 15% and 1% of internet offenders who lived with a partner and their own or her children respectively. This result highlights the importance of having access to children: dual offenders disproportionately do and this facilitates their contact offending. Seto, Wood, Babchishin and Flynn's (2012) study of 38 contact, 70 solicitation and 38 internet offenders yielded similar findings, with 92% of contact offenders living with a child compared to 47% of internet offenders. This was perhaps reflected in contact offenders being more likely to have known their victims; as opposed to stranger victims as was the case for internet offenders committing online solicitation offences.

Another study examining a sample of internet, contact and dual offenders referred for sex offender treatment programmes yielded similar results. The question of whether one had ever had a stable partner was answered as 'none' by the greatest number of internet offenders followed by contact and then dual offenders. Conversely, when asked about current partner status (with the options of both

sexual and cohabiting), the results were highest for dual offenders; internet offenders were in the middle and contact offenders had the lowest figures. Whilst more internet offenders are in relationships than their contact counterparts, they are less likely to have had a 'stable partner,' suggesting that the relationships they are involved in are perhaps not long-term. Dual offenders have the highest number of partners and were more likely to indicate they have previously had a stable partner. Dual offenders were also more likely to have their own children, followed by contact and then internet offenders. The implications for this are those with contact offences against children are more likely to have their own biological children (Merdian et al., 2016).

Reijnen, Bulten and Nijman (2009) used the files of 134 male patients at an outpatient forensic department in the Netherlands: 22 had been admitted for internet offences, 47 for contact abuse of both adults and children and 65 for non-sexual offences such as domestic abuse. Findings showed that 40.9% of internet offenders lived alone, whereas only 16.9% of the 112 other offenders did so. Moreover, 59.1% of internet offenders did not have a partner compared to 34% of contact offenders and 34.5% of the non-sexual offenders. The internet offenders were also less likely to have children of their own at a rate of 18.2% compared to 59.6% of contact and 54% of non-sexual offenders respectively.

McManus, Long, Alison and Almond (2015) examined the differences between 124 internet and 120 dual offenders by examining three different areas: socio-demographic characteristics, internet activities and quantity and type of IIOC possessed. Internet offenders were more likely to be single, with 56.9% of the sample having this status compared to 37.6% of dual offenders. Dual offenders were more likely to be married at a rate of 39.3% of the sample compared to 29.8% of internet offenders. The percentages of co-habiting and separation statuses were similar across the two groups. Dual offenders were 2.34 times more likely to live with children than internet offenders. This was particularly the case for living with their partners' children, which dual offenders were 11.48 times more likely to do.

Research by Jung, Ennis, Stein, Choy and Hook (2013) yielded similar results. The sample of 196 convicted male sexual offenders had been referred or were court mandated for an assessment of their risk and treatment needs and received formal convictions for their sexual offences. This population of offenders was divided into categories based on their offending type: 50 internet, 45 non-contact (exhibitionism and voyeurism) and 101 contact offenders. The study compared the three groups on various items such as education, work history, relationship history, mental health, criminal history and recidivism. Internet offenders were more likely to be single at the time of their index offence (68%) than non-contact (50%) and contact offenders (43%). Internet offenders also had significantly fewer biological children than their non-contact and contact counterparts.

In contrast to the results of most of the other studies, McCarthy (2010) found that dual convicted offenders¹¹ were more likely to be single/never married at a rate of 62% compared to 50% of internet offenders. There were slightly more internet offenders who had ever been married, with 17% married and 19% divorced. The respective figures of married and divorced statuses were 16% and 12% for dual offenders. Paralleling the previous study, Tomak, Weschler, Ghahramanla-Holloway, Virden and Nademin (2009) found that internet offenders were more likely to be married than other general sex offenders. The sample was comprised of 48 male internet offenders referred to an outpatient sex offender treatment programme for risk assessment. The control group was comprised of 104 general sex offenders who had not committed IIOC or other internet-related offences (e.g. online grooming). The offences of this group included rape, paedophilia or both rape and paedophilia. The authors speculate that internet offending is easier to conceal than other types of sex offending, explaining why internet offenders may be more likely to attract and maintain spousal relationships.

Employment and Education

After relationship statuses and living arrangements, the second most common finding of the articles reviewed were employment and educational backgrounds as a distinguishing feature of internet offenders. The comparison between 48 internet (grooming children in chatrooms and distributing IIOC) offenders with a control group of 104 sex offenders (including child and adult contact offences) found that 74% of the internet group had attempted college; whilst general sex offenders were more at the high school level (Tomak et al., 2009). In a similar vein, Henshaw et al.'s (2018) study compared and contrasted the demographic, mental health and offending characteristics of internet offenders (n=456), contact offenders (n=493) and dual offenders (n=256). Findings indicated that internet offenders had the highest level of educational attainment, with 39.91% completing secondary education or higher in contrast to 33.59% and 27.79% of dual and contact offenders respectively.

A study of 51 dual and 56 internet offenders found that 22% of dual offenders were at high school level compared to 11% of internet offenders. The percentages of undergraduate and postgraduate degrees were reversed, however, with dual offenders totalling 26% and 10% respectively compared to 18% and 11% of internet offenders (McCarthy, 2010). Similar findings were evident in research carried out by Faust et al. (2015) of 428 internet and 210 contact offenders. The average amount of years in education was 13.7 for internet offenders in contrast to 11.2 for contact offenders. Correspondingly, 85.8% of internet offenders were employed at the time of arrest compared to 61% of contact offenders.

Aslan and Edelman's (2014) study comparing 74 internet offenders with 38 dual and 118 contact offenders found that internet offenders were better-educated and more likely to be in stable employment. Sixty-one percent of internet offenders had stable employment; whereas 64% of contact and 63% of dual offenders were unemployed at the time of their index offence. Correspondingly, 38%

¹¹ In this study, McCarthy (2010) uses a combined sample of 107 offenders with convictions for possessing IIOC. This group is then divided into two groups: those who are 'non-contact' in that they have never committed physical abuse against a child (defined in this write-up as 'internet offenders'); those that are 'contact' in that they have sexually abused a child (defined in this write-up as 'dual offenders').

of internet offenders were more likely to have graduated from university and have a postgraduate degree than 4% and 23% of contact and dual offenders respectively. Similar results were found in Babchishin et al.'s (2015) meta-analysis comparing internet, contact and dual offenders. It was found that internet offenders were at a higher income and educational level than contact offenders. Dual offenders were more likely to be unemployed than internet; although they had a higher education level than contact offenders. Likewise, Seto et al. (2012) found that contact offenders had lower levels of academic achievement than internet ones.

Greater academic and vocational achievements were evident for internet offenders (n=50) in a comparative study with non-contact (n=45) and contact offenders (n=101). Internet offenders completed on average 2 more years at schools than non-contact and contact offenders. Furthermore, internet offenders were three to four times more likely to have attended post-secondary education than non-contact and contact offenders. In terms of employment, internet offenders were twice as likely to be in a skilled job at the time of index offence compared to non-contact and contact offenders (Jung et al., 2013).

Merdian and colleagues (2016) found similar results when examining the characteristics of dual, internet and contact offenders. The amount of years in education was highest for internet offenders with an average of 11.62 years in comparison to 9.69 for dual offenders and 7.87 for contact offenders. This is further reflected in the disparities in employment status, with contact offenders more than twice as likely than dual and internet offenders to be unemployed. Surprisingly, the income levels were highest for dual offenders, with a mean of almost fifty thousand New Zealand dollars; in contrast with just over thirty-seven and a half thousand for internet offenders and slightly over twenty thousand for contact ones.

Age

Another situational factor distinguishing between internet and contact offenders is age; although studies give conflicting results about which type is younger. Reijnen and colleagues (2009) compared 22 internet offenders with 112 individuals who had committed other types of offences, 47 of which were child sexual contact offences and 65 were non-sexual crimes. It was found that internet offenders were significantly younger on average than the other types of offenders. Likewise, Babchishin et al.'s (2011) meta-analysis found that internet offenders were younger than contact ones with average ages of 38.6 versus 43.6 years respectively.¹² In a similar vein, McCarthy (2010) found that the average age of internet offenders at the time of their index offence was 39 in contrast to 41 for contact offenders. Another comparative study found that contact offenders were found to be the oldest at the time of their first and index offences than their internet and dual counterparts (Henshaw et al., 2018).

¹² This was only found to be statistically significant in the fixed-effects analysis.

Combining younger age ranges with higher educational and employment status facilitates access to the internet, another situational indicator distinguishing between the groups. It is noteworthy that internet offenders were found to possess greater 'internet preoccupation' levels — to a statistically significant degree — than contact offenders (Babchishin et al., 2015). It is also likely that given their younger age range, internet offenders are more technologically advanced.

Challenging the findings of previous studies, Faust et al.'s (2015) study of 428 internet and 210 contact offenders found that internet offenders were significantly older than contact ones when first arrested, with average ages of 33.7 and 23.7 respectively. This meant that internet offenders were older than contact ones when released from prison, averaging circa four years in difference. In a similar vein, Merdian et al. (2016) found that those who committed internet offences were likely to be slightly older at an average of 41.82 years compared to 41.29 for contact offenders. Dual offenders were older again, averaging 45.56 years.

A study looking at juvenile offenders aged under 18 years old found that those who possessed IIOC tended to be older than other types of juvenile sexual offenders. The study was based on criminal files of a sample of children and adolescents who were aged between 10 and 18 years. These individuals had been convicted of sexual offences, including possession or distribution of pornography that is illegal in Switzerland (featuring animals, brutality or excrement) and sexual contact offences such as sexual assault against children. The final sample was comprised of 264 male youths who were classified into four offender groups, including one index group and three comparison groups. The four groups were: juveniles convicted of the possession or distribution of IIOC; juveniles who did not possess IIOC but possessed or distributed other illegal pornography; juveniles who committed a sexual contact offence against at least one victim under the age of 12 or 3 years younger than themselves; juveniles who committed a sexual contact offence against peers or adults but not against a child. It was found that juveniles who possessed IIOC were on average aged 15.3 years. This is older than those who possessed other illegal pornography (mean age=15), contact offended against a child (mean age=13.1) and contact offended against a peer or adult (mean age=14.5) (Aebi, Plattner, Ernest, Kaszynski & Bessler, 2014).

Ethnicity

Another emerging finding was that there are some variations in ethnicities, with internet offenders being more likely to be Caucasian or the majority race for the country in which they are based. This also feeds into their issues of class groupings, with ethnic minorities more likely to be of a lower socio-economic class. This is something which could affect access to the internet across societies in advanced, developed countries.

Meta-analytic reviews of recent research found that 35.4% of contact offenders were classified as a racial minority compared to 8.2% of internet offenders (Babchishin et al., 2011). Similar results were evident in a study of 90 internet and 120 contact offenders, examining the background, offence-related

and psychometric variables of each type. Ninety-one percent of internet offenders were White; whilst 1% were Black and 8% were Asian. By contrast, 71% of contact offenders were White; whereas 16% and 13% were Black and Asian respectively (Webb et al., 2007). There were similar findings in a study by Merdian and colleagues (2016) in that more than three-quarters of internet offenders (77.27%) were the majority race in New Zealand compared to almost 58.82% of dual and 41.38% of contact offenders respectively.

Although the differences did not reach statistical significance, Seto et al. (2012) found that there was a slight variance in the ethnicity of internet (n=38), contact (n=38) and solicitation (n=70) offenders with 100%, 92.1% and 94.2% being White. In a similar vein, Tomak and colleagues (2009) found that internet offenders were more likely to be Caucasian evidenced in 92% of the sample; this was followed by 6% Hispanic and 2% Native American. In comparison, the control group of general sex offenders consisted of 66% Caucasian, 16% Hispanic, 13% African-American and 5% Native American individuals.

Drawing upon a cohort of federal offenders, Magaletta, Faust, Bickart and McLearn (2014) compared a sample of internet offenders who had not engaged in treatment with multiple comparison groups to examine clinical and personality characteristics. In a sample of 35 internet offenders, the breakdown of race categories was as follows: 91.3% White, 5.7% African-American and 2.9% Hispanic. Comparatively, there were slightly more ethnic minorities within the sample of 26 contact offenders: 42.3% White, 30.8% African-American, 23.1% Hispanic and 3.8% Native American.

A study using a sample of juvenile offenders in Switzerland found that internet offenders (possession and/or distribution of IIOC in this case) were more often of Swiss origin than contact offenders. Those juveniles possessing other types of illegal pornography (e.g. bestiality, excrement) were even more likely to be of a foreign nationality, with almost half (47.6%) fitting into this category (Aebi et al., 2014).

Challenging the results of the previous studies, it was found that dual offenders were more likely to be White than internet offenders at rates of 90% and 74% respectively. Of the internet offenders, 4% were African American and 16% were Hispanic; in contrast, 4% and 6% of dual offenders were African American and Hispanic respectively (McCarthy, 2010).

Substance Abuse & Mental Health Issues

In Aslan and Edelmann's (2014) study, substance misuse was found to be highest amongst internet offenders with 31% having a documented history. This may be juxtaposed with 28% for contact and 21% for dual offenders. Meta-analytic reviews of the literature found that contact and dual offenders had more substance abuse problems in comparison to internet offenders, a difference that was found to be statistically significant (Babchishin et al., 2015).

An evaluation of the differences between 107 internet offenders, 56 non-contact and 51 contact offenders found that substance abuse levels were highest for contact offenders. Forty percent of the

dual offending sample had problems with illicit drugs and 24% misused alcohol. The respective figures for internet offenders were 18% for alcohol abuse and 16% for issues with illegal drugs (McCarthy, 2010). Two scales of the 'Personality Assessment Inventory' (PAI) relate to alcohol and drug problems. The PAI instrument was administered to 35 internet and 26 contact offenders to gain an understanding of the clinical perspective of each type, as well as contrasting this with a normative population of 480 males taken from U.S. Census data. Findings showed that there was a lower incidence of substance abuse problems in internet offenders, with them yielding lower scores on the alcohol and drug subscales than the contact offenders (Magaletta et al., 2014).

In examining psychiatric diagnoses, Henshaw and colleagues (2018) found that those related to substance abuse with highest for those with contact offences at a rate of 9.12% compared to 7.42% and 6.14% for dual and internet offenders. Psychiatric admissions for other issues including mood, trauma and personality were all highest for contact offenders. Conversely, internet offenders had less contact with mental health and crisis services than expected. In spite of this, those with internet offenders were more likely to be diagnosed with a paraphilia than those who committed contact offences.

Adversity

A further situational factor was having a history of trauma/abuse. Contact offenders had a history of physical and sexual childhood abuse at rates of 18% and 24% respectively. Conversely, internet and non-contact offenders had the respective rates of 13% and 17% and 9% and 11% for physical and sexual abuse in childhood (McCarthy, 2010). Similar results were reported by Sheldon and Howitt's (2008) study: 56% of contact offenders had sexually abusive childhoods juxtaposed with 50% and 19% of dual and internet offenders respectively.

Similarly, Merdian and colleagues (2016) found adversity (e.g. experience of abuse in childhood) to be a significant predictor of contact offending when modelled alongside items relating to social exclusion and escape. It is postulated that whilst internet users may cope with adversity by immersion in online fantasy, contact offenders may 'act out' in a physical way to cope with traumatic life experiences.

In their assessment of internet, contact and dual offenders, Aslan and Edelman (2014) found that reporting of childhood difficulties involving emotional, physical and sexual abuse was highest amongst those who had committed contact offences at 43% contrasted with 21% and 39% for internet and dual offenders respectively. Taking the items of history of sexual abuse and emotional or physical abuse separately, however, there were no significance differences between the groups.

An inquiry into juvenile sex offenders found internet offenders were less likely to have a troubled familial background (e.g. being placed outside their family) than contact offenders. One hundred percent of internet offenders as well as those in possession of other types of illegal pornography lived with their

parents compared to 87.5% of those who contact offended against a child and 86.5% of contact offenders against their peers/adults (Aebi et al., 2014).

Criminal Histories

Babchishin et al.'s (2015) meta-analysis of recent studies found there was a statistically significant difference between contact and internet offenders in rates of prior sexual offences. Dual offenders were also found to have a greater history of any prior offending, particularly violent offences, than internet offenders. Comparing dual and contact offenders, however, found that contact offenders had more prior offences; although dual had more prior violent offences. Similar results were present in Merdian et al.'s (2016) study, where contact offenders rated significantly more highly than dual and internet offenders, with the rate for internet offenders being very low.

Henshaw et al.'s (2018) study compared the offending characteristics of 493 contact, 456 internet and 256 dual offenders. Internet offenders had fewer total offences and were found to be less versatile in their offending patterns, defined as committing offences across four or fewer of the eighteen offence types coded. Dual offenders, by contrast, were the most versatile in their offending and perpetrated the greatest number of offences. An examination of other types of sexual offences committed by each group yielded the following results: internet offenders were the most likely to commit online solicitation; contact offenders demonstrated higher rates than expected of adult contact sexual offending and non-contact offences (e.g. wilful and obscene exposure); dual offenders rated most highly on child exploitation offences.

Studies contrasting dual and internet offenders had comparable results. Long and colleagues (2012) found that dual offenders were significantly more likely to have a criminal conviction for non-sexual offences than internet offenders. Likewise, McManus et al. (2015) documented that dual offenders were significantly more likely to have any previous convictions, particularly for violent offences. Moreover, a greater number of dual offenders had been convicted on three or more separate occasions, with a community or custodial sentence being imposed on each.

Personality Traits

Turning now to personality differences, Bates and Metcalf's (2007) comparison between internet and contact offenders using psychometric measures found that internet offenders report higher levels of self-esteem. Furthermore, they were also found to be less self-deluded measured in terms of the 'Balanced Inventory of Desirable Reporting' encompassing self-deception of an individual's qualities and attributes, as well as impression management in terms of presenting oneself in an overly optimistic manner. The authors suggest this could explain internet offenders' greater educational and employment achievements. Another study found that following scoring on the screening version of the 'Psychopathy Checklist,' contact offenders were found to have higher levels of psychopathy than internet ones (Webb et al., 2007).

Bates and Metcalf (2007) found that under-assertiveness is marginally higher in internet offenders. These results were mirrored in Tomak et al.'s (2009) study, which found that internet offenders are less aggressive and impulsive than their contact counterparts. Research by Elliott, Beech, Mandeville-Norden and Hayes (2009) also showed that contact offenders were more likely to respond over-assertively than their internet counterparts. Likewise, Magaletta et al. (2012) found that internet offenders had lower levels of aggression, hostility and dominance than contact offenders and even the male normative sample. Reijnen and colleagues (2009) found that compared to non-sexual offenders, internet offenders generated a lower Ma score¹³ on the MMPI-2 instrument. This scoring suggests internet offenders are less impulsive, energetic, extraverted, social and impulsive — adhering to the findings from previous research. Combining all of these studies gives the impression of an internet offender as an individual who is under-assertive, as well as low on belligerence, dominance and hostility. Possessing these character traits is likely to affect their everyday lives, e.g. their ability to start and maintain intimate relationships.

Interestingly, Bates and Metcalf (2007) found that the largest difference between internet and contact offenders related to 'impression management,' where internet offenders scored higher on the scale. It is hypothesised that this may mean that internet offenders are aware of the social judgment surrounding their behaviour and adjust their responses accordingly. Another possible explanation is that internet offenders tend to present themselves in a positive and unrealistic manner. This is perhaps linked to their pro-social lives, which are more likely to consist of secure employment and higher educational attainment. Extrapolating from this, the authors suggest that the psychometric scores reported by internet offenders should be treated with caution, with the assumption being that psychological deficits are actually higher than their scores suggest. Having said that, a meta-analysis by Babchishin et al. (2011) gave contradictory results, whereby online offenders reported less socially desirable responses than offline ones. Another study also found that internet offenders appeared to be less deviant than contact offenders (Tomak et al., 2009).

A comparative look at the differences between internet, contact and dual offenders found that antisociality was another distinguishing feature. Contact and dual offenders endorsed a greater number of indicators of antisociality. Consequently, if an internet offender was to possess high levels of antisociality they would likely be at greater risk of 'crossing over' to contact offending (Babchishin et al. 2015) — this is something which is discussed in-depth in Question Four. In a similar vein, Henshaw et al. (2018) found that internet offenders possessed high sexual deviance but low antisociality; contact offenders showed the reverse pattern; whilst dual offenders rate highly on both. Research by Webb et al. (2007) gave similar results about antisocial variables like 'acting out,' failing to cooperate with supervision and breaking the rules being distinguishing characteristics of contact offenders. As mentioned earlier, Merdian and colleagues (2016) speculated that internet offenders cope with unfavourable experiences through an avoidant behavioural style (i.e. escaping by immersing

¹³ This is for 'hypomania,' a mild form of mania characterised by hyperactivity and inflated self-esteem or grandiosity.

themselves in the online world); whereas contact offenders could be more inclined to 'act out' in response to adverse life events.

Another contributor to this may be dissimilarities in the 'locus of control,' the extent to which people feel they have control over events that influence their lives. Contact offenders scored higher with 44.7% showing an externalised locus of control (feeling that fate/luck rather than their own actions and abilities drives what transpires in their lives) compared to only 9.4% of internet offenders. This might be indicative of their more stable employment and educational situations (Bates & Metcalf, 2007). Similarly, Elliott et al. (2009) found that contact offenders have a more externalised locus of control. A later study also found that contact offenders have more external locus of control than internet and dual offenders (Elliott, Beech & Mandeville-Norden, 2013).

Another individual component separating the types of offenders is the ability to relate to fictional characters. Internet offenders scored higher on the fantasy scale, suggesting that they view IIOC as a 'performance' where the children are playing a 'role' (Elliott et al., 2009). A later study that looked at contact, internet and dual offenders found this feature was most prominent in the latter two groups. This implies that IIOC is part of a fantasy for these types of offenders to some extent (Elliott et al., 2013).

Emotional Problems

For the most part, there were clear differences in emotional problems between internet and other types of sexual offenders. Emotional loneliness was significantly higher in internet offenders; this is in spite of them having more stable education and employment situations than contact offenders (Bates & Metcalf, 2007). Furthermore, Babchishin et al. (2011) postulated that internet offenders are less inclined to act on their sexual interests in the form of contact offending due to their avoidance of emotional closeness. This could also explain why internet offenders are less likely to be involved in age-appropriate, intimate relationships. Elliott et al. (2009) made a similar claim that emotional loneliness, coupled with other problems like low self-esteem and under-assertiveness, affects the ability of internet offenders to form and maintain interpersonal relationships. Although Bates and Metcalf (2007) found that internet offenders actually had a higher level of self-esteem.

Clinical measurements of interpersonal warmth found that contact offenders reported the highest levels (Jung et al., 2013). This is consistent with other findings, suggesting that reduced levels of interpersonal warmth are linked with difficulties in maintaining relationships; thus, making internet offenders more likely to be single and emotionally lonely. Backing up the previous studies, Magaletta and colleagues (2012) found that internet offenders are likely to experience problems with interpersonal functioning, depression and mood regulation.

Sexual Practices

In terms of sexual practices, there are further disparities between types of sexual offenders. High rates of sexual deviance for internet offenders were documented in Henshaw et al.'s (2018) study. Similarly, those who committed IIOC offences scored more highly than contact and solicitation offenders on the deviant sexual preference and sex drive/preoccupation scales of the Stable-2007; they were also more likely to admit paedophilia or hebephilia (Seto et al., 2012). Meta-analytic reviews by Babchishin et al. (2011) found that greater sexual deviancy was documented in 'online offenders.' The authors note, however, that this scoring might have been affected disproportionately by their viewing of IIOC.

Another meta-analysis by Babchishin and colleagues (2015) yielded similar results. Internet offenders had more problems with sexual preoccupation and self-regulation than their contact counterparts; although dual offenders rated higher than both types. It is claimed that a greater degree of self-control may be one of the barriers to contact abuse by internet offenders; although it is worth noting that internet offenders are not a homogenous group. Following on from this, Elliott and colleagues (2013) purport that dual offenders may have poorer self-management than internet ones. This is perhaps strengthened by the finding in McCarthy's (2010) study that dual offenders appear to be more sexually preoccupied. Furthermore, they were more likely than internet offenders to engage in cybersex with adults, as well as spend a greater amount of time per week viewing adult pornography. Moreover, dual offenders were more likely to trade adult pornography online and pay for such material; although the difference in rates was not statistically significant. Another study looking at a sample of undetected internet and dual offenders (n=190) found that a pertinent risk factor was 'sexual preoccupation,' defined as a highly deviating preoccupation with sexual content, often characterised by a high frequency of sexual fantasies. Out of the 190 participants, 53.7% of participants reported only IIOC offences; whilst 23.2% admitted to committing both types within the last six months. With regards to lifetime offending, this was admitted by 37.4% of participants for dual offending, 51.1% for IIOC offences and 5.8% for contact offending. Findings indicate that dual offenders have a generally increased level of sexual preoccupation that makes them at high risk to offend over a lifetime; whilst internet offenders are sexually preoccupied in temporal proximity to their IIOC usage (Kuhle et al., 2017).

Another distinguishing indicator is 'sexually risky behaviour,' which is twofold in nature: general risk, such as continuing to access adult pornography on a daily basis; specific risk, referring to a new allegation or charge. Contact offenders had 26% general and 16% specific risky behaviours; this is in comparison to 14% general and 4% specific sexually risky behaviours for internet offenders (Webb et al., 2007).

Cognitive Factors

Feelings about Children

Emerging from the review of literature were a number of cognitive factors highlighting differences between internet and other types of sexual offenders. Perhaps one of the most important cognitive

distortions considering the offending behaviours involve sexual crimes against children relates to sexual feelings about children. Assessed as part of psychometric testing was the degree to which the participants hold distorted sexualised beliefs about children that may justify abuse, e.g. 'there is no harm in sexual contact between adults and children.' Contact offenders scored higher on this scale: 26.5% were beyond the deviancy cut-off compared to 5.9% of internet offenders (Bates & Metcalf, 2007).

Using a sample of 16 internet offenders, 25 contact offenders and 10 dual offenders, Sheldon and Howitt (2008) sought to explore the role of sexual fantasy in offending behaviour. Completed by all participants was a 'Sexual Fantasy Questionnaire,' consisting of 52 items covering both normal (i.e. consensual, adult sex) through to deviant fantasies (sexual contact with a child, overpowering an adult to force them to have sex). The most common fantasy appeared to be consensual sexual acts with adult females, which is what would be expected of non-offending, heterosexual males. Notably, since the results were self-reported by participants, this could be the result of 'impression management' to some degree. In spite of this, there were paedophilic fantasies recorded by participants. An illustrative finding from this study was that fantasy seems to have a contraindicative effect on physical offending, with internet offenders having more fantasies than their contact and dual counterparts. The authors suggest that this challenges the notion that fantasy drives contact offending. Further to this, it is suggested that contact offenders have difficulty generating fantasies and instead tend to use the memories of the abuse perpetrated. Moreover, it is speculated that since they can generate fantasies more easily, internet offenders may have less need to contact offend. A further link is made between the higher intelligence levels of internet offenders evidenced in their superior educational achievements and the ability to generate sexual fantasies.

A study by Seto, Cantor and Blanchard (2006) examined 685 male patients referred for sexological assessments. A hundred of the patients had committed internet offences, with 43 of them being dual offenders and the remaining 57 being internet offenders. Contact offences against children and adults were the charges for 178 and 216 individuals respectively. The remaining 191 were general sexology patients¹⁴ with no charges for internet or other sexual offences. Phallometric assessments of patients' sexual interests were carried out using a variety of nude models from adults, pubescent children and prepubescent children of both genders. Results indicated that internet offending is a valid diagnostic indicator of paedophilia, with both internet and dual offenders being significantly more likely to show a paedophilic pattern of sexual arousal during phallometric testing than the other groups of patients. The inference drawn from this is that internet offending may be a stronger indicator of paedophilia than sexually offending against a child. Further to this, the argument is advanced that the selection of pornography tends to correspond to sexual interests, so few non-paedophilic men would choose to access IIOC given the availability of legal pornography available. For contact offenders, by contrast, it may be the case that a child who is showing signs of sexual development but is under the legal age of consent is victimised due to their being an easy target. The authors do caution, however, that the sample

¹⁴ These patients may have been referred for behaviours such as compulsive use of prostitutes or legal pornography.

consists of patients referred for sexological assessments so it may not necessarily be representative of internet offenders more generally.

A meta-analytic review of the literature by Babchishin et al. (2015) found that dual offenders had the greatest sexual interest in children (paedohebephilia) compared to both contact and internet offenders. The implication from this is that dual offenders are a particularly problematic group in terms of sexual deviancy. Moreover, McCarthy's (2010) study showed that dual offenders had the highest diagnosis of paedophilia evident in 68% of the sample juxtaposed to 38% for internet offenders. Out of the 68% of dual offenders with a diagnosis of paedophilia, however, an exclusive sexual preference for prepubescent children was evident in 20% of cases; the remaining 48% also had a sexual preference for adults. The implications from this is that not all those who possess IIOC have a primary sexual interest in children.

A survey examining clinical and risk-related variables administered by Merdian and colleagues (2016) found that there were disparities between the offending groups in terms of the sexual objectification and agency of children. Contact and dual offenders were more likely to endorse children as sexual agents and display a sense of sexual entitlement. These two offending groups were also more likely to justify their sexual behaviours.

In terms of emotional congruence with children (the degree to which children are emotionally significant to an individual), contact offenders again scored higher at 21.2% compared to 9.1% of internet offenders (Bates & Metcalf 2007). Research by Elliott and colleagues (2013) compared contact offenders, internet offenders and dual offenders on a range of self-reported psychological measures. Contact offenders were found to have the highest levels of cognitive distortions and emotional congruence pertaining to children and sex. The authors question why there is a difference, particularly since dual offenders have committed contact offences against a child and would, therefore, be expected to possess such cognitive distortions to justify their behaviours. This question requires further research to fully address. There is also the possibility of 'undetected' dual offenders in both the internet and contact groups, which would skew the results slightly.

Attitudes

Webb and colleagues (2007) reviewed the psychometric and risk factors of 90 internet and 120 contact offenders using risk assessment tools. Assessments using the Stable 2000 found that contact offenders had greater problems with 'attitudes towards sexual assault'; although internet offenders scored more highly on the 'sexual self-regulation' problem scale. It is worth noting that there was a possible sampling bias in this study in that individuals who self-referred for treatment were included; this could mean that other potentially more or less risky individuals have been excluded from the research.

Similar results were present in Babchishin et al.'s (2011) meta-analysis. This found that 'offline offenders' (i.e. contact) had less victim empathy, higher cognitive distortions and more emotional

identification with children than 'online' ones (encompassing both internet and dual offenders). Combining these elements could facilitate contact offenders' physical abuse of children. In spite of this, online offenders showed a significantly higher level of sexually deviant interests; although this was on the basis of only three studies and the measurements of sexual deviance could have been affected by their interest in viewing IIOC.

Merdian, Curtis, Thakker, Wilson and Boer's (2014) article studied the endorsement of cognitive distortions in 22 internet, 29 contact and 17 dual offenders recruited from community sex offender treatment centre and prison settings. To measure this, ten items were retrieved from the 'Child and Sexual Activities Scale' (Howitt & Sheldon, 2007) and added to an established assessment tool, the 'Abel and Becker Cognition Scale,' which participants completed. Out of the three offender groups, dual offenders gave the strongest endorsement of cognitive distortions pertaining to justification, children as sexual agents and entitlement. This profile raises concerns about the high risk of reoffending in both internet and contact offences. By contrast, internet offenders were the least likely to endorse items around the justification for behaviours, children as sexual agents and power and entitlement. To clarify, internet offenders are less likely to agree with statements blaming other people for their actions, portraying children as sexually willing and able, and feeling entitled to their sexual behaviour. In fact, internet offenders displayed higher levels of agreement for items relating to their own sexual behaviours, such as 'sexual thoughts about a child are not as bad' and 'just looking at a naked child is not as bad.'

Victim Factors

Victim Empathy

One of the victim factors was the perceptions of each type of offender about the harm caused to victims by their offending behaviours. Bates and Metcalf (2007) psychometrically assessed 39 contact offenders and 39 internet offenders to examine their emotional states, attitudes and cognitive distortions. One of the factors measured was 'victim empathy,' denoting the extent to which the individual has the capacity to express compassion for the victim and acknowledge the possible damage caused to them. Items asked offenders to consider their victims and think about whether he/she enjoyed what happened, felt safe, led them on or was left feeling emotionally confused. A greater number of contact offenders scored above the normal range at 52.6% compared to 22.7% for internet offenders. In Elliott et al.'s (2013) study, offence supportive beliefs, socio-affective functioning, emotional management and socially desirable responding were researched using a sample of 526 contact offenders, 459 internet offenders and 143 dual offenders. Non-contact offenders were deliberately excluded from the sample. It was found that the contact group demonstrated a lower degree of victim empathy than dual and internet offenders respectively.

A meta-analysis of research by Babchishin et al. (2011) found that 'online offenders' displayed greater victim empathy than contact ones. It is noticeable that the study examined 'online offenders' as one

group including both dual and internet offenders. It is hypothesised that the lower victim empathy levels of 'offline' (contact) offenders, coupled with higher levels of cognitive distortions, could facilitate their physical offending against victims. Another meta-analysis by Babchishin and colleagues (2014) compared the demographic and psychological variables of internet offenders with both contact and dual offenders. Similar to the previous study in 2011, it was found that internet offenders had greater victim empathy; whilst contact offenders displayed more victim empathy deficits. Likewise, dual offenders did have greater empathy deficits than internet offenders; although the difference was not statistically significant.

Victim Characteristics

In their study comparing and contrasting dual, internet and contact offenders, Aslan and Edelman (2014) found there were differences in victim characteristics. Whilst the victims of contact and dual offenders tended to be female at 75% and 58% respectively, the IIOC accessed/downloaded was mixed gender for 42% of internet offenders. Also, the way victims were accessed differed between the groups. Fifteen percent of the internet offenders groomed victims online and requested IIOC from them. Dual offenders were more likely to target stranger victims, with 45% meeting them online. Conversely, the victims of contact offenders were more likely to be known to them. This suggests that everyday access to children in an offline context is a feature distinguishing between dual and contact offenders. Similar to the other studies reviewed, a possible limitation of this study is that there could be 'undetected' dual offenders in either the contact or internet groups, a factor that would possibly skew the results.

Sheldon and Howitt (2008) sought to understand the role of fantasy in offending behaviour in a comparative study comprised of 16 internet, 25 contact and 10 dual offenders. The authors deliberated the possible purposes of sexual fantasy: a blueprint or rehearsal for offending; a way of stimulating sexual arousal; shared origins with offending; offending being a way to enhance or renew sexual fantasies. The three offender groups completed a sexual fantasy questionnaire developed from previous literature and research findings. For the purposes of this study, a child was defined as a person aged 15 years or younger. It was discovered that the gender of children in fantasies reflects the type of victim: contact offenders with girl index victimised were higher on girl fantasies; whilst dual offenders were high on both boy and girl fantasies.

Engagement with IIOC

Explanations Given

Since this category involves some form of engagement with IIOC, it is only applicable to internet and dual offenders. The implication being that although contact offenders may be viewing this kind of material, it is not something they have been convicted for. Six studies reviewed for this question related to indicators about offenders' engagement with IIOC.

Out of a sample of 90 internet offenders, 34% fully accepted responsibility for their behaviours and 37% denied any sexual arousal upon viewing IIOC material. Of the 63 internet offenders asked, almost half paid to view such materials. Furthermore, half of the 52 internet offenders questioned admitted masturbating to IIOC (Webb et al., 2007).

For comparative purposes, Long and colleagues (2012) assessed how 60 dual and 60 internet offenders engaged with IIOC material. Explored were the explanations given in their police interview for possessing IIOC. It was discovered that internet offenders were more likely to admit their attraction to this material (48.3%) and provide a positive justification for possessing it (24.1%), e.g. claiming it was to trap and report offenders to the authorities. Conversely, dual offenders were more likely to give a 'no comment' interview (39.3%); whilst 17.9% admitted their attraction to IIOC and 28.6% provided a cognitively distorted view (e.g. IIOC does not harm children). This suggests that dual offenders are more criminally aware, something which is exemplified in internet offenders being 13.33 times more likely to take risks like paying for IIOC (Long et al., 2012). These findings were mirrored in McManus and colleague's (2015) study of the socio-demographic characteristics, offending behaviours and types of IIOC in a sample of 120 dual and 124 internet offenders. Dual offenders were more likely to give no comment interviews or deny the offence with 34.5% and 21.8% doing so; whilst internet offenders gave partial and full admissions at rates of 13.9% and 53.9% respectively. Similarly, in terms of paying for access to IIOC, rates were higher for internet offenders (12.1%) than dual offenders (5%).

IIOC Collection

These two studies also have similar results regarding IIOC collection. Dual offenders had significantly less IIOC than internet offenders and, probably reflective of the collection size, the material contained children with a smaller age range. In line with this, internet offenders were found to have downloaded IIOC for a longer period of time. A lengthy duration in collecting IIOC was linked to the possession of material at levels 4 and 5, the most severe levels as per the UK Sentencing Guidelines Council. Of note is that dual offenders were more likely to produce IIOC with 53.3% doing so (compared to 20% of internet offenders) and engage in non-contact behaviour like grooming at a rate of 86.7%. Further to this, the gender of the children in IIOC tended to parallel the contact victims of dual offenders (Long et al., 2012). Comparable results were found in a study by McManus et al. (2015): dual offenders were 7.11 times more likely to be involved in the production of IIOC and 12.4 times to be engaged in non-contact behaviours like grooming. The collection size of IIOC was significantly less for dual offenders compared to their internet counterparts. Of the fifty participants within the sample who possessed extreme IIOC, 72% were internet offenders; whereas 28% were dual. It appears that internet offenders are, thus, more likely to possess larger collections and more extreme material.

There were comparable findings in Aebi et al.'s (2014) study, where juvenile possessors of IIOC were found to have downloaded these materials more frequently and over a longer period of time than juvenile possessors of other types of illegal pornography. To put it into perspective, the average number

of pictures and videos were 37.5 for IIOC possessors compared to 8.2 for other types. The time frame of greater than three months was 35.2% and 11.9% for IIOC and other illegal pornography possessors respectively.

Function of IIOC

A recent study by Merdian and colleagues (2016) found there were variances in the ways IIOC is used. Twenty-two internet offenders, 29 contact offenders and 17 dual offenders were recruited from a community sex offender treatment centre in New Zealand. Spatial and numerical classification methods were used to identify the ways internet and dual offenders use IIOC (referred to here as CSEM) and two pathways were established. One of these were fantasy-driven users, in which IIOC is intensely used by those with difficulties establishing and maintaining interpersonal relationships. Fantasy-driven users demonstrated a preference for indirect methods of sexual stimulation and reported intimacy deficits. The other pathway is contact-driven, where users are more likely to endorse cognitive distortions about the sexual agency of children. Unsurprisingly, perhaps, this had a greater number of dual offenders than the fantasy-driven pathway: there were 11 dual and 4 internet offenders. The authors question whether the fact that four of the contact-driven users had not engaged in direct sexual contact with a child could either be a misclassification error caused by the self-reporting nature of the research or a warning that these users are on the trajectory to crossing over to contact offending. A surprising finding from the study was that almost half of fantasy-driven users (75% of which were internet offenders) had made contact with children online; whereas none of the contact-driven ones had. The authors surmise that this could suggest the absence of a link between online communications with children and offline contact offending. Alternatively, it could be the result of under-reporting of online communications by contact-driven users and/or contact offending by fantasy-driven users.

McCarthy's (2010) comparative study of dual and internet offenders found the former were more likely to talk to children in a sexual manner online and arrange to meet them, as well as send IIOC and adult pornography to underage persons. Dual offenders are more inclined to network with others who share similar deviant interests to trade and organise IIOC. Opposing the results from other studies, McCarthy (2010) also found that dual offenders have larger IIOC collections and were more likely to masturbate to such materials.

Summary

Overview tables of the most prominent characteristics for internet, contact and dual offenders are documented in Appendix T. Having reviewed the literature, it appears there are only a handful of similarities between the types of offenders. In spite of what other studies found, Neutze et al. (2011) discovered that emotional deficits, lack of task-oriented coping, impression management, conscientiousness, ability to control sexual urges, victim empathy and maladaptive cognitions were similar between internet, contact and dual offenders. Additionally, the majority of internet, contact and dual offenders had never made contact with mental health services, partaken in substance misuse and

were Caucasian (Aslan & Edelmann, 2014). Kuhle and colleagues (2017) found there were no significant differences in sociodemographic data between undetected dual and internet offenders who were recent and lifetime offenders. Moreover, Babchishin and colleagues (2011) found there were no significant differences in loneliness or self-esteem between offline and online offenders. Dual and internet offenders are more reliant on indirect means of sexual stimulation (Meridian et al., 2016).

The remainder of this chapter focused on the differences between internet, contact and, where relevant, dual and non-contact offenders. Dual offenders were more likely to have a history of previous convictions compared to internet offenders. This was also the case for comparisons between internet and contact offenders. The consensus from this is that internet offenders possess fewer criminogenic qualities as an offending group.

Most studies found that internet offenders were more likely to be single and live alone or with their parents. Perhaps linked to this was the finding in Babchishin et al.'s (2015) meta-analysis that internet offenders were more likely to have problems with their sex lives, probably linked to their difficulties in maintaining emotional relationships. The exception to this was a handful of studies that discovered a greater number of internet offenders had ever been married compared to contact and/or dual offenders (Faust et al., 2015; McCarthy, 2010; Tomak et al., 2009). Dual and contact offenders were more likely to live with children, highlighting access to children as a possible enabler to their offending. With regards to age, there were conflicting results across the studies. Three found that internet offenders were younger than their contact counterparts; whilst another two found internet offenders — including juveniles in one study — were more likely to be older than contact offenders or possessors of other types of illegal pornography.

All studies that mentioned education and employment status found that internet offenders held a higher degree of educational attainment and were more likely to be in secure employment. Three out of four studies found that substance misuse was lowest amongst internet offenders (Babchishin et al., 2015; Magaletta et al., 2014; McCarthy, 2010); the remaining one (Aslan & Edelmann, 2014) found a higher number of internet offenders had a documented history of this. Contact offenders were also more likely to have made contact with mental health and crisis services (Henshaw et al., 2018). Another difference is that contact offenders were more likely to report a history of emotional, physical and sexual abuse in childhood. Even Aebi et al.'s (2014) study looking at juvenile offenders found that those that possessed IIOC were less likely to have a troubled family background (e.g. separated from parents) than their contact counterparts.

Personality factors documented further differences between the offending types. Bates and Metcalf (2007) discovered that internet offenders scored higher on the impression management scale, suggesting dishonesty and deception. Having said that, this finding was contradicted in Tomak et al.'s (2009) study and Babchishin et al.'s (2015) meta-analysis of other research. Internet offenders were found to possess higher levels of self-esteem and be less self-deluded in relation to presenting

themselves in an overly optimistic manner, something that may be explained by their higher educational and employment achievements. In comparison to contact offenders, internet offenders were found to possess reduced levels of the following characteristics: assertiveness, aggressive, hostility, impulsive, energetic, social, dominant and extraverted. Moreover, internet offenders were found to be higher in emotional loneliness and more interpersonal deficits were present — this may feed into them being more likely to be single. Internet and dual offenders were found to have a greater ability to relate to fictional characters, which feeds into the generating of sexual fantasies discussed earlier.

It was discerned that contact offenders had an externalised 'locus of control,' a mind-set in which fate/luck determines their lives, whereas internet offenders had an internal one of taking responsibility for what transpires in their lives. Another difference was antisociality (more likely to break the rules and act out), with contact and dual offenders having higher levels of this. The implication of this is if an internet offender were to possess high levels of antisociality, they may be more likely to cross over into contact offending. Dual offenders had the greatest problems with sexual preoccupation and self-regulation, with them being more likely to engage in adult cybersex and view adult pornography. It may be the case that those who cross over to contact offending have a poorer level of self-management.

Moving onto cognitive factors now suggests more disparities between the groups of offenders. Internet offenders were able to generate more sexual fantasies, suggesting a counteractive effect on offending where this ability removes the need to contact offend against a child. In comparison, contact offenders are more likely to use memories of the sexual abuse as a form of fantasy. In a similar vein, contact offenders hold distorted sexual beliefs about children that could possibly justify the abuse they perpetrate. Likewise, contact offenders had higher levels of emotional congruence with children and more problematic attitudes to sexual assault. In spite of this, studies found that internet offenders showed higher rates of paedophilia and sexually deviant interests than contact offenders. Moreover, internet offenders were less likely to endorse cognitive distortions about the sexual agency of children; yet were more likely to justify items relating to their specific offending, e.g. 'just looking at a naked child is not as bad' (Meridian et al., 2014). This could perhaps be related to the 'dissociative anonymity' component of the 'online disinhibition effect,' which is predicated on the belief that actions online have no consequences in real life (Faust et al., 2015). Perhaps, unsurprisingly, Babchishin et al. (2015) and McCarthy (2010) found that dual offenders possessed the highest level of sexual interest in children out of the three types.

The next set of differences related to victims. Contact offenders have a lower degree of victim empathy than internet offenders, something which likely enables their physical abuse of children. The victim characteristics of contact offenders are likely to be known to them and female; whilst dual offenders are more likely to target stranger females. The characteristics within the IIOC consumed by internet offenders tends to be mixed gender. The fantasies of contact offenders tend to feature girls; whilst dual offenders have fantasies about both genders.

The last section explored how dual and internet offenders engaged with IIOC — this excludes contact offenders on the assumption that they are not viewing such materials. In their police interviews, internet offenders are more likely to admit their attraction to IIOC and give a positive justification for possessing it. Conversely, dual offenders are more likely to give 'no comment' interviews or deny the offence. In addition to this, internet offenders are more likely to take risks like paying for IIOC. Moreover, dual offenders are more likely to produce IIOC, network with like-minded individuals and engage in activities like grooming children online.

Considering all of this, these results imply that dual offenders possess more criminogenic traits. In spite of this, internet offenders possess more IIOC and have downloaded it for a longer period of time. A lengthy collection time appears to be correlated with owning more severe materials. Merdian and colleagues (2016) split dual and internet offenders based on their motivations for using IIOC. One pathway was 'fantasy-driven,' consisting of mainly internet offenders, where the users had intimacy deficits and relied upon indirect means of stimulation. The other pathway is contact-driven, where users are more likely to endorse cognitive distortions about the sexual agency of children. Surprisingly, contact-driven users had never made contact with a child online; whereas some of the fantasy-driven ones had. This does not mean, however, that the fantasy-driven users were going to progress onto a contact offence; rather, it could be the case that contacting children online is part of the fantasy.

Question Four – Offending Trajectories of Internet Offenders

Now that the differences between internet and contact offenders have been explicated, this chapter will discuss the offending trajectories of internet offenders. The twelve studies reviewed (details can be found in Appendix M) included a variety of samples, including a mixture of internet, contact and dual offenders, to explore the pathways from contact or internet offending to dual offending. Broadly, this chapter will investigate the extent to which internet offenders progress to contact offending and elucidate the risk factors for this. First of all, the recidivism patterns of internet offenders will be discussed. Following that, a broad overview of the possible risk factors for making the transition to contact offending will be deliberated. Outlined thereafter will be questions about the offending pathway emerging from the research. The arising implications for practice will be detailed in the Discussion Chapter.

Recidivism Patterns

Studies have found that internet offenders recidivated at a lower rate than other types of sexual offending. A study focusing on child solicitation offenders examined recidivism patterns within the sex offender registry held by the *U.S. Department of Justice*. Findings showed that 87% (n=291) of those in the registry were categorised as 'non-reoffenders,' having no prior, concurrent or subsequent offences. The remaining 13% (n=43) were classed as 'reoffenders': 5.4% (n=18) and 2.7% (n=9) of the total sample had prior and simultaneous offences; whilst 1.2% (n=4) had multiple offences (prior and simultaneous). In terms of reoffending after the sex sting conviction, this applied to 3.6% of the total sample. The majority of these were for further IIOC or solicitation offences; only 2 individuals reoffended with contact offences (Drouin, Boyd & Romanelli, 2018).

Seto, Hanson and Babchishin (2011) carried out two meta-analyses on studies about the contact sexual histories and recidivism rates of 'online offenders' (this includes both IIOC and dual offenders), with the combined sample size across the studies totalling 2630. The first meta-analysis looked at contact sexual offence histories of internet offenders; whilst the second looked at recidivism rates. Noticeably, there were nine studies in the second meta-analysis that were yet unpublished, showing the recency of this line of research. The recidivism rate of all sexual offending for online offenders in a 1.5 to 6 year follow-up was 4.6%, which is lower than rates typically found for other types of sexual offenders. A new IIOC offence was committed by 3.4% of the sample. The authors advanced the notion that it is rare for online offenders to go on to commit contact sexual offences, with only 2% doing so. It may be the case, however, that the offending estimates are biased downward, with individuals able to avoid detection for both internet and contact offending.

In order to determine whether internet offenders had any 'undetected' contact offences in their past, Bourke and colleagues (2015) utilised secondary data from 'tactical polygraph examinations': these are

administered as soon as possible after the point of first contact with a suspect for the purposes of gathering information. One hundred and twenty-seven persons under investigation agreed to take part in a polygraph examination at a time when they were being investigated for solely internet offences. Prior to the polygraph, 4.7% of the suspects admitted contact offences against a child. During the polygraph examinations, however, there were disclosures about contact abuse of a child from 52.8% of the suspects. The remaining 54 participants did not admit to committing contact abuse; despite making no admissions, 26 of them flagged a 'Deception Indicated' result in their polygraph examinations. There are uncertainties around the overall effectiveness of the polygraph examinations, however. There are also questions about the accuracy of the data since it came from various agencies with their own procedures. Further to this, polygraph examinations were administered at different time points after the arrests of suspects — it has been suggested that these are more effective if completed sooner (Bourke et al., 2015). The detection status of offenders is something which will be discussed further in Question Five of the Literature Review.

Jung and colleagues (2013) set out to explore the trajectory of internet to contact offending. To achieve this aim, they compared and contrasted different groups of sex offenders: 101 contact, 50 internet (convicted of accessing or distributing IIOC) and 45 non-contact offences such as exhibitionism and voyeurism. Unfortunately, there were no dual offenders in the sample — they may have been useful for exploring the trajectories of offending. Notably, internet offenders were older than the other offender types when convicted. The recidivism of each type of offender was assessed for a follow-up period of two years. In terms of all reoffending, internet offenders did so the least at a rate of 11% compared to 14% and 18% for contact and non-contact offenders respectively. Contact offenders were the only group to recidivate with a violent, non-sexual offence. Sexual recidivism matched offenders' index offence, suggesting a specialisation amongst the different types of sexual offenders. Internet offenders reoffended at a rate of 7% for further IIOC offences; whilst 5% of contact and 5% of non-contact recidivated with crimes that matched their index offences. The authors note, however, that the follow-up period of two years may be too short to fully measure recidivism patterns.

In a similar vein, Faust et al. (2015) set out to address whether there is a link between internet (possession or distribution of IIOC) and contact offending. The authors examined the reoffending trends and trajectories of 428 internet offenders and 210 individuals convicted of contact offences. Dual offenders were deliberately excluded from the analysis to focus on the offending patterns of internet and contact offenders. Similar to the previous study, internet offenders were older when first arrested (mean=33.7 years) compared to contact offenders (mean=23.7 years). Fifty-eight percent of internet offenders had no prior arrests or convictions compared to 25.2% of contact offenders. Findings indicate that internet offenders have a comparatively lower risk of reoffending than contact offenders. The follow-up period ranged from one to nine years, with an average of 4.8 years. Only a minority of internet offenders (3%) went on to commit contact offences and an even lower number recidivated with IIOC offences (1.6%). There was no crossover of contact offenders to IIOC offences. For non-sexual, violent

arrests, contact offenders had a hazard rate¹⁵ almost 536% higher than that of internet offenders — the implication is that contact offenders are more prone to offending. As with many studies in this field, however, the low rates of re-arrest make it difficult to accurately assess recidivism — the authors maintain that they would need to extend the observation by about ten years to do so.

Another study used a sample of 231 internet offenders in Switzerland to examine recidivism over a six year follow-up period. The majority of the sample did not have a criminal record: 4.8% had previously committed a violent/sexual offence, 1% for contact offences against a child and 3.5% for using IIOC. The purpose of this study was to examine the offending trajectory of consumers of IIOC and other types of illegal pornography to determine their risk of committing sexual offences. It is worth noting that the majority of offenders in the study also consumed other types of illegal pornography, as per Swiss penal law, involving excrement, animals and violence. Two definitions of recidivism were used: the 'strict' one applied to new convictions registered in criminal records; the 'broader' term encompassed convictions, investigations and charges. The strict definition yielded the following reoffending results: 2.6% for illegal pornography, 3% for sexual offending and/or violence and 0.4% with a violent offence. Using the broader definition, the figures were 3.9% for illegal pornography, 6% for violent and/or sexual recidivism, 0.8% for a hands-off sex offence and 1.3% for a violent offence. Considering all of this, the authors concluded that the risk of internet offenders recidivating, particularly with contact offences, is quite low (Endrass et al., 2009).

Another caveat to the recidivism patterns of internet offenders is for those who did recidivate, the majority did so with another IIOC offence. In a meta-analysis of recent studies, Seto et al. (2011) found that out of the combined sample of 1247 internet offenders 2% committed a contact offence and 3.4% reoffended with another IIOC offence. Similarly, Seto and Eke (2005) looked at the criminal histories and recidivism trends of 201 internet offenders (possession, distribution or production of IIOC). It was found that 56% of the sample had a prior criminal record; whilst 24% and 15% had previously committed contact and internet offences respectively. A 'time at risk' period was calculated as the duration of time in which an offender had an opportunity to offend: this started at the date of the conviction for IIOC possession and went through to the date of a new offence (or the date follow-up data was available for those who did not recidivate), with time in custody being subtracted. The average time at risk was 29.7 months, ranging from 15 days to 6.2 years. For contact offenders, 9.2% reoffended with a similar offence compared to the 5.3% who did so with an IIOC offence. Only 1.3% of the internet offenders went on to commit a contact sexual offence; whilst 3.9% recidivated with another IIOC offence. These results, argue the authors, contradict the assumption that internet offenders will go on to commit contact sexual offences. In this sense, there exists the 'absence of a trajectory' for internet offenders. The limitations of this study are the reliance on official records, the lack of data on psychological variables and the fact that only charged (and thus 'detected') offenders could be studied. Likewise, Jung et al. (2013) discovered that 11% of the internet offenders who reoffended did so in the same type of offence.

¹⁵ Calculations were based on Cox proportional hazard models, where hazard rates refer to the relative risk for an individual compared to the baseline constant.

Furthermore, internet offenders with no history of contact offences are said to be at lesser risk of progressing onto this. For instance, in a sample of 2630 individuals, only 2% committed a contact offence; whilst 3.4% reoffended with further IIOC offences (Seto et al., 2011).

Howard, Barnett and Mann (2014) examined criminal histories and reoffending patterns using a large dataset from the National Offender Management Service of 14, 804 sex offenders. These were grouped into four categories: contact child offences¹⁶ (43%), contact adult offences (32%), internet offences (making, distributing, showing or advertising IIOC) (7%) and paraphilia offences, consisting of indecent exposure and voyeurism (18%). Those with internet offences were less likely to have an offending history of non-sexual offences with rates of 31% compared to 81% for those with no history of these. Results indicated that most recidivism was for the type of offence previously committed. Accordingly, internet offenders tended to be further convicted for similar offences. Sexual specialism (defined as at least 50% of past and index sanctions including sexual sanctions) were present in 85% of those with IIOC offences in contrast to 31% of those with no history of this type of offending. Based on the results, the authors surmised that having risk assessment tools that measure all types of sexual offending may not be appropriate - this will be examined further in Question Six. It could be argued that the reliance on official criminal records as the sole data source may have resulted in an overestimation of internet offending. Moreover, the study also had a follow-up period of less than five years, with a mean duration of 37.3 months, which may not be enough time for sexual offences to come to the attention of the relevant agencies.

In order to examine the trajectory from internet offending to other types of sexual offences against children, the FBI's 'Crimes Against Children' Unit assessed investigative reports relating to 251 cases of the online 'sexual exploitation of children.'¹⁷ Thirty-eight percent of cases involved crossover offending, whereby internet offenders had attempted or committed other sexual offences against children. Out of the sample of internet offenders, 25% were discovered to have at least one contact offence victim; thus, making them 'dual offenders' (Owens, Eakin, Hoffer, Muirhead & Shelton, 2016).

Fortin and colleagues (2018) propose an offending pathway that goes through the following stages: the possession of legal pornography; consuming CSEM; distribution of CSEM and becoming involved in a peer community with similar interests; acting out via contact offending. The authors note, however, that this is not necessarily a simple linear pathway. Some offenders may adopt a parallel strategy of consuming CSEM and sexually assaulting children when the opportunity arises. Moreover, there may be psychological and social characteristics that guard against an offender acting out.

¹⁶ It is interesting to note that this study counts grooming offences as a contact offence on the basis that the intention is to make contact with a child.

¹⁷ This is a broad term referring to the sexual victimisation of a child, including IIOC and contact offences.

Recidivism Trajectories

A number of the studies explored the reasons why an internet offender would progress onto contact offences. Perhaps the most obvious factor is being able to access children. Notably, Jung and colleagues (2013) found that internet offenders were more likely to be single and not have biological children; thus, giving them less access to children than other types of child sexual offenders. The authors referred to Finkelhor's (1984) 'precondition theory' about the conditions necessary for a sexual offence against a child to occur: sexual motivation, lack of internal and external inhibitions and no resistance from the child. It was thereafter postulated that the characteristics of internet offenders, coupled with the lack of availability of child victims, may inhibit them from acting on their sexual desires.

A second possible risk factor, noted in a couple of the studies reviewed, is having a criminal history. Following their meta-analysis of recent studies, Seto et al. (2011) maintained that having a criminal history is the key risk factor for making the transition to contact offending. Likewise, in their examination of the different categories of sexual offending against children, Owens et al. (2016) found that 38% of the 251 cases involved crossover offending between categories; although this high rate may be attributable to the broad categories used in this study. In those cases, 62% had no prior criminal history; whilst 20% had a criminal record for sexual crimes against children and 4% had a previous IIOC charge. Further to this, an examination of IIOC content found there were strong demographic similarities between the images held and the children involved in contact offences. The authors came to the conclusion that sexual offending is a dynamic process, with behaviours perpetrated by individuals along a continuum. The limitation of this study is the lack of identification of the specific triggers causing the crossover to contact offending

In their study of 231 internet offenders in Switzerland, Endrass and colleagues (2009) also found that recidivism was linked to criminal histories: those who reoffended with a contact offence had previously been convicted for a contact offence. The linkage between prior criminal histories and offending is something which has already been discussed by Seto and Eke (2005). To that end, they conclude that the internet offenders most likely to progress to contact offending are those with a history of doing so - in this sense, such offenders would already be dual offenders. In a similar vein, Eke et al. (2011) looked at the index offending and reoffending patterns of 541 male internet offenders. The charges were a mixture between consuming and producing IIOC: 84% were convicted for possession; 15% for distribution; 12% making; 2% accessing. Over an average follow-up period of 4.1 years, 6.8% reoffended with another internet offence. Moreover, 6.3% were charged with a contact sex offence after their index IIOC offence. In 3.9% of cases, this was recidivism; the remaining 2.4% was for historical sex offences. A third of the contact charges being for historical incidents shows the actual recidivism rate for contact offending is unquestionably lower. It was found that offenders with a history of violent offending (including contact sexual offences) were significantly more likely to recidivate with a contact sexual offence. For instance, the recidivism rate was 45% for the 162 offenders with a prior or index contact sex offence. Further to this, offenders with a prior violent criminal history were more likely to be charged with failures on conditional release: this was 39% for those individuals compared to 24% for

the overall sample. Just greater than half of the conditional failures related to being alone with children, accessing the internet to contact children or downloading IIOC materials; the remainder of violations related to breaking rules such as not registering with the police or using alcohol. Overall, the risk of internet offenders committing a contact offence was very low, with this occurring in less than 1% of the overall sample.

Another potential risk factor is the type of indecent images possessed by offenders. Using a sample of 114 investigations, Smid, Schepers, Kamphuis, Linden and Bartling (2015) study focused on the distinction between dual and internet offenders (those convicted of IIOC possession). Fifty-four percent of investigations relating to dual offenders resulted in a charge for concurrent direct victimisation versus 10% of cases concerning internet suspects. As part of this investigation, IIOC material was rated for severity. It was found that the dual offenders downloaded the most deviant material (involving children aged under 5 years old and intrusive or violent content) in larger quantities. Extrapolating from this suggests there is a small subgroup of internet offenders who are 'deeply invested downloaders.' The authors hypothesised they are more likely to progress to contact offending as per the 'incentive theory of sexual motivation,' where their sexual interest in children motivates them. A limitation of this study is the emphasis on the most deviant images, with these being more likely to be included in the sample. The study may, therefore, overestimate the amount of extreme material within the 'typical' collections of internet and dual offenders.

Also identified as a risk factor in one study was 'antisociality.' Lee, Li, Lamade, Schuler and Prentky (2012) looked at the likelihood of offenders convicted of internet-based sexual offences crossing over to contact offending. To do this, a mixed sample of 466 participants was used: 113 committed an internet offence, 349 were contact offenders and 60 were dual offenders. The authors examined antisocial behaviour and internet preoccupation via the administration of scales to participants. This study was, however, limited by a number of factors: the lack of follow-up, the small size of the dual offending group and the reliance on self-report data. Findings showed the internet offenders to be low on antisociality and high on internet preoccupation; the contact offending group were the reverse of this and dual offenders were high on both factors. This suggests that a risk for an internet offender carrying out contact offences is possessing a high degree of antisociality. Furthermore, the authors argued that antisociality and internet preoccupation are key to 'dual offending,' with an individual needing to score highly on both factors to carry out both internet and contact offences. To that end, if the scores for both antisocial behaviour and internet preoccupation are in the 'quite high' range (a score of 8 or above on the scales), the probability of becoming a dual offender increases.

There was some speculation in a couple of the studies (Faust et al., 2015; Lee et al., 2012) about other possible influencers. In a comparative study of internet and contact offenders, it was found that there were key differences in characteristics. Compared with contact offenders, those convicted of internet offences tended to possess a higher level of educational achievement and be in employment. An interesting finding from the research reviewed for this question is that internet offenders were often

married. This is something that contradicts the results of Questions Two and Three, where the majority of studies reviewed found that the majority of internet offenders were single. This led the authors of the study to speculate that the 'pro-social characteristics' of internet offenders' lives may be a deterrent to them reoffending (Faust et al., 2015). Likewise, Lee et al. (2012) hypothesised whether 'predisposition' is the key influencer for the transition to contact offending. When this is lacking, conversely, there is little risk that someone viewing IIOC is likely to progress onto a contact offence. Since this is something which is pondered but not really measured in this study, it could be a target for future research.

Another theory advanced is that there are various stages and obstacles in the pathway to consuming CSEM¹⁸ to contact offending. After reviewing the literature on online sexual exploitation of children, Fortin and colleagues (2018) proposed the existence of four scripts to explain the transition from internet to contact offending:

- CSEM as a tool. In this case, the material is thought to be used to teach children about the sexual acts that will be eventually inflicted upon them. The consumption of CSEM may also become the basis for blackmail.
- Script of groomers. Grooming is positioned as an offence halfway between the consumption of CSEM and contact abuse, where the act of grooming creates an environment in which the offender may gain access to their target. For fantasy-driven offenders, however, this may not extend to real world contact abuse, with them only engaging in cybersex and masturbation with adolescents online.
- Script of collectors-distributors. In this case, the primary motivation of contact offending is to collect material or to assault with recordings of sexual offences against children creating new material for them.
- Ad hoc script of excited offenders. Within this script, acting out depends on the circumstances and environments of individuals.

Somewhat limiting the validity of these scripts are the fact that they were derived from studies including a diversity of data sources and methodologies. Moreover, the authors proposed that the following obstacles must be overcome for the transition from internet to contact offending:

- Obstacle 1: Toward CSEM, with legal adult pornography acting as a gateway for consuming illegal material involving the sexual exploitation of children.
- Obstacle 2: Socialisation. In order to obtain new and perhaps previously unavailable material, those using CSEM have to interact with other users and possibly become distributors themselves.
- Obstacle 3. Transition to real world. The final part of this process is concretely acting out in the form of contact offending. In this stage, the possession and distribution of CSEM may still occur.

¹⁸ This is the term appropriated by the authors in this study, so is used in the context of referring to the pathway proposed.

Another study utilised linguistic analysis to examine the chat transcripts from 334 convicted offenders involved in internet child sex stings. Those categorised as 'reoffenders' (including simultaneous and previous offences) were found to differ significantly from 'non-reoffenders' in a number of different ways. Linguistic techniques found to be predictive of recidivism were: 'clout,' a composite measure of social dominance; higher rates of time category words and first person singular pronouns; lower rates of ingestion words referring to superfluous topics like consuming food. Those more likely to reoffend were also found to be more predatory in their language and display less equivocation in their use of language, e.g. "We are going to" rather than "I think I might." The main limitation of this study is the fact that the authors were only able to locate and analyse transcripts for 62% of those in the sex offender registries; hence, the actual rate of recidivism may be higher or lower than what they report here (Drouin et al., 2018).

Dual Offenders: Exploring the Conundrum

A surprising element emerging from the literature was that there is a conundrum around 'dual offenders' about which type of offending came first. To explicate, the question could be asked whether the pathway to dual offending is starting with internet offences and progressing onto contact offending or, alternatively, contact offenders who find a new way to offend via the internet. Firstly, after examining the recidivism rates of 541 male internet offenders, Eke, Seto and Williams (2011) found that five of the offenders who had previously committed an internet offence went on to be charged with a contact offence. Two of these offences were historical, raising the question of whether dual offenders are offenders who previously committed a contact offence and were not caught until their later internet offence was being investigated.

Smid et al. (2015) posed similar questions about the journey to becoming a dual offender: whether it involves either an escalation in the behaviours of internet offenders or contact offenders who subsequently use the internet as part of their offending. The authors draw upon the 'incentive theory of sexual motivation' to theorise an explanation for the crossover from internet to contact offending, whereby the consumption of IIOC acts as a gateway to contact offending by lowering the internal restraints that would normally inhibit an individual from acting on inappropriate sexual desires. This is something which requires further research looking at dual offender's initial form of sexual offending and tracking their developmental journey to becoming a dual offender.

Similarly, one of the research aims in Howard et al.'s (2014) study of 14, 804 sexual offenders was to examine whether there is crossover or specialisation between the different categories of sexual offending, something which will assist with predicting offending trajectories. Surprisingly, it was found that contact offenders sometimes became dual offenders by crossing over into IIOC offending. Out of the 712 contact offenders, 2% reoffended with a similar offence and 2.1% carried out an IIOC offence. This was not, however, the case for internet offenders, who rarely crossed over to contact offending.

This finding will, thus, be described as the 'reverse trajectory' of offending, where contact offenders appear to transgress to internet offences.

Further complicating matters is the fact that a number of the studies with mixed samples of internet and contact offenders maintained that they cannot guarantee there is not undetected 'crossover' between the two groups: contact offenders accessing IIOC materials on the internet who have not yet been caught; internet offenders whose contact offences are unknown. This is something which needs to be explored in future to ensure that the distinction between internet, contact and dual offending is clear.

Summary

As a population of offenders, those convicted of internet offences appear to be at lower risk of recidivating than other types of sexual offenders. Moreover, when they do recidivate, it tends to be with further IIOC offences. For the minority of internet offenders who do transition to contact offending, there seems to be a number of risk factors influencing this. Perhaps most obviously, a lack of access to children disinhibits internet offenders from transgressing to contact offences. Having a previous criminal history, particularly for violent offences, is another risk factor elucidated in the research. The type of IIOC material possessed was found to be an influencing factor, with the possession of extreme images linked to an increased risk of contact offending. Lastly, having high degrees of antisociality and internet preoccupation increased one's chances of being a dual offender. For those internet offenders making the transition to contact offending, antisociality seems to be the key risk factor. There was also some conjecture about the possibility of pro-social factors desisting internet offenders from committing contact offences, the implication being that those with fewer of these are more likely to transgress to contact offending. It was also surmised that 'predisposition' is the key distinguisher between internet offenders who do not act on their urges with a child victim and those who go on to become contact offenders. Both of these speculative risk factors require further investigation. A table detailing these elements can be found in Appendix U.

The last element of this question is the conundrum of the offending pathway of dual offenders. The presumption is that this pathway is linear going from viewing/downloading indecent images of children to grooming a child online followed by contact offending against a child. Moreover, it has been proposed that the offending journey from internet offending to contact offences may involve the distribution of IIOC and becoming involved in a community with similar interests along the way (Fortin et al., 2018). Studies have found, however, that there were cases of dual offenders being contact offenders who have found new ways to offend via the internet. Further to this, the internet has created a mechanism through which offenders can locate and communicate with potential victims. Having said that, it is unclear whether offences like grooming are necessary components of the offending pathway, for this is something there has been very little research into. Further complicating matters is the limitation highlighted in a number of studies about the possibility of undetected 'crossover' between the samples of internet and contact offenders; therefore, the number of dual offenders may be higher than is officially recorded. Considering all of this, it is questionable whether the continuum of offending behaviours is

linear in nature. It may instead be the case that this is an asymmetrical pathway that goes back and forth between internet and contact offending, with some possible 'stopovers' in what are considered to be 'halfway point' offences like grooming.

Question Five – Risk Factors Associated with Internet Offenders

This chapter will now move on to discuss ways to manage the risk of internet offenders. Research has shown that whilst some of the risk factors overlap with contact sex offenders, there are those that are unique to internet offenders. Given internet offenders are a relatively new category of sex offenders, it is important to determine whether another approach to managing risk is needed. Nine studies were reviewed to answer this question – details are provided in Appendix N.

The findings are grouped in categories: personality and emotional factors; social and situational elements; sexual deviancy; engagement with IIOC. The layout of this chapter adheres to these categorisations and finishes with a summary. The discussion here has some overlaps with Question Three about the similarities and differences between internet and contact offenders. It also parallels Question Four in that an amplified presence of some of the risk factors may facilitate the trajectory from internet to contact offending.

Personality and Emotional Factors

Paralleling the literature on sex offenders, 'antisocial behaviour and orientation' emerged as a risk factor. Five of the studies reviewed for Question Five found antisocial behaviour and orientation to have a positive association with internet offending (Elliott et al., 2009; Klein, Schmidt, Turner & Briken, 2015; Lee et al., 2012; Seto et al., 2011; Seto et al., 2015). Meta-analyses found that similar to contact offenders, internet offenders were likely to be of antisocial orientation (e.g. psychopathy, antisocial attitudes and beliefs) (Seto et al., 2011). Similarly, after surveying 8718 men in Germany, Klein et al. (2015) found that antisocial behaviour was a risk factor for both consumption of indecent images of children and contact offences against children. The main limitation of this study is its reliance on self-reported data, which is subject to recall and social desirability biases.

Another study by Lee and colleagues (2012) used a mixed sample of 349 participants: 113 had committed an internet offence, 176 were contact offenders and 60 were dual offenders. Two scales were administered, one of which looked at antisocial behaviour. Results evidenced contact and dual offenders were higher on antisociality than internet offenders. To that end, the authors postulate that the chances of internet offenders becoming dual offender increases in line with antisocial behaviour. Given the reliance of this study on self-reporting and the deliberate exclusion of official criminal records to guarantee anonymity, however, it cannot be guaranteed that there is not some overlap between the groups, i.e. that the group of internet offenders did not have a previous contact offence. A similar study by Elliott et al. (2009) applied scales to a mixed sample of 505 internet and 526 contact offenders to determine which psychological measures distinguished between the groups. Scales pertaining to cognitive distortions and victim empathy distortions found that contact offenders were more likely to have deficits in 'antisocial cognitions,' displaying difficulty in identifying the harm caused to children and

maladaptive beliefs affecting their ability to empathise with their victims. Nonetheless, these scales were developed for contact offenders and have since been adapted for internet offenders, so they may not accurately measure their offence-related deficits.

The final study capturing antisociality administered a sexual beliefs and attitudes survey to 1978 Swedish males aged 17-20, 4.2% of which admitted to viewing IIOC (Seto, Hermann, Kjellgren, Svedine & Långström, 2015). A number of risk factors were determined and thereafter incorporated into a scale to measure an individual's risk of accessing IIOC. One risk factor highlighted in this study was antisocial behaviour. Further to this, having peers who believed it was acceptable to have sex with children or consumed IIOC themselves was also found to be strongly linked to one's chances of becoming an internet offender.

Another individual factor highlighted in three of the studies was that of emotional loneliness and intimacy deficits (Elliott et al., 2009; Neutze, Grundmann, Scherner and Beier, 2012; Seto et al., 2011). Neutze et al. (2012) looked at risk factors across 345 diagnosed paedophiles and hebephiles to ascertain which distinguished between detected and undetected (i.e. their offending has not yet been caught). The sample was divided into dual (n=144), internet (n=129) and contact (n=72) offenders; it was then further subdivided into detected and undetected for each type. Dual offenders had the greatest degree of loneliness followed by internet offenders; emotion-oriented coping was highest for internet second to dual offenders. Furthermore, the 'detection' status of offenders was thought to be linked to their emotion-oriented coping skills, with detected offenders more likely to regulate emotions by ruminating. Similarly, Seto et al.'s (2011) meta-analyses of literature found that intimacy deficits in the form of poor social skills, emotional identification with children and loneliness were major risk factors. The administration of emotion-related scales in Elliott et al.'s (2009) study of 505 internet and 526 contact offenders found that low self-esteem and under-assertiveness, potentially coupled with emotional loneliness, could be hindering the ability of internet offenders to maintain age-appropriate relationships. Conversely, over-assertiveness and cognitive impulsivity had a greater link to contact offending.

A particularly interesting finding from the review was that internet offenders are more likely to distance themselves from their offending. A study by Buschman, Wilcox, Parohl, Oelrich and Hackett (2010) employed polygraph tests on 38 internet offenders post-conviction. In order to explore the truthfulness of self-reported content, the authors administered the 'Sexual History Disclosure Examination' (SHDE) (a polygraph examination technique) after the participants had completed a 'sexual behaviour checklist,' containing questions about non-contact sexual behaviours. As it transpired, there were evident distinctions between both forms of reporting. With the self-reported method, 21 participants denied masturbating to child images and the most commonly reported sexual interest was pubertal children aged 13 and over, as well as girls on their own and girls and boys together. During the SHDE procedure, 21 participants who had denied masturbating then admitted doing so upon viewing images of children. Further to this, the strongest sexual preferences were for children aged 6 upwards and adult men and

girls together. The main weakness of this study is the possibility of 'false disclosures'¹⁹ during the polygraph examination, which could overestimate risk profiles. The authors maintain, however, that the increase in accuracy for 14 of the offenders is unlikely to be solely due to false disclosures.

Further to this, Elliott et al.'s (2009) investigation of the psychological profiles of 505 internet and 526 contact offenders discovered that there was a lesser presence of cognitive distortions related to the sexual sophistication of children and victim empathy in the profiles of internet offenders. To that end, internet offenders were found to be more aware of the harm that sexual interactions can cause to children. The authors surmise that whilst internet offenders are more conscious of the harm caused by sexual contact with children, they may be able to distance themselves from their offending by perceiving themselves as a 'passive viewer.' This is probably exacerbated by the fact that those who perpetrate internet offences were found to have a greater ability to identify with fictional characters than contact offenders. This could be related to the interpersonal difficulties present in internet offenders such as under-assertiveness, intimacy deficits and emotional loneliness, which were discussed in more detail in Questions Two and Three. Extrapolating from this, it could be the case that for internet offenders fiction/fantasies are more desirable than dealing with real-life relationships.

McManus et al. (2015) explored the risk factors associated with contact sexual offending in a sample of 244 IIOC offenders. Out of this sample, 120 were dual offenders and 124 were non-contact (i.e. internet) offenders. The two groups were compared and contrasted for the following characteristics: socio-demographic factors, access to children, offence history, sexual grooming and possession of IIOC. Results evidenced there were notable differences between the groups. Dual offenders are more likely to have access to children, as well as previous convictions for contact sexual offending, violent and/or non-violent, and non-sexual offences. By contrast, internet offenders lived with their parents, paid for access to IIOC and possessed more IIOC than dual offenders. Further to this, internet offenders were found to possess more extreme pornography, pursuant to the SAP's advice on the five levels of severity²⁰ relating to IIOC.

Social and Situational Factors

The living arrangements of internet offenders means they are less likely to have access to children. Long et al.'s (2012) study examining the differences between dual and internet offenders found that those who perpetrated internet offences were more likely to live on their own or with their parents. The authors, thus, conclude that access to children is a situational enabler to contact offending. McManus et al. (2015) examined the socio-demographic characteristics of a mixed sample of 120 dual and 124 internet offenders. The authors acknowledge that there are likely to be unidentified dual offenders

¹⁹ The polygraph technique used in this study is estimated to have an 89% accuracy rate (see Krapohl 2006), meaning that it should have accuracy for circa 33 of the 38 offenders in this study.

²⁰ The levels of severity according to SAP's (2007) sentencing advice were as follows: 1, depicting erotic posing with no sexual activity; 2, non-penetrative sexual activity or masturbation involving a child/children; 3, non-penetrative sexual activity involving adults and children; 4, penetrative sexual activity involving a child, children or children and adults; 5, sadism or penetration involving an animal.

within the internet group, possibly skewing the sample. Findings indicated that dual offenders were significantly more likely to have access to children, including their own or partner's children, family members and other opportunities such as volunteering. Concurrently, greater access to children was found to be a risk factor for dual offending in both studies (Long et al., 2012; McManus et al., 2015).

Another distinguishing social factor for internet offenders was their internet-related behaviours. Long et al. (2012) and McManus et al. (2015) found that internet offenders were more likely to engage in risky behaviours such as paying online for access to indecent images of children. It is postulated by both sets of authors that this may be linked to dual and contact offenders being more likely to have a criminal history than internet offenders. Furthermore, this is exemplified by dual and contact seeming more 'criminally aware,' with those types of offenders being more likely to give 'no comment' interviews than those who perpetrated only internet offences. Internet preoccupation²¹ was measured via a scale in a study by Lee and colleagues (2012) in 113 internet, 176 contact and 60 dual offenders. It was discovered that internet preoccupation was indicative of being an internet offender. Accordingly, an increase on the 'internet preoccupation scale' increased a contact offender's likelihood of becoming a dual offender. The authors suggest that an increased amount of time on the internet and impact of internet usage on one's life may be a proxy for sexual deviance.

Three studies within the review found that individuals who committed internet offences were less likely to have a criminal history than dual and contact sexual offenders (Long et al., 2012; McManus et al., 2015; Seto et al., 2011). Seto et al.'s (2011) meta-analysis of 24 studies reporting on the criminal histories of online offenders found that the majority had no prior history and those that did had a greater chance of reoffending, including with sexual offences. Of the combined sample of 46997 internet offenders, 17.3% were dual offenders who had previously committed a contact offence, mainly against a child. Likewise, in a mixed sample of 244 offenders, 22.5% of dual offenders had three or more convictions compared to 8.1% of internet offenders (McManus et al., 2015). A study examining 120 offenders of both types found that 58.3% and 21.7% of dual and internet offenders respectively had previous convictions (Long et al., 2012). A potential limitation in both of these studies, however, may be 'undetected' contact offenders within the internet samples; thus, possibly skewing the results. This is particularly the case when official records rather than self-report data are used, since criminal records will only capture offenders who have been caught and sentenced for their crimes. Further empirical research on 'undetected' offenders is required to give a more accurate representation of offending patterns; although this brings challenges since 'undetected' offenders will fear being discovered (Seto et al., 2011).

²¹ This scale measured the impact of internet's use on one's life, looking at factors like feeling depressed or moody when not online and prioritising time on the internet over going out.

Sexual Deviancy

One of the most notable category of risk factors in this study is 'sexual distortions,' which six of the studies reviewed for Question Five made reference to (Buschman et al., 2010; Klein et al., 2015; Long et al., 2012; Neutze et al., 2012; Seto et al., 2011; Seto et al., 2015). A link has been found between paraphillic interests in sex offenders and 'hypersexuality,' where an individual spends a significant amount of time consuming and thinking about sexual material. Another risk factor was found to be 'aggregated sex drive,' quantified by the 'total sexual outlets/week' defined as "the sum of the orgasms derived from the various types of sexual activity in which that individual had engaged." The questions posed to participants in an online survey were the number of orgasms in the past week, the strength of their desire for sexual activity and their sexual behaviours. These sex drive questions were coupled with measurements of the amount of time spent viewing pornography and fantasizing about sexual content. This was based on the assumption that a widespread interest in typical pornography can be seen as indicative of an increased sex drive (Klein et al., 2015). Influencing this is likely to be an increased sense of 'sexual lust' (i.e. one that is experienced almost all of the time), a feature which was found to be more prominent in those who reported viewing indecent images of children compared to those who denied doing so (Seto et al., 2015).

Another caveat to this would be 'sexual preoccupation' experienced by an average of 19% of detected internet offenders; although the rates were found to be higher for detected dual offenders (Neutze et al., 2012). Notably, Seto et al.'s (2015) survey of 1978 Swedish men found that there was a link between frequent pornography use, viewing violent pornography and the consumption of IIOC. Further to this, 4.2% of the overall sample who reported having previously consumed IIOC defined pornography as 'sex between adults and children.' Of note here is that indecent images of children falls under the purview of Swedish law and refers to an adult engaging in sexual interactions with a child under the legal age of consent of 15 years old. This means that pornography which would be considered 'legal' in Sweden would still be 'illegal' in the United Kingdom if it involved an individual aged under 18 years.

Perhaps more importantly, a sexual interest in children is another risk factor. Meta-analyses carried out by Seto et al. (2011) found that sexual interest in children was a risk factor for both internet and contact offending. Long and colleagues (2012) examined a sample of 120 adult males and found that 48.3% out of 60 internet offenders admitted a sexual attraction to children. Another study found that 21 participants out of a sample of 38 who firstly denied masturbating to IIOC in a self-disclosure examination all later admitted doing so during a polygraph examination (Buschman et al., 2010). Furthermore, the polygraph disclosure data revealed that offenders' sexual interests centred on the most extreme categories of IIOC: 32, 28 and 10 participants admitted masturbating to categories 8 (assault), 9 (gross assault) and 10 (sadistic/bestiality) respectively. Klein and colleagues (2015) found that sexual fantasies involving children in those with a higher sex drive²² were positively associated with consuming IIOC. If this is then coupled with a higher level of antisociality in an individual, it increases

²² In this case, 'total sexual outlets' were equal to or greater than seven orgasms per week.

the chances of contact sexual abuse occurring. The survey of Swedish men carried out by Seto et al. (2015) showed that the 'child sex liberalism' and 'rape myth' subscales had a strong positive relationship with the consumption of IIOC. The 'child sex liberalism' subscale refers to offence-supportive attitudes and beliefs about the acceptability of child-adult sexual relations; whilst the 'rape myths' subscale consists of statements like 'in the majority of rapes, the victim is promiscuous or has a bad reputation.' Moreover, self-reported interest in having sex with a child had a strong link to the viewing of IIOC.

Engagement with IIOC

Another risk factor emerging from the literature review is engagement with indecent images of children. Two studies within this review assessed whether there were differences in the collections of IIOC for dual and internet offenders (Long et al., 2012; McManus et al., 2015). A study comparing 60 dual offenders with 60 internet offenders found that internet offenders downloaded such material for an average of 5.56 years compared to 3.25 years for dual offenders. The authors postulate there is a link between collecting material for a longer duration and possessing more extreme materials of levels 4 and 5 involving penetrative sexual activity and sadism or penetration involving an animal, as per the descriptions of the UK Sentencing Guidelines Council. In spite of this, internet offenders were found to be less likely overall to possess extreme material than dual offenders (Long et al., 2012). By contrast, in a mixed sample of 244 offenders, 50 of these were found to possess extreme images: 72% of these were internet and 28% were dual offenders (McManus et al., 2015).

Both studies reached the consensus that internet offenders are likely to possess a greater number of images (including stills and movies) than dual offenders. McManus and colleagues (2015) found that dual offenders possessed an average of 4,605.11 IIOC materials compared to a mean of 10,807.07 for those committing only internet offences. In a similar vein, Long et al.'s (2012) study discovered that the average number of images was 6,086.40 and 24,112.13 for dual and internet offenders respectively. Another finding from both studies was that dual offenders possessed IIOC with a smaller age range of victims. This is perhaps reflected in the larger collections of internet offenders, where there is a greater chance of having a wider age range of victims. It may also reflect the age range of contact offence victims for dual offenders (Long et al., 2012; McManus et al., 2015).

Another finding of interest was that internet offenders were less likely to produce IIOC. Long and colleagues (2012) found that 20% of internet offenders produced their own IIOC compared to 53.3% of dual offenders. The other study also found that dual offenders had a greater chance of engaging in hands-on production of indecent images of children than internet offenders (McManus et al., 2015). Furthermore, in both studies, it was discovered that internet offenders were less likely to 'groom' children than dual offenders. McManus et al. (2015) found dual offenders were 12.40 times more likely to groom a child than internet offenders. Similarly, 86.7% of dual offenders compared to 20% of internet offenders carried out grooming behaviours in Long et al.'s (2012) study. It is worth noting that internet offenders who were found to be displaying grooming behaviour could perhaps be on the trajectory to

committing contact offences. This is something which should, therefore, be considered in the assessment and management of internet offenders.

Summary

An overview table of risk factors is available in Appendix V. Sexual interest in children is perhaps the most obvious risk factor for internet offending (Klein et al., 2015; Long et al., 2012; Seto et al., 2011; Seto et al., 2015). This is strongly linked to viewing IIOC and masturbating to these materials (Buschman et al., 2010). Sexual preoccupation was also found to be a risk factor for internet offending. This was higher again for dual offenders, perhaps explaining why they were more likely to engage in cybersex with adults and view legal pornography more frequently (Neutze et al., 2011).

Additionally, the research suggested a number of personality and emotional problems are evident. Emotional loneliness and intimacy deficits were found to be present in internet offenders (Elliott et al., 2009; Neutze et al., 2011; Seto et al., 2011) — linking back to the results of Question Three, this could perhaps explain why they are more likely to be single than other types of sex offenders. Further advancing the idea of internet offenders as detached individuals was the finding that they are more likely to distance themselves from their offending behaviour; despite being more aware of the harm sexual contact causes to children (Buschman et al., 2010; Elliott et al., 2009).

An increased presence of antisociality is thought to increase the chances of an internet offender progressing to dual offending (Elliott et al., 2009; Klein et al., 2015; Lee et al., 2012; Seto et al., 2011; Seto et al., 2015). In line with this, over-assertiveness has a greater link to contact offending (Elliott et al., 2009). It may be postulated, therefore, that if an internet offender displayed antisocial traits such as acting out and over-assertiveness, there is a greater risk of them also engaging in contact sex offences.

The social and situational risk factors shape their offending behaviours. Internet offenders yielded high results on the 'internet preoccupation scale,' indicating the influence the internet has over their lives is a distinct characteristic to this type of offending (Lee et al., 2012). This is also perhaps reflected in their engagement with IIOC. In comparison to dual offenders, internet offenders were found to have downloaded larger collections of IIOC, accrued over a longer duration of time and containing more extreme materials. Dual offenders, conversely, were more likely to engage in non-contact activities like grooming a child online, with this perhaps facilitating their access to a contact abuse victim (Long et al., 2012; McManus et al., 2015).

This result also feeds into the answer to Question Four about offending trajectories, where behaviours like online grooming could potentially facilitate the commission of a contact offence or part of a combined pathway of offending behaviour which could consist of both engaging with IIOC and contact offences. Something that could be disinhibiting internet offenders from making the transition to contact offending is their lack of access to children compared to contact and dual offenders. In line with the

results of Question Three, internet offenders were also less likely than other sex offenders to have a criminal history and more likely to engage in risky behaviours like paying for access to IIOC (Long et al., 2012; McManus et al., 2015). It could be the case for some internet offenders, however, that they have previously committed contact offences — making them ‘dual offenders’ — but just never been caught. This is particularly going to be the case for studies reliant on official criminal records, rather than self-reported data.

Question Six – Risk Assessment Tools

Following on from the discussion on risk factors and needs pertaining to internet offenders in Chapter Five, this chapter explores which tools are available to assess risk. The review of literature demonstrated there have been some modest advances in determining which risk assessment tools are best-placed to assess the risks posed by internet offenders. The seven identified studies reviewed for this chapter were published within the last decade — details are available in Appendix O. A lack of risk assessment tools have been developed, given this is a relatively recent field of offending. The purpose of this chapter is to explore the available options for assessing the risk of internet offending in current actuarial instruments, as well as those tools designed specifically for this population. A summary of findings is provided at the end.

Actuarial Tools

Two studies examined the applicability of existing actuarial risk assessment instruments to assess sexual offending or general risk to internet offenders: Static 99 (Hanson & Thornton, 1999), RM2000 (Thornton et al., 2003), RM2000R (Thornton et al., 2010) and OGRS3 (Copas et al., 1998). The Static 99 is an actuarial tool mainly used in North America to predict the risk of sexual violence; its age range was updated in 2012, creating the Static-99/R. The RM2000 is an actuarial tool used in Scotland in conjunction with Stable and Acute 2007 (Hanson, Harris, Scott & Helmus, 2007) to assess and inform the management of those convicted of sexual offences. The scales of the RM2000 use static information to classify offenders into risk bands as per risk of sexual offending (RM2000/s), violent, non-sexual offending (RM2000/v) and a combination of the first two scales (RM2000/c). The sexual recidivism scale assesses four aggravating factors: stranger victim, male victim, no current or part relationship of two years or more and non-contact offence. The presence of two or three of these increases risk by one level; the presence of all four factors elevates risk by two levels. The revised version of the tool, RM2000R, omits two aggravating factors: stranger victim and non-contact offence. The reasoning behind this is IIOC offences would technically fall within the remit of a non-contact offences and will tend to involve stranger victims; thus, the risk levels of those committing IIOC offences could be overestimated. The OGRS3 is an actuarial instrument commonly used in the UK for predicting short-term, reoffending within a period of 1 to 2 years (Osborn, Elliott, Middleton & Beech, 2010; Wakeling, Howard & Barnett, 2011).

In 2010, Osborn and colleagues applied actuarial risk assessment tools for sex offending risk to 73 internet offenders to assess their suitability for this population. The Static-99, the RM2000 and a revised version, RM2000R, were administered to the UK community-based sample. The findings indicated that the RM2000 and Static-99 overestimated the risk levels posed by internet offenders. The revised version of the RM2000 was found to be a more realistic measure of risk for this population. Further, the removal of aggravating factors in the RM2000R allowed for the offenders to be moved down one risk level. An overall finding was that the recidivism rate for internet offenders was lower than that of contact

ones, going some way to explain the overestimation in risk by the RM2000 and Static-99. The main limitation of this study is the small sample size of 73 offenders.

Wakeling et al. (2011) examined the predictive validity of the OGRS3, as well as the scales of the RM2000. The ORGS3 and the scales of the RM2000 were applied to a mixed sample of 1344 offenders of which there were 426 dual and 918 internet offenders for a follow-up period of two years. Although the results showed that the tools yielded moderate to very good predictive accuracy with AUCs of between .67 and .87, these risk assessment instruments were still not deemed suitable for measuring sexual recidivism in internet offenders. The predictive accuracy of the OGRS3 was moderate for sexual reoffending and large for violent, non-sexual offences; this suggests it is best placed to predict only the latter type of offending in the short-term. Similar to the previous study, Wakeling and colleagues (2011) found the RM2000 overestimated risk. Furthermore, due to detailed information not being available on the OASys database, the revised version of the RM2000 could not be properly completed — this is the main limitation of this study.

Risk Assessment Tools - Internet Offenders

Recent years have marked the advent of internet offender specific instruments and systems: the KIRAT-2 and the CPORT. The Kent Internet Risk Assessment Tool (KIRAT) was developed out a need to prioritise those internet offenders at higher risk of escalating to contact child sexual abuse. As part of a collaboration between the Kent Police Force and the Psychology Department at the University of Liverpool, a study by Long et al. (2012) examining IIOC in terms of quantity and types possessed, socio-demographic characteristics of offenders and other internet activities (e.g. grooming) was utilised. The KIRAT was then adopted as the national model in England and Wales to rank internet offenders for their risk of committing contact offences against children based on their history of contact offending. The items on the KIRAT are based on the characteristics of contact sexual offenders: previous convictions or allegations of a sexual offence against a child; close and unsupervised access to children via friends and other social contacts; engaging in behaviours such as incitement or grooming online; conviction of domestic violence or substance abuse. A 2016 study by Long et al. discusses KIRAT-2, the second version of framework.

The purpose of Long et al. (2016)'s article was to develop and thereafter refine the KIRAT-2 to prioritise IIOC cases. Notably, the KIRAT is *not* to be used to predict future risk; rather, its purpose is to provide a 'robust procedure' to prioritise the processing of certain cases. To that end, cases are categorised into low, medium, high and very high risk, highlighting which cases need to be dealt with immediately compared to those that can wait for the moment. After being rolled out across law enforcement agencies in England and Wales, a second version of the KIRAT was developed with European partners using a larger sample and feedback from law enforcement about the first version. Using data from 374 male offenders, ROC analyses were carried out to determine which variables were the most appropriate to distinguish between high risk (those with previous convictions or allegations of contact sexual offending) and low risk (those with no allegations or convictions for contact sexual offending). This generated a 17

variable phased decision tree model, which examines previous convictions, access to children, online and offline behaviours. The KIRAT-2 correctly classified 97.6% of offenders who had previous convictions or allegations of contact offending into the high or very high risk levels; whilst 62.3% of the lower risk offenders were classified into the low or medium categories.

With the KIRAT-2 being a prioritisation system, the main available tool to predict sexual recidivism risk in internet offenders is the Child Pornography Offender Risk Tool (CPORT). In conjunction with findings from the literature about risk factors associated with internet offending, items from the Static 99 and SORAG were used to create the CPORT. In the end, seven variables were selected for the checklist: offender age at time of index investigation; any prior criminal history; any prior or index failure on probation, parole or conditional release; any prior or index contact sexual offence; indication of paedophilic interests; more boy than girl content in the child pornography²³ content; more boy than girl content in any other child content. What makes this instrument different from other risk assessment tools is that it can be used for *any* sexual recidivism, encompassing contact, non-contact (e.g. grooming) and internet offences. Four studies in the literature collection published from 2015 through to 2018 relate to the CPORT (Seto & Eke, 2015, 2016, 2017; Eke, Helmus & Seto, 2018).

In 2016, Seto and Eke published the scoring guide for the CPORT. The Canadian definition of 'child pornography' is used, including nude images of children, fictional depictions and text stories involving sex with children. These items are covered in more detail in the latter half of the scoring guide, with the authors providing background context for each one. The authors caution against using the CPORT if more than one item is missing. Furthermore, given the tool has not been tested on individuals yet to be convicted, the authors recommend not using it with this particular group nor on those whose charge has been withdrawn or dismissed.

An earlier study published by Seto and Eke (2015) described the validation of the CPORT. The tool was tested in a mixed sample of 266 adult males convicted of internet offences (n=135), internet and contact sexual (n=61) and internet and other types of offending (n=90) over a five year follow-up period. The CPORT was found to be associated with recidivism (AUC=.66), particularly any sexual (AUC=.74) and contact sexual (AUC=.74). With regards to predicting sexual recidivism in the subgroups of offenders, the CPORT was found to significantly predict this for internet offenders with other offending (but no contact offences) (AUC=.69) and those with contact offending histories (AUC=.80); however, it did not significantly predict sexual recidivism for the subgroup of those with only internet offences (AUC=.63). Similar to the studies discussed earlier, the low rate of sexual recidivism within this subgroup is likely a contributing factor: 6% of internet offenders recidivated compared to 23% for those with both internet and contact sexual offences. This means that the tool might not be predictive for those with solely internet offences due to the low rates of reoffending within this subgroup of offenders. The authors caution that actuarial use of the CPORT is not recommended without further validation studies.

²³ Although the term IIOC has been used throughout this literature review rather than 'child pornography,' it was felt that because the developers of the CPORT tool described the scoring criteria in this way, it would be best to keep this terminology.

Concerned about the potential misreporting of CPORT item 5 'admission of sexual interest in children,' Seto and Eke (2017) developed a measure, CASIC, to negate this risk. The intention of CASIC is to assess 'paedohhebephilia,' combining paedophilia (sexual interest in prepubescent children) and hebephilia (sexual interest in pubescent children). This is then translated into a six-item scale looking at factors like marital status, collection and nature of child pornography content, access to children and engaging in online communications with children. The sample of 286 adult males from the developmental study (Seto & Eke, 2015) was used to test the predictive accuracy of the CASIC measure, generating an AUC of .71. Moreover, when this was further tested on a small cross-validation sample of 60 internet offenders, the CASIC score showed even greater predictive accuracy with an AUC of .81. The limitations of this study are the fact that diagnoses of paedophilia and hebephilia were missing in 5% of the sample, as well as details about situational factors that may have influenced admissions of sexual interest in children like interviewer technique being unavailable. The authors reach the conclusion that the CASIC measure may replace item 5 of the CPORT if a score of 3 or more is generated. The CASIC was referenced in the CPORT scoring guide; thus, it has since adopted as a caveat to the tool.

The final article relating to the CPORT was a validation study published in 2018 by Eke, Helmus and Seto (2018), whereby the developers administered the tool to a new sample of 80 males charged with IIOC offences. This was also amalgamated with the original developmental sample to create a larger sample of 346 men divided into two groups: internet offences (n=269) and internet and contact offences (n=67). Any sexual recidivism was calculated for a five year follow-up period for both the new and combined samples, giving AUCs of .698 and .724 respectively. The results also indicated that the predictive accuracy was reduced for internet recidivism (combined sample, AUC .740; validation sample, AUC .668). Furthermore, this was even lower when the offenders were divided into internet only (combined sample, AUC .685; validation sample, AUC .569) and dual offending (combined sample, AUC .767; validation sample, AUC .592). The study was limited in its unavailability of videotaped police interviews, a small sample size, and the similarity of the new sample to the developmental sample in the gender and geographic location of offenders. Moreover, since only 13 individuals went on to commit contact sexual offences within the combined sample, the authors were unable to examine whether there is a trajectory from internet to contact offending. With the study felt to provide further empirical support to the CPORT, the authors felt it may be of use to predict sexual recidivism in those with internet offences. It is further noted that measures like the Static 99R (which the CPORT shares similarities with) do not capture items relating to the characteristics of this type of offending and other internet offence specific measures like the KIRAT do not identify those who are at higher risk of recidivism.

Summary

Considering all of the above informs which measures are appropriate and effective to measure risk in internet offenders. Whilst some of the risk factors of internet offenders overlap with those of contact sex offenders (e.g. sexual deviancy), there are others that represent substantial differences between the

offending types. The implications of this are that risk assessment instruments commonly used to measure the risk of contact offenders may not be fully successful in measuring the risk of internet offenders. This was validated to some extent when reviewing studies that tested a number of actuarial risk assessment tools used for measuring risk in traditional sex offenders. The RM2000 was found to overestimate the risk posed by internet offenders — this is likely because of the presence of two aggravating items ‘non-contact offences’ and ‘stranger victims,’ both of which would be marked as positive for internet offences (Osborn et al., 2010; Wakeling et al., 2011). When this tool was modified to the RM2000-R by removing these two factors, it was found to be a more realistic predictor of risk in this population. The Static-99 tool was also found to overestimate the risk of internet offenders (Osborn et al., 2010). The OGRS3, a more general risk assessment tool used for predicting short-term risk, only showed large predictive accuracy for predicting recidivism in violent, non-sexual offences. By contrast, the predictive accuracy of the OGRS3 was only found to be in the moderate range for sexual recidivism (Wakeling et al., 2011). The implications of this are traditional risk assessment tools should be used with extreme caution on internet offenders, since they seem to overestimate risk on this population. Out of the actuarial tools reviewed, the revised RM2000 holds the most promise as an accurate predictor of risk.

Additionally, a case management system, KIRAT-2, has been developed to allow police to assess which internet offenders are at high risk of progressing onto contact offences. Although not a risk assessment tool, it is worth mentioning since it allows case work to be prioritised on the basis of which internet offenders are deemed to be at the greatest risk of committing contact offences. It is used in police forces throughout England and Wales for this purpose (Long et al., 2012; Long et al., 2016).

The gap within risk assessment for a tool specific to internet offenders has been filled to some extent with the CPORT, an instrument consisting of seven variables to measure the risk of recidivism in internet offenders. This tool was developed from the SORAG and Static-99 in conjunction with findings from the literature on internet offenders (Seto & Eke, 2016). The authors later developed the CASIC scale to try to negate the risk of CPORT item 5, which measures an individual's sexual interest in children, being manipulated and hence skewed (Seto & Eke, 2017). The CPORT instrument holds the greatest promise as a means to specifically measure recidivism risk in internet offenders. Since it has only ever been validated by the tool developers (Seto & Eke, 2015; Eke et al., 2018), it requires validation studies by external authors to fully gauge its predictive accuracy and reliability.

Discussion

This literature review sought to address six questions pertaining to internet offenders. In doing this, the review has examined a significant amount of research relating to this field. This discussion aims to consider the key findings emerging from the research reviewed for each of the questions in addition to highlighting similarities and divergences in the findings. This chapter will also address the limitations and strengths relating to both the research reviewed and the literature review itself. The discussion will conclude with recommendations for the future in relation to both research and practice to inform policy decisions by the MAPPA National Strategy Group (NSG).

The typologies reviewed for Question One highlight the existence of different types of internet offenders with varying motivations to offend. Krone's (2004) typology proposes nine different types of internet offenders, illustrating that internet offenders are a heterogeneous group. Additionally, Krone's (2004) typology encompasses offenders who use the internet to target and groom children which is a group often excluded from other typologies (Aslan, 2011). The typologies suggest that internet offenders engage with IIOC for a variety of reasons, which includes impulsivity/curiosity, having a sexual interest in children, in addition to non-sexual reasons such as financial gain. Typologies can inform our understanding of the differences in behaviours, characteristics and motivations of offenders. They can also assist with understanding the risk posed and aid the development of appropriate treatment. Over adherence to typologies may, however, result in the application of pre-held beliefs when working with individuals, as opposed to a more flexible, individualised approach based on the needs of the individual (DeMarco et al., 2018). This will be explored more in the recommendations for future practice section.

The findings of Question Two indicated that internet offenders tend to be male, Caucasian, single, well-educated and employed. This parallels the findings from a rapid evidence assessment conducted by DeMarco et al. (2018) which noted that convicted offenders of online child sexual abuse are generally male, white, young, educated, intelligent and employed. Several studies found that the offenders had intimacy and social skills deficits (Henry et al., 2010; Middleton et al., 2006; Price et al., 2015). This is interesting as the majority of reviewed studies reported that internet offenders were most likely to be single, with some having never been in an intimate relationship. Henshaw et al. (2017) proposed two possible reasons for this finding: either internet offenders have little interest in intimate relationships or they may experience difficulties in forming and maintaining intimate relationships. It is interesting to consider that the characteristics of those who have a greater technological knowledge and use additional measures to elude detection remain unknown at this stage (Henshaw et al., 2017).

The findings of Question Three evidenced there are far more disparities than similarities between internet and contact offenders, with only one study out of the twenty-five reviewed finding mainly commonalities between the two types of offenders. Whilst contact offenders showed a greater presence of antisocial traits, internet offenders were low on these; a finding also evident in Babchishin et al.'s (2018) study. Mirroring the findings of a rapid evidence assessment by DeMarco et al. (2018), there

was a greater presence of intimacy deficits, loneliness, the avoidance of emotional closeness and depression in internet offenders. This could perhaps explain why they have a more passive approach to intimate relationships (Henshaw et al., 2017). Findings relating to age were inconsistent across the studies reviewed, paralleling Henshaw et al.'s (2017) literature review. Contact offenders possessed less victim empathy, more cognitive distortions and higher emotional congruence with children. By contrast, internet offenders were more likely to justify cognitive distortions related to their own offending behaviours, such as 'looking at a child is not that bad.' Further to this, internet offenders showed greater levels of paedophilia than other types of sexual offenders.

An often-cited concern about internet offending is that it will progress onto contact sexual abuse against a child (see Faust et al., 2015). Question Four aimed to address this by exploring the offending trajectories of internet offenders. Looking at recidivism rates found that internet offenders reoffended at a lower rate than their contact or dual counterparts. For internet offenders who do reoffend, this tends to be with further IIOC offences. There are a number of factors increasing the risk of an internet offender progressing onto a contact offence. Access to children, criminal histories, antisociality and possessing extreme IIOC material are all highlighted as potential risk factors. Although a common presumption is that an individual may start with internet offences and progress onto contact offending against a child, findings to some degree challenged which type of offence came first. Moreover, it is possible that activities like distributing IIOC amongst an online community of individuals with similar interests may also be part of the offending pathway for some (Fortin et al., 2018). In their literature review, Ly, Dwyer and Fedoroff (2018) claimed it is more likely a contact offender will transition to internet offences than the other way around. Further research is needed, however, around offending pathways.

Question Five reviewed what research has found about the risk factors present in internet offenders. Sexual interest in children is perhaps the most obvious risk factor for internet offending. Sexual preoccupation was also highlighted as a risk factor, mirroring the findings of Kingston and Bradford (2013) that hypersexuality in terms of spending a significant amount of time consuming and thinking about sexual material is a risk factor for sexual offending. Internet offenders scored higher on the internet preoccupation scale, suggesting this is a distinct characteristic of this type of offending. An increased presence of antisociality and over-assertiveness is thought to increase the chances of an internet offender progressing to contact offending. In line with the offending trajectories discussed in Question Four, it was found that behaviours like online grooming could potentially facilitate the commission of a contact offence.

Question Six explored which risk assessment instruments may be suitable for measuring risk in internet offenders. Results indicated that actuarial risk assessments used for sexual violence may not be appropriate to use with internet offenders. Only moderate predictive accuracy for sexual recidivism was found with the OGRS3. Both the RM2000 and Static-99 overestimated the risk posed by internet offenders. A revised version of the RM2000 (RM2000-R), which omits two aggravating factors, was found to be a more accurate predictor of risk. Although not a tool, a case management system, KIRAT-

2, has been developed to allow police to assess which internet offenders are at high risk of progressing onto contact offences. The CPORT holds the most promise to predict the risk of recidivism in internet offenders, since it has been specifically designed for this offending population. Currently, it has only ever been validated by the developers on Canadian samples. Further validation work will hopefully allow the CPORT to be globally²⁴ adopted as a commonplace risk assessment tool for internet offenders.

Parallels across Questions

Offending Behaviours

A finding evident from the research reviewed for Questions Two, Three, Four and Five was that internet offenders have similar patterns in their offending behaviours. The rates for previous convictions were very low for this offending population, evidenced by multiple studies (Burgess et al., 2012; Clevenger et al., 2016; Henshaw et al., 2018; Howard et al., 2014; Laulik et al., 2007; Long et al., 2012; McManus et al., 2015; Niveau, 2010; Seto & Eke, 2005; Seto et al., 2011). Rates of recidivism are also lower in this population, with internet offenders who did reoffend tending to do so with further IIOC offences (Endrass et al., 2009; Faust et al., 2015; Howard et al., 2014; Jung et al., 2012; Seto et al., 2011).

Multiple studies reported similar findings with regard to the criminal histories of internet offenders. For instance, in Merdian et al.'s (2016) comparative study, contact offenders had significantly higher criminal histories than internet and dual offenders. A number of other studies found that dual offenders had a greater history of prior offending, particularly for violent offences (Babchishin et al., 2015; Long et al., 2012; McManus et al., 2015). Exemplifying this further is the assertion that having a criminal history of any kind may be a risk factor for internet offenders transitioning to committing contact offences (Owens et al., 2016; Seto & Eke, 2005; Seto et al., 2011). Furthermore, several studies reported that antisociality appears to be a risk factor with regard to internet offenders crossing over to committing contact sexual offences, since antisocial traits such as 'acting out' tend to be evident in contact offenders (Babchishin et al., 2015; Elliott et al., 2009; Henshaw et al., 2018; Klein et al., 2015; Lee et al., 2012; Seto et al., 2011; Seto et al., 2014; Seto et al., 2015).

Employment and education

One of the most prominent characteristics which emerged from the review was that internet offenders appear to have stable employment situations and higher educational attainments. This was found in the research reviewed for Question Two about the characteristics of internet offenders and Question Three contrasting their characteristics to those of contact offenders. Several studies found that internet offenders were likely to be well-educated in comparison to contact offenders (Aslan & Edelmann, 2014; Babchishin et al., 2015; Burgess et al., 2012; Faust et al., 2015; Henshaw et al., 2018; Jung et al., 2013;

²⁴ This would likely be with some modifications to handle cultural and legal variations in countries. Notably, the CPORT uses the Canadian legal definition of 'child pornography,' which is broad and all-encompassing. If this was to be adopted within Scotland, for instance, it would likely have to be tailored to adhere to the definitions present in Scottish, UK and EU laws.

McCarthy, 2010; Merdian et al., 2016; Niveau, 2010; Seigfried et al., 2008; Seto et al., 2012; Stevens et al., 2013; Tomak et al., 2009). When contrasting internet offenders with other groups, it was found that internet offenders tended to have spent more years in education and have higher levels of qualifications.

The studies reviewed found that the majority of internet offenders were in some form of employment (Aslan & Edelmann, 2014; Babchishin et al., 2015; Burgess et al., 2012; Clevenger et al., 2016; Faust et al., 2015; Jung et al., 2013; Laulik et al., 2007; Meridan et al., 2016; Niveau, 2010; Price et al., 2015). Additionally, a study by Merdian et al. (2016) found that contact offenders were more than twice as likely as dual and internet offenders to be unemployed. Linking in from this, the income levels of internet offenders were found to be higher than those of contact offenders (Babchishin et al., 2015; Merdian et al., 2016). As such, the research reviewed indicates that employment is a factor which distinguishes internet offenders from other types of sex offenders.

Emotional and Interpersonal Problems

Another similar finding that emerged from the research reviewed for Questions Two, Three and Five was that internet offenders appear to experience interpersonal and social skills deficits, in addition to emotional and psychosocial problems. This is perhaps something that is reflected in them being more likely to not have been in an intimate relationship (Bates & Metcalf, 2007). Several studies found that internet offenders appeared to experience emotional loneliness, social isolation, intimacy deficits, problems with interpersonal functioning and low levels of emotional warmth (Babchishin et al., 2011; Bates & Metcalf, 2007; Elliott et al., 2009; Henry et al., 2015; Jung et al., 2013; Laulik et al., 2007; Magaletta et al., 2012; Middleton et al., 2006; Neutze et al., 2012; Price et al., 2015; Seto et al., 2011). One study examining a sample of New Zealand internet offenders found that 94% of the sample experienced one or more emotional or psychosocial problems (Price et al., 2015). The most common difficulties experienced included social isolation (60.9%), depression (54.3%), general relationship issues (43.5%), intimacy deficits (28.3%) and social skills deficits (19.6%). It is postulated that the emotional and interpersonal difficulties of internet offenders may act as a barrier to them committing contact sexual offences (Bates & Metcalf, 2007). Giving credence to this, it has been found that contact offenders are less likely to suffer from these types of emotional and intimacy issues (Babchishin et al., 2011; Bates & Metcalf, 2007; Jung et al., 2013). From the research reviewed, it appears that interpersonal, social and emotional deficits differentiate internet offenders from other types of sex offenders.

Sexual Preoccupation and Deviancy

Several of the reviewed studies reported similar findings with regards to sexual preoccupation and deviancy. From the research reviewed for Questions Two, Three and Five, it was discovered that sexual cognitive distortions are found amongst most internet offenders. Problematic factors were found to be an increased sense of sexual lust, sexual preoccupation, an increased sex drive and hypersexuality in the form of spending a significant amount of time consuming and thinking about sexual material (Kingston & Bradford, 2013; Klein et al., 2015; Kuhle et al., 2017; Niveau, 2010; Seto et al., 2015). Internet offenders appear to experience greater problems with sex drive and sexual preoccupation in comparison to contact offenders (Babchishin et al., 2015; Kingston & Bradford, 2013; Klein et al., 2015; Neutze et al., 2012; Niveau, 2010; Seto et al., 2015). The possible implications from this are that internet offenders may have greater levels of self-control to avoid committing a contact offence, something which could be a key distinguishing factor between internet offenders who go on to commit a contact offence and those that do not (Babchishin et al., 2015; Seto et al., 2012). In line with this, dual offenders appear to be more sexually preoccupied than their internet and contact counterparts (Babchishin et al., 2015; Elliott et al., 2013; McCarthy, 2010). This perhaps explains why McCarthy (2010) found that dual offenders were more likely to engage in cybersex with adults and spend a greater amount of time viewing adult pornography.

Following on from this, the research indicates that internet offenders are more likely than contact offenders to have deviant sexual interests (Babchishin et al., 2011; Babchishin et al., 2015; Henshaw et al., 2018; Seto et al., 2011; Seto et al., 2012). Perhaps the most relevant sexual deviancy related to internet offending is a sexual interest in children (Buschman et al., 2010; Long et al., 2012; Seto et al., 2006; Seto et al., 2011; Seto et al., 2015). A number of studies found that self-reported interest in having sex with a child and sexual fantasies involving children has a link to viewing IIOC (Klein et al., 2015; Seto et al., 2015). Furthermore, higher levels of paedophilia were present in internet offenders than those who had committed contact offences. Dual offenders, however, were the offending group with the greatest sexual interest in children, implying this is a motivator for them committing both internet and contact offences (Babchishin et al., 2014; McCarthy, 2010). The research reviewed indicates that internet offenders experience sexual preoccupation, sexual cognitive distortions and sexual deviancy in the form of an interest in children. In spite of this, studies found they are less likely to endorse offence-supportive attitudes pertaining to sexual relations between adults and children than their contact and dual counterparts (Bates & Metcalf, 2007; Elliott et al., 2013; Merdian et al., 2014).

Contradictions between Questions

Age

The research reviewed provided differing findings with regard to age. One study found that there was a significant association between age and offence type (Clevenger et al., 2016). The study found that the largest proportion of those arrested for possession of IIOC were aged 50 and above (77.2%); whereas

the largest proportion of those arrested for production/distribution of IIOC were aged between 30 and 39 years old (8.4%). The largest proportion of those who did not engage in IIOC (online solicitation) were less than 30 years of age (56.9%). This suggests that age may vary amongst subgroups of internet offenders; however, further research is required.

When compared with contact offenders, the results similarly differed: some studies reported that internet offenders are younger (Babchishin et al., 2011; Henshaw et al., 2018; McCarthy, 2010; Reignen et al., 2009); whilst others found that internet offenders are older than their contact counterparts (Faust et al., 2015; Merdian et al., 2016). In their review of the literature, Henshaw, Ogloff and Clough (2017) note similar inconsistencies relating to the age of internet offenders. It is postulated that the growing availability of the internet means the demographic characteristics of internet offenders may evolve over time. On the whole, the studies appear to suggest that internet offenders tend to be young to middle-aged; however, since the studies reviewed reported divergent findings no definitive conclusions can be drawn from the research reviewed.

Access to Children

It has been proposed that access to children may be a risk factor for progressing from committing internet offences to contact sexual offences (McManus et al., 2015). The studies reviewed, however, differed in the rates of access to children. It was found that internet offenders may have access to children through various means which includes having children of their own, their living arrangement or through employment and recreational activities. Alternatively, offenders may use the internet as a means of targeting children and attempting to arrange an offline, in-person meeting. One study found that over half of the sample (51.1%) had children of their own (Burgess et al., 2012). Moreover, Clevenger et al. (2016) reported that 18.5% had lived with a minor child and Laulik et al. (2007) found that over a quarter (26.7%) had been living with children at the time of arrest. In addition to this, one study found that almost half (42%) of the sample had direct contact with children due to their employment or recreational activities such as sports coaching (Niveau, 2010).

The research reviewed for Question Three which examines the differences between internet, contact and dual offenders found further differences with regards to access to children. One study reported that 92% of contact offenders and 47% of internet offenders lived with a child (Seto et al., 2012). In contrast to this, Long et al. (2012) reported significantly lower rates with only 1% of internet offenders living with their partner and their partner's children. Interestingly, this study found that internet offenders were more likely to live with their partner and biological children (15%) in comparison to dual offenders (13%). The study reported, however, that dual offenders had more access to children through either biological children or their partner's children (25%) in comparison to internet offenders (16%). A notable finding that emerged from the meta-analysis conducted by Babchishin et al. (2015) is that contact sexual offenders were more likely to have access to children in comparison to internet offenders. In contrast, it was found that internet offenders had greater access to the internet in comparison to contact sexual

offenders (Babchishin et al., 2015). This suggests that access to children is one of key differences between internet offenders and other sexual offenders (Babchishin et al., 2015).

Relationship Status

Whilst the research reviewed indicated that internet offenders tend to be single, differing findings with regards to the relationship status of internet offenders was found. Four studies reported that approximately a quarter of internet offenders were married (Burgess et al., 2012; Clevenger et al., 2016; Laulik et al., 2007; Seigfried et al., 2008). Conversely, several studies reviewed for Question Two reported that a proportion of internet offenders were either divorced or separated, evidencing that they have been in an intimate relationship at some point. This is interesting to consider given the finding that internet offenders tend to be single and the reasons provided by Henshaw et al. (2017) as to why this may be the case (e.g. a passive approach to relationships).

Similarly, the research reviewed for Question Three provided differing findings with regard to relationship status amongst internet, contact and dual offenders. Whilst Webb et al. (2007) found they were more likely to have failed to establish intimate relationships lasting longer than a year, the results of McCarthy (2010) were that they were more likely to be married or divorced than dual offenders. Another study found that internet offenders were more likely to be married than other general sex offenders convicted of rape, paedophilia or both types of offences (Tomak et al., 2009). As such, the findings regarding relationship status of internet offenders differed. It is unknown why there are such variable rates regarding marriage and divorce amongst internet offenders; however, in the context of the interpersonal difficulties experienced by them, these results are interesting. On the whole, the rates indicate that internet offenders may have less stable intimate relationships.

Limitations

The limitations are two-fold in nature, relating to the research reviewed and the literature review. One of the main limitations encountered relates to the terminology used in the studies reviewed, as there is significant variability in the way that internet offenders are defined. As an example, the term 'internet offender' was used at times to refer to those convicted solely of IIOC offences; however, this term was also used to refer to any offenders who had committed a sexual offence which involved the internet in some capacity, e.g. online solicitation. This review included studies which did not distinguish between those who have committed solely internet offences and dual offenders. It was found that some studies categorised offenders based upon their most recent offence rather than their criminal history. If an offender's most recent offence was an IIOC offence, then they may have been categorised as an IIOC offender, even if they had a history of contact sexual offences. This means that it cannot be guaranteed that the offenders within their samples constitute solely IIOC offences (Henshaw et al., 2017). This, in turn, limits the generalisability of the claims that can be made about internet offenders.

Further adding to this is the possibility of offenders with 'undetected' offences being included within samples. For instance, an individual may be categorised as an internet offender on the basis of their criminal history but may have committed undetected contact sexual offences; it could be the case for contact offenders who have not been caught engaging with IIOC. This is particularly a limitation for studies that aimed to offer a comparative analysis of the different types of sexual offenders, in addition to those examining the offending trajectories of offenders especially with regards to cross-over offending. Ultimately, research based upon case files or convicted offenders might be affected by an underlying, undetected level of other sexual criminality (DeMarco et al., 2018).

There were also methodological shortcomings with regard to the research reviewed. Studies utilised varying methods and measures such as a reliance on self-reported data or reviewing criminal histories and other official documentation. All of which have inherent limitations which may impact upon the reliability of the results. For instance, self-reported data relies upon a participant responding honestly and is difficult to validate; responses may also be subject to recall and social desirability biases. In contrast, studies which relied upon official criminal histories cannot capture undetected offenders, i.e. those who have not yet been caught and convicted. Other factors may have affected the results of the research. For instance, one study focused on the most extreme IIOC which may have overestimated the results for 'typical' internet and dual offenders (Smid et al., 2015). Some studies had missing information: for example, one study was missing data pertaining to diagnoses of paedophilia and hebephilia for 5% of the overall sample (Seto & Eke, 2017). Moreover, the majority of studies were cross-sectional, which limits the causal inferences that can be made. Further to this, the studies did not have designs capable of testing the temporal ordering of behaviours.

A further limitation is the varied location of the studies which ranged from the United Kingdom, Canada, Australia, United States, Germany and Switzerland. Whilst this offers a global insight into this topic, this may have implications for the generalisability of the results as criminal justice systems differ across countries and there are variations in the legislation related to internet offending. An example of this is Sweden, where the age of sexual consent is 15 years old; thus, what may be considered legal 'adult pornography' in that country would still be considered illegal in countries like the United Kingdom. The study conducted by Ray et al. (2014), for instance, asked survey respondents questions which did not take into account cultural/regional variations in legislation pertaining to the age of consent. Respondents were asked if they would be interested in sex with a minor; however, the age of consent is 16 in many American states meaning that sex with someone aged 16/17 would not be illegal even though they would be classified as a legal minor. This means that the respondents who responded that they would be interested in sexual contact with a minor may not be indicating a willingness to engage in criminal behaviour. Another limitation is that some of the findings reported within this review were based on a small number of studies; therefore, further empirical research is required. Lastly, only a few studies utilised samples that were not drawn from forensic or criminal populations. These samples are not likely to be representative of the entire population of internet offenders, including IIOC offenders and online solicitation offenders (Henshaw et al., 2017).

There are also limitations associated with this literature review. Due to the scope of this review, 'grey literature' was excluded, which means that this review did not include unpublished work that perhaps has significant value. Identifying research through database searches also creates the possibility that relevant articles were not returned during the process. In response to this, the reference lists of full-text articles were reviewed to identify research that may be of relevance but missed during the database search. Due to time constraints, if an article could not be easily obtained then it was excluded, which means that articles that may have been of relevance might have been missed. Excluded due to inaccessibility were articles in certain journals that the researchers did not have a subscription to (e.g. *Journal of Sexual Medicine*) and books. Although the possibility of buying journal articles and books was considered, there was the risk that this could have been of great financial cost to the organisation for research that, upon further reviewing, may not have been relevant to this literature review.

Overall, the greatest limitation of a literature review is the fact that it is not an exhaustive review of the research in the field. In the case of this review, it does not provide a definitive account of the evidence on internet offending. This literature aimed to provide an overview of the research identified for the purposes of this review; yet, as noted above, other relevant research may have been missed. As such, this review does not provide a definitive account of the evidence on internet offending but instead provides an overview of the research identified for the purposes of this review. Additionally, this literature review is an evaluation of existing studies and does not add any new empirical data to the field. Considering all of this, only tentative conclusions can be drawn from this literature review.

Strengths

Conducting a literature review offers an insight into the current landscape of research. This has the benefits of documenting what studies have found. It also identifies gaps in the literature, indicating directions for future research. This review could also be considered to consolidate some of the available research relating to the six questions examined for this review. For the purposes of this review, the researchers extracted articles from some of the leading databases in the field and applied a rigorous screening process to generate the final list of articles reviewed. Additionally, studies were quality appraised using an adaption of the Weight of Evidence approach allowing studies to be rated as low, medium or high. The rating process was based on questions which evaluated the methodological approaches, research aims, relevance to the literature review and overall clarity.

Areas of Concern

Technology is continually developing which creates new opportunity for offenders; therefore, it is important to contemplate the future. Krosodomski-Jones (2018) identified several areas likely to grow in terms of importance in the coming years. This includes online 'cloud' storage which would diminish the need for images to be stored offline. This means that the images can be stored online instead of being physically stored on devices such as a computer. Additionally, 'Internet of Things' (IoT) devices

such as smart TVs could even be used as a means of storage, potentially without the knowledge of the owner if the device is unsecured. Simply put, IoT refers the ever-growing network of physical devices/objects which can connect to the internet (Fernandes, Rahmati, Eykholt & Prakash, 2017). Furthermore, it is suggested that improvements in mobile technology such as the forthcoming 5G may further encourage streaming and peer to peer sharing, which also might reduce the use of offline storage. Lastly, live-streaming of abuse is another area which is likely to grow in importance in the coming years. Live-streaming is difficult to detect in real time and leaves little or no digital trace which may appeal to offenders.

A recent study by the IWF (2018) examined the distribution of captures of live-streamed child sexual abuse. The study was conducted over a three-month period and 2,082 images and videos depicting live-streamed child sexual abuse were analysed. The IWF found that the majority (96%) of victims were girls and the majority (96%) of images and videos depicted a child on their own, often in a home setting such as their bedroom. All of the imagery has been taken from the original upload location and redistributed on other websites. The report details that there were cases where it was apparent that the child was being coerced into sexual activities such as being offered rewards. Furthermore, of the content analysed, 98% was assessed as depicting children aged 13 or younger, with over a quarter (28%) depicting children aged ten or younger. The IWF suitably concludes that the results of this study indicate that there is a lack of awareness amongst children and young people regarding the risks involved with live interactions and the potential for permanent records to be created and distributed out with their control. As noted above, this is an area which may become of increasing concern in the coming years; therefore, it is important that children, young people and adults are informed of the risks of live-streaming. The MAPPA thematic review also made a recommendation in relation to the risks posed to children and young people and the Child Protection Team has assumed the lead for this.

The areas highlighted within this section as areas of concern are likely to grow in importance over the coming years. This is not an exhaustive list as there are other concerns such as the growth of apps/gaming that offenders may use to target children and so forth. It is recommended that practitioners remain informed regarding technological advancements, for an understanding of how online sexual offences are being committed is integral to combatting the problem (Krone, 2004).

Preventative Work

Jutte (2016) aptly stated that it would not possible to 'arrest our way out' of this growing problem, which, as previously noted, is a global issue. This is pertinent to consider and suggests that perhaps more investment should be made in preventative methods. Prevention has not received as much attention as detection; however, there are examples of preventative methods in practice. An example is the Dunkelfeld project which was developed to provide clinical and support services to those with a sexual attraction towards children. The project offers free and confidential treatment to those who refer themselves. Using 53 participants receiving treatment in compared to a control group of 22 individuals, Beier et al. (2015) sought to assess whether the Dunkelfeld project enhanced behavioural control and

reduced risk. Findings indicate that the therapy could alter dynamic risk factors associated with child sexual offending and reduce related behaviours. A further example is Stop It Now!, a charity in the UK aiming to prevent child sexual abuse by providing confidential treatment and support. The charity provides a helpline providing confidential help and advice; this may be used by an offender, parents and carers concerned about a young person exhibiting worrying sexual behaviour or family and friends who are concerned about an adult exhibiting worrying sexual thoughts or behaviour. There is a Scottish branch of the charity in Edinburgh. Jutte (2016) highlights that organisations like Stop It Now! provide an important but under-resourced service.

An important preventative approach which might help to combat the growth of IIOC is to equip children and young people with a comprehensive understanding of the risks associated with the online world. A recent report by Ofcom (2017) suggests that children and young people are not fully aware of the complexities and dangers associated with the internet. For example, over half of children and young people reported that they believed content could be easily deleted once uploaded online. This is not true, however, for it can be incredibly challenging to remove content. This is supported by the IWF (2018) report into live-streaming, which found that all of the content analysed had been harvested from its original upload site and uploaded on third party websites; thereby the person has lost all control over the distribution of the content. The finding of the Ofcom (2017) survey indicates that children and young people do not fully understand the risks associated with the online environment and the potential for content to be distributed in a way that they cannot control, something which is of concern.

As the internet is becoming ever more present in the lives of children and young people, it is important that they fully understand the risks which exist online as well as how to appropriately deal with these. Choi, Wong and Fong (2018) claimed that smartphone dating applications provide the opportunity for online predators to interact with potential victims. Six hundred and sixty university students in Hong Kong were surveyed to find out more about any possible associations between dating apps and sexual abuse. Findings indicated that using these applications for longer than a year was a risk factor²⁵ associated with sexual abuse including being forced into sexual acts both with and without physical force (Choi et al., 2018). There is also the risk posed by practices such as the sharing of self-generated sexual images either online via channels like social media or in an offline medium such as text message (Hollis & Belton, 2017). This may be part of 'sexting' where the young person produces these images as part of an intimate relationship (Leary, 2009) or this could occur via online solicitation or grooming (Quayle & Newman, 2015). Despite this being a common form of harmful sexual behaviour for adolescents, research into this practice is scarce (Hollis & Belton, 2017). Whilst not listed above as an area of concern, the research evaluated whilst developing this review suggests that this may be an area likely to grow in importance in the coming years.

²⁵ A causal relationship cannot be confirmed, however, due to the limitations of the cross-sectional design used (Choi et al., 2018).

Educating young people about the challenges of removing uploaded content and the dangers of live-streaming, for example, may help combat the growth of IIOC. This sentiment is echoed by Krosodomski-Jones (2018) who notes that the volume of IIOC is increasing and, therefore, stopping it or limiting it from one of the sources is a sensible response. Parents and carers would also benefit from gaining a greater understanding of the risks that exist online; otherwise they may be unable to fully protect their children. A recent survey conducted by Mumsnet and Gransnet for the IWF asked parents and carers about their concerns regarding their child going online. Whilst 78% of respondents cited concerns about their child being exposed to 'sexual imagery or pornography,' a lesser amount cited grooming as a concern (69%) or child sexual exploitation via video or photographs (61%). This is interesting as concerns about bullying (76%) and 'unpleasant or aggressive people, trolls and bad language' (76%) were greater in comparison to grooming and child sexual exploitation. The results highlight the importance of raising awareness about the risks associated with the internet to ensure that parents and carers can keep children and young people safe when online.

Areas for Future Research

As previously mentioned, one of the benefits of a literature review is that it can identify gaps in the research base. This review has identified a number of areas which require further research. Firstly, it would be useful for future research to examine the differing findings presented within this literature review. Perhaps the most important contradiction requiring further investigation relates to offending trajectories in terms of which comes first in the dual offending pathway: contact or internet offences. It is important to address this conundrum to gain a fuller understanding of risk. Part of this consideration should be accounting not only for internet offenders who will 'progress' onto contact offences but also for contact offenders who find new ways to offend via the internet. Of particular interest is the answer to the conundrum of what came first for dual offenders: contact or internet offences?

This review also found differing findings regarding the age of internet offenders. The research reviewed for Question Three provided a contradiction, with studies varying in their findings about whether internet offenders were younger or older than other types of sex offenders. Furthermore, Clevenger et al. (2016) found a significant association between age and offence type which raises the question of whether there are variations in age amongst subgroups of internet offenders hence this is an area which requires further research. If marked age differences do exist, this then poses questions about the characteristics of each type of offender. This is an area which would thus benefit from further research.

The research reviewed provides suggestions that there are differences between subgroups of internet offenders. As an example, there appears to be differences between those who solely possess IIOC and those who produce/distribute IIOC. As noted above, there may be age differences between possessors and producers/distributors of IIOC. It may be the case that producers of IIOC have a distinctive set of risk factors, particularly since they are likely to have different motivations for engaging in their offending behaviour. A study by Henry et al. (2010) found that internet offenders fell into three groups: the normal, the inadequate and the deviant. The three groups were characterised by different deficits, which

suggests there are subgroups of internet offenders who present with varying risks and needs. This would likely have implications for treatment and management; therefore, this is an area which would benefit from further research.

Winters et al. (2017) note that there is much still to learn about online sexual offenders. In particular, online solicitation offenders are a group who would benefit from further research. There were only a handful of studies reviewed (DeHart et al., 2017; Drouin et al., 2018; Winters et al., 2017) in this literature review which focused on or included online solicitation offenders. Definitions of online grooming have focused on the way in which individuals spend time developing a connection with victims (Lorenzo-Dus & Izura, 2017). Research demonstrates that sexual behaviours may be introduced quickly. Winters et al. (2017) reviewed 100 transcripts and found in 96% of the cases, an offline meeting was arranged between the offender and the decoy victim. It was also found that sexual content was introduced in less than 30 minutes in more than two-thirds of the cases. This is similar to the DeHart et al. (2017) study which found that many of the offenders exchanged sexual images or discussed meeting in less than ten minutes, suggesting that online interactions with sexual offenders may quickly escalate. Furthermore, a review of chat transcripts of 334 convicted internet offenders found that those who reoffended were more predatory and direct in their language and displayed 'clout,' a social measure of dominance. Similar to the other studies, reoffenders were more likely to attempt to arrange a meeting with their victims (Drouin et al., 2018). Research thus far has indicated that online solicitation offenders are a heterogeneous group (Tener et al., 2015). Further studies examining the characteristics of online solicitation offenders would be useful. In particular, it would be interesting to know if online solicitation offenders and IIOC offenders share similar characteristics. Drouin and colleagues (2018) purported that online solicitation offenders are more likely to be contact-driven rather than fantasy-driven, as they have taken steps towards committing a contact offence such as arranging or travelling to meet a child for sexual purposes. This requires further investigation as this could have important implications for risk assessment and management.

A further area which would benefit from research is the association between pornography use and IIOC use. The study conducted by Ray et al. (2014) found that for those high on sensation seeking, the risk of viewing IIOC increased with the number of hours spent viewing pornography. It has been suggested that there is a journey beginning with viewing pornography involving models that look young (teen pornography) and may then progress to viewing IIOC (NSPCC, 2016). As such, further research is clearly required to investigate whether there is a relationship between pornography use and IIOC. Additionally, one study suggested an association between the severity of IIOC material and the risk of becoming a dual offender (Smid et al., 2015). In spite of this, other researchers have proposed that severity and risk are not the same when it comes to IIOC (Meridian, 2014). Further research would, therefore, benefit from examining whether the severity of IIOC viewed is associated with an individual's risk of progressing to commit a contact sexual offence.

Another area requiring further research relates to female internet offenders. This is a particularly fascinating area as internet offending has been largely conceptualised as being a male only

phenomenon (Seigfried et al., 2008). The results of one study found that there was a 2:1 ratio of men consuming IIOC to women. Interestingly, a meta-analysis by Cortoni, Babchishin and Rat (2017) found that there was an absence of beliefs in female sex offenders regarding sexual entitlement in relation to children. Considering this, the risk factors and characteristics of female internet offenders are likely to be different, something which has significant implications for the risk assessment and management of female internet offenders. Further research is needed, however, to properly examine this.

In particular, further research is required with regards to the risk assessment tools examined in Question Six. Whilst research is emerging, further studies are needed to fully validate a risk assessment tool to be used with this population. This is particularly important for the CPORT, the RM2000R and the OSP, as the tools with the greatest potential to predict recidivism in this offending population. Further external studies on the KIRAT-2 system would also be welcomed. At the moment, there are not enough validation studies to use these risk assessment tools with complete confidence in this offending population. Additionally, there needs to be further exploration of possible instruments for measuring the risk of adolescents involving in internet offending. Lastly, the characteristics of internet, contact and dual offenders requires further empirical support. In particular, the barriers and facilitators to offending for each type of offender need to be explored.

This review did not explore literature pertaining to victims of internet offending; however, this is an area which would obviously benefit from further research. For example, research into the characteristics and gender of victims of internet offenders would help to provide a profile of victims. The impact on victims and supporting their recovery is another area which would benefit from research. Lastly, future research would benefit from analysing how other means of technology are being used to facilitate internet offending such as the use of social networking sites (SNS). As emphasised throughout this review, the offending patterns of internet offenders has changed as a result of the evolving nature of the internet providing new means to offend. To successfully combat this global issue, it is important to obtain a current understanding of offending patterns.

As highlighted within the limitations section, the studies reviewed suffered from a number of methodological shortcomings. It is recommended that future research on internet offenders utilises samples comprised only of offenders convicted of an internet sexual offences. Internet offending studies which include dual offenders in the sample are limited in their ability to make generalisations about internet only offenders. Furthermore, future research would benefit from using longitudinal study designs allowing causal inferences to be made, in addition to testing the temporal ordering of behaviours.

Recommendations for practice

This literature review was conducted in response to a recommendation from the joint thematic review of MAPPA in Scotland. The review recommended that additional guidance should be developed to enable staff to better assess the risk posed by internet offenders (HMICS, 2015). This section aims to

provide recommendations for practice, which includes highlighting rising areas of concern and suggestions for what could be done in response to this.

The typologies examined in Question One highlight the diversity of the behaviours and motivations of internet offenders. Several typologies allude to the existence of two distinct sub-groups whose motivation is broadly categorised as being either fantasy driven or contact driven (Briggs et al., 2011; DeHart et al., 2017; Merdian et al., 2013). The fantasy driven and contact driven distinction has been applied to those engaging with IIOC, in addition to online solicitation offenders. The distinction between fantasy driven and contact driven offending indicates that individuals use the internet to serve different functions with regard to offending. It is likely that fantasy driven and contact driven offenders will have different criminogenic and treatment needs (Merdian et al., 2016). Understanding this distinction during the assessment process will require the practitioner to analyse the individual's offending and consider the function of factors identified. This reinforces the need for a formulation approach to understand the onset, development, occurrence and maintenance of the offending behaviour. A recent systematic review of 22 studies, however, found that it was difficult to definitively categorise individuals as being either fantasy driven or contact driven (Broome, Izura & Lorenzo-Dus, 2018). The authors note that the distinction does not consider those who engage in both online and offline sexual abuse (dual offenders). The review had several limitations including the difficulty with cross-comparison between the studies. Ultimately, the review highlights the need for larger studies with robust methodologies to examine the behaviour of internet offenders (Broome et al., 2018).

As demonstrated by the typologies discussed in Question One, typologies of internet offenders may overlap and offenders may not fit well into a sole typology; they may instead present with characteristics from multiple typologies or none at all (Aslan, 2011). Aslan (2011) further asserts that due to the heterogeneity of internet offenders, no classification system has universal validity. It should, therefore, be kept in mind that offenders do not always fit into typological categories and individuals should not be forced into typological boxes (Russell & Darjee, 2012).

The findings of the research reviewed for Question Two provides an insight into the demographic background and characteristics of internet offenders. Niveau (2010) examined the rates of personality disorder and found a high rate of personality disorders amongst a sample of internet offenders. Whilst further research is needed in this area, it is worth considering that the existence of personality disorders may have implications for risk management. For example, those with severe personality disorders are harder to engage in treatment, may exhibit difficult behaviour and are also more likely to drop out of treatment (Ministry of Justice, 2011). One of the main discoveries that emerged is that further research is required to examine the various subgroups of internet offenders. For example, whether the characteristics of those who possess IIOC differs from those who produce IIOC. This may have implications for risk assessment and management. Such research should provide a more comprehensive picture of those committing sexual offenses utilising the internet.

Taken together, the findings of Questions Two and Three suggest that internet offenders are well educated and score high with regards to impression management. It is suggested that practitioners should be mindful of this when working with internet offenders, particularly when interviewing them or administering measures. Interestingly, this is similar to the findings noted by Merdian et al. (2009) following a review of the literature. Moreover, internet offenders tend to suffer from interpersonal deficits and emotional problems which could impact upon their risk management. For instance, they may have difficulties engaging with practitioners and lack protective factors such as social support systems. Another finding which emerged from the research reviewed for both Question Two and Three is that internet offenders may have access to children through their living arrangements, employment or hobbies. This has implications for risk management that practitioners should consider. Additionally, the research suggests that internet offenders appear to spend a significant amount of time online. It could, therefore, be assumed that many are technologically literate, which is another consideration for practitioners when managing internet offenders who may be able to conceal access to the internet and could have access to the internet through various means including their employment.

The existing literature base indicates that there are significant differences between internet only offenders, dual offenders and contact sexual offenders (Babchishin, Merdian, Bartels & Perkins, 2018). Dissimilarities between internet and other types of sexual offenders have important implications for risk assessment and treatment programmes, i.e. whether traditional methods of sex offender assessments and treatment can be administered to internet offenders or whether the programmes need to be tailored to the differing needs and characteristics of internet offenders (see Merdian et al., 2014). The research indicates that there are various types of internet offenders who may have different treatment needs and risk factors; this should be considered when forming treatment plans (Ly et al., 2018; Merdian et al., 2011). The findings that internet offenders are likely to be under-assertive, have fewer cognitive distortions and suffer from interpersonal deficits suggests that a treatment programme developed for contact offenders based on their criminogenic needs (managing aggression, hostility and cognitive distortions) may not be suitable for internet offenders. Moreover, the increased levels of paedophilia suggest that treatment could potentially be shaped around this. This would be worthy of further exploration with the 'Moving Forward, Making Changes' (MFMC) programme used in Scotland. Of clinical importance is the idea that internet offenders, despite their paedophilic orientations, desist from contact offending (Sheldon & Howitt, 2008). It has been suggested that dual offenders may benefit from current sex offender treatment programmes more than internet only offenders, since they have committed contact sexual offences. Community-based treatment programmes have the potential to help internet offenders in the development and maintenance of positive and healthy relationships and lifestyles (Ly et al., 2018). The Price et al. (2015) study noted a number of general treatment needs for internet offenders beyond offending behaviour. The authors detail that social isolation, emotional and psychological problems in addition to relationship difficulties should be targeted. It is evident that the treatment of internet offenders is an area which requires further research.

The research reviewed for Question Four highlights that recidivism rates tend to be very low for internet offenders. Moreover, the tendency to reoffend with IIOC offences suggests a degree of offending specialisation²⁶, whereby offender's recidivate with the same type of offences. This is not, however, to underplay the possibility of an internet offender making the trajectory to contact offences. Studies reviewed indicated that the presence of potential risk factors like access to children, antisociality and criminal histories (all elements that are more prevalent in contact offenders) increase the chances of an internet offender becoming a dual offender (Eke et al., 2011; Endrass et al., 2009; Jung et al., 2013; Lee et al., 2012; Owens et al., 2016; Seto & Eke, 2005; Seto et al., 2011). Markedly, the idea that the pathway to dual offending is linear in nature, i.e. starting with internet offences and progressing onto contact offending, may not be fully accurate. By contrast, the pathway of offending has the potential to be asymmetrical with contact offenders going on to commit internet offences and internet offenders going on to commit contact offences. In all likelihood, it may be theorised that offending behaviour will alternate between internet and contact offences and potentially other offences like grooming.

The results of the review indicate that internet offenders possess a particular set of risk factors. Whilst some of these overlap with contact offenders, there are others specific to internet offenders. Markedly, the high internet preoccupation levels of IIOC offenders likely facilitate their lengthy and concerted engagement with IIOC. The intimacy deficits and emotional problems evident in internet offenders could also explain the high internet preoccupation levels. Given the differences highlighted, pre-existing risk assessment and treatment programs may not adequately address the needs of this population and thus require revision and evaluation prior to widespread use among this population. It also appears that environmental factors play a key role in their behaviour. For instance, the reduced access to children for internet offenders plays a role in preventing them from crossing over to contact offences. To that end, if an internet offender were to gain access to children via their living arrangements or volunteering/employment, this could increase their chances of becoming a 'dual offender.' What could also increase this risk is if their levels of antisociality or sexual deviancy were to increase. The broad overview of the risk factors is provided in tables within Appendix P. These should be considered when devising risk management and assessment strategies for internet and possibly dual offenders.

The implications of the variations in risk factors means that existing risk assessment tools used for other types of sexual recidivism are not entirely suitable for use with internet offenders. Some of the tools that are currently available for sexual offending, such as the J-RAT, RRASOR, SORAG and VASOR-2,²⁷ have not yet been validated on internet offenders; thus, are not recommended for use in this population of offenders (Garrington et al., 2018). The Stable-2007 (Hanson et al., 2007) measures 'stable dynamic risk factors' that may endure in an offender for a lengthy period of time and also identifies responsivity factors. Its purpose is to aid supervision of sex offenders within community settings and can be used to inform assessors about level of priority. Personal correspondence with one of the tool's developers,

²⁶ This is an issue that is of interest in criminological debates. Interested readers are directed to Howard, Barnett and Mann (2014).

²⁷ For further information on risk assessment tools, please see RATED (Risk Management Authority, in press), an update of which is due to be published in Spring 2019.

Karl Hanson, found that the Stable can be used for internet offenders in cases where they have an identifiable victim, i.e. if they are dual offenders. Conversely, if an internet offence has only offended with IIOC offences then this tool cannot be used (Hanson, 2016, personal correspondence). In this case, it could perhaps be combined with another tool like the CPORT to measure risk of recidivism in dual offenders.

Studies found that tools like the RM2000, Static-99 and OGRS3 do not accurately predict the risk of recidivism in internet offenders (Osborn et al., 2010; Wakeling et al., 2011). The revised version, the Static-99R, states that the tool cannot be used with offenders who have only been charged or convicted of internet offences (Garrington et al., 2018). Perhaps the only exception to the suitability of existing actuarial tools is the modified version of the RM2000, which was found to be a more accurate predictor of risk in this offending population. The RM2000R removes the aggravating factors of 'stranger victim' and 'non-contact offence,' both of which are likely to inflate the risk posed by internet offenders.

There is also the possibility of the OSP tool being of use for internet offenders, something that requires further research to properly determine. Her Majesty's Prison & Probation Service (formerly called the National Offender Management Service) created the OASys Sexual Reoffending Predictor (OSP) to address the weaknesses of the RM2000, where repeated non-contact offending artificially increases the risk level. One predictor of the tool, OSP-I, is for IIOC recidivism and was created in response to practitioner demand for a way to assess IIOC reoffending. The other item is the OSP-C for assessing risk of actual/attempted victim contact, encompassing grooming, inciting sexual activity and causing a child to witness sexual acts (Howard, 2016). To that end, risk factors measured on the OSP are: current age at last sexual offence, contact adult sanctions (offences), contact child sanctions, paraphilia²⁸ sanctions, not first-time entrant and stranger victim of current sexual offence. It has been found that history of IIOC offending is most predictive of IIOC reoffending, followed by a history of contact sexual offences with child victims. To that end, two and one points are scored for IIOC and contact offences respectively. This is then totalled and grouped by low (0), medium (1), high (2/3) or very high (≥ 4). Aggravating factors on the RM2000 of relationship history and male victims are not asked on the OSP (Howard, 2016; Moore, 2015). This tool is commercially free to use from HMPPS and seems to hold promise as a possible substitute for the RM2000 when using with internet offenders. For instance, Bell's (2018) comparative study of the RM2000/s and the OSP, in which 22 participants scored a maximum of ten real-life cases (n=201), found that the OSP was completed significantly more quickly than the RM2000/s. Comparing inter-rater reliability found that both tools appeared to score moderately; although the author acknowledges that training in the complex method of scoring in a one-day workshop and possible issues with OSP guidance may have impacted this. It is interesting to note that most of the participants completing the scoring had great familiarity with the RM2000/s; yet, anecdotal evidence emerging from the study found that the OSP was quicker and easier for them to complete (Bell, 2018).

²⁸ Paraphilia includes offences suggesting sexually deviant interests, such as exhibitionism, voyeurism and zoophilia (Moore, 2015).

The KIRAT-2 may also be of use in allowing police and other agencies to prioritise casework based on those perceived to be at greatest risk of progressing onto contact offences. It is a resource prioritisation and management system to identify individuals most likely to commit a contact offence based on convictions or accusations of previous contact offences. Specifically, the KIRAT provides operational advantages in removing the need for police officers to use their personal judgment to prioritise cases. Importantly, the KIRAT is not a risk assessment tool meant to predict future risk or reoffending. This, therefore, allows immediate attention to be given to cases deemed to be at higher risk of progressing onto contact offending. It also considers factors that might facilitate the progression of a contact offence, such as the offender's access to children. This might be useful as part of their screening combined with the initial analysis they now use in Scotland. The use of the KIRAT-2, however, would require approval to use as this is not freely available.

In a similar vein, a case formulation model for Child Sexual Exploitation Material²⁹ (CSEM) has been developed by Merdian et al. (2018), which could be potentially used for assessment and treatment purposes. The model aims to increase understanding of an individual's unique pathway into CSEM offending by looking at the linkages between past, present and future behaviour, as well as personal and situational factors. This model was developed through a process of five stages: reviewing the literature, carrying out qualitative interviews with 20 internet offenders, consultation with professionals, identifying emerging themes and synthesising information into a model. The seven superordinate themes that emerged from the research and subsequent analyses were: Developmental Context; Individual Propensities (risk-related and risk-protective) and Psychological Vulnerabilities; Personal Circumstances; Permission-Giving thoughts; Internet Environment and Behaviour; Evaluation of Consequences for the Individual and Desistance. The developers stress that this is a preliminary case formulation tool and is not intended to be used as a risk assessment tool.

With regards to the risk assessment tools available for internet offenders, there is some empirical evidence to show the CPORT is able to predict sexual recidivism (both contact and internet offences) in this specific offending population. Of particular note is the fact that the CPORT may be used for any kind of sexual recidivism from contact, internet and non-contact offences and is freely available. Substituting item 5 of the CPORT 'admission of sexual interest in children' with the CASIC scale may negate the risk of this item being manipulated to some extent. When presenting at the NOTA Scotland event in April 2018, one of the CPORT developers, Angela Eke, advised that there was new research being carried out on the tool, particularly comparative studies with other tools like the SAPROF and Stable 2007. These studies will likely become available in the near future.

In future, risk assessment may be aided by the emergence of a variety of clinical scales (Garrington et al., 2018). There is the 'Internet Sex Screening Test' (ISST) (Delmonico & Miller, 2003), a self-report

²⁹ Child Sexual Exploitation Material (CSEM) is the term commonly used in North America to describe what would be known in the UK and Europe as IIOC. Since CSEM is the term used in the case formulation model, it is also used within this discussion to reference internet offending.

scale designed to identify if internet-based sexual behaviours are clinically problematic. There is also the 'Internet Behaviours and Attitudes Questionnaire' (IBAQ) (O'Brien & Webster, 2007) to measure attitudes towards child abuse material by those convicted of related offences. The 'CISC scale' (Kettleborough & Merdian, 2013) is a Likert-scale examining the cognitions of people who use child abuse material.

It is notable that all the tools and systems discussed thus far only apply to male adults. Currently, there is no specific risk assessment tool for internet offending in adolescents. In terms of adolescents committing internet offences, findings suggest they are likely to require a different approach to risk assessment and management than adolescents engaging in other types of sexual offences. The internet offenders tended to be older teenagers and were less likely to have a troubled family background with most living with their parents (Aebi et al., 2014). There are resources available to assist practitioners working with adolescents such as the Framework for Risk Assessment, Management and Evaluation (FRAME) planning for local authorities and partners to be used with children and young people under 18 (Scottish Government, 2011). Additionally, there is the Care and Risk Management (CARM) guidance which has been developed for children aged 12 to 18 who pose a risk of serious harm.

It may be the case that a revised version of the AIM2 (likely to be called the AIM3) will address this. The AIM2 is a tool to predict the risk of sexual violence in adolescent males, which consists of both risk and protective factors. The TA-HSB is a framework developed from a literature review of technology-assisted harmful sexual behaviour, covering a broad spectrum of behaviour from sexting, indecent images and grooming (Hollis & Benton, 2017). It has been surmised within the field that the TA-HSB will be incorporated into the AIM2 to allow for consideration of internet offences. Moreover, a new risk assessment tool for adolescents called PROFESOR has been developed. It has been suggested that this tool may be useful for those involved in child abuse images³⁰. Part of the motivation for developing the tool was the increasing number of adolescents involved in such offences in the developer's practice. Given the recency of this tool, however, the data is not yet available for validating this tool (Worling, 2018, personal correspondence).

Overall, the dissimilarities between internet, contact and dual offenders suggests risk assessment and management should be tailored to the individual. Approaches to assessing and managing risk, as well as treatment where appropriate, should be tailored as per the variations in characteristics, risk factors, etc. between the offending groups. This again reinforces the use of structured decision-making models of assessment adopted by agencies in Scotland to consider the pattern and nature of past offending, as well as estimate the likelihood and seriousness of future harm.

³⁰ This is the term used by Professor Worling, the developer of the PROFESOR, to refer to IIOC.

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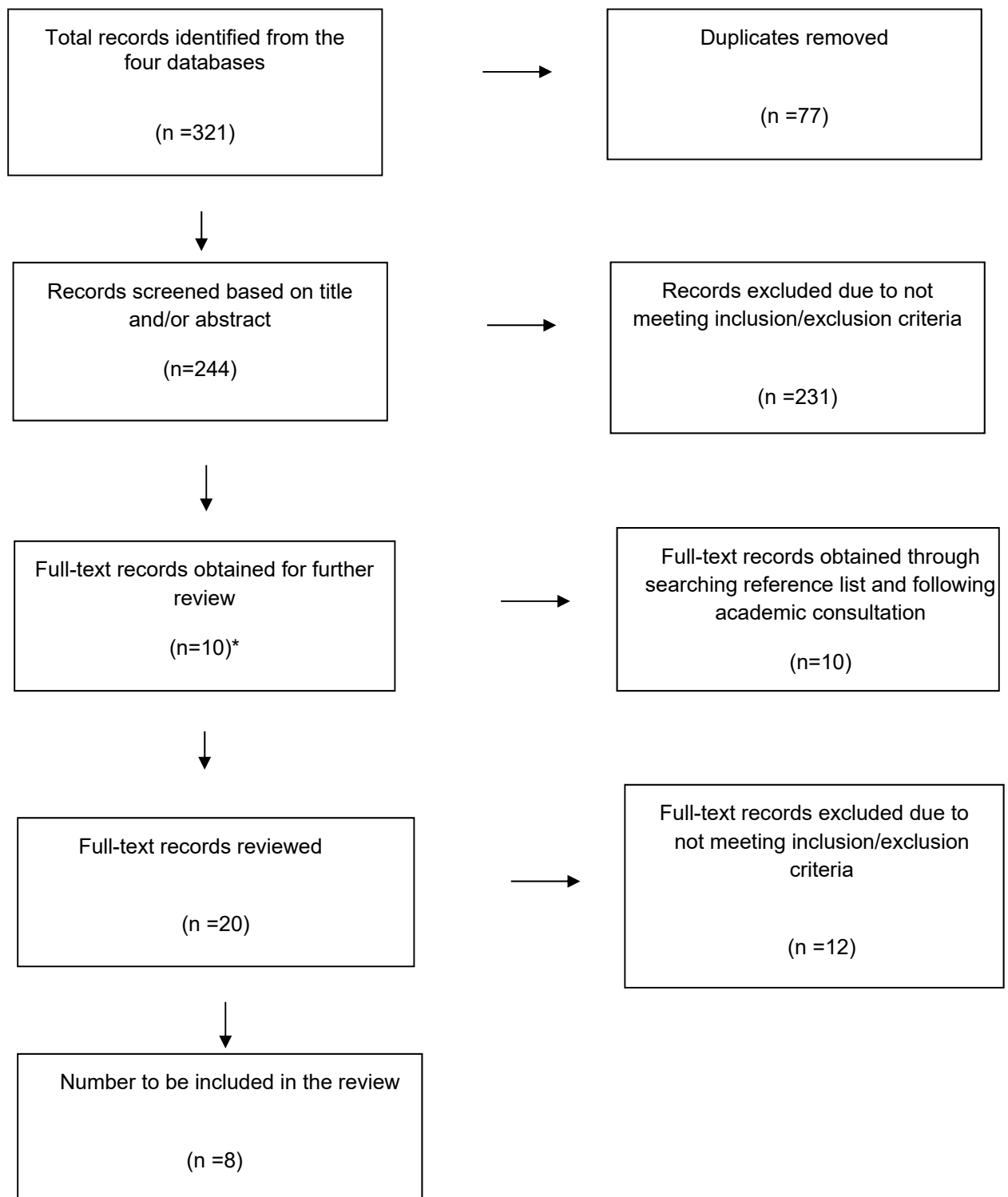
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Appendix A: Inclusion/Exclusion Criteria

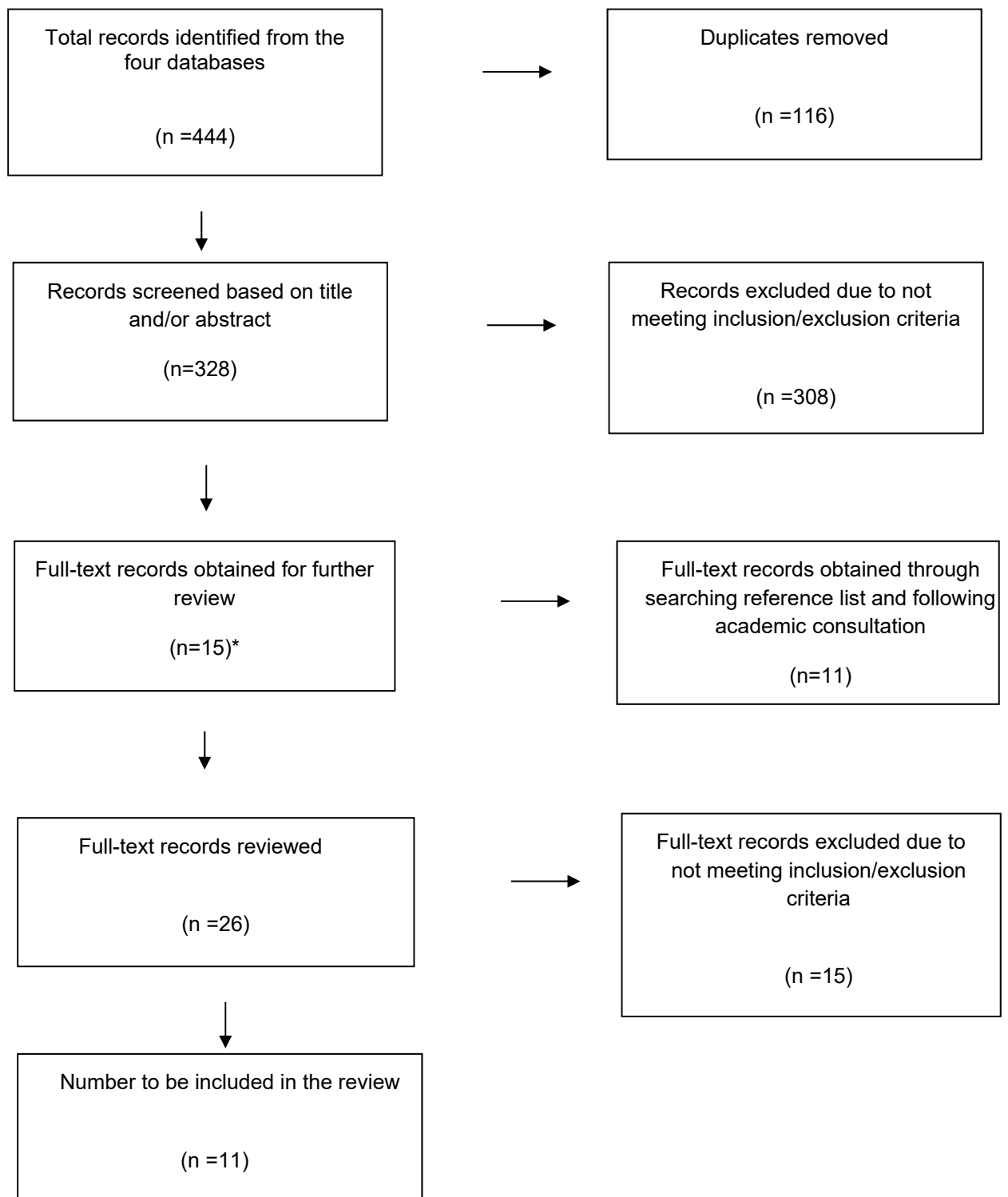
Criteria	Inclusion	Exclusion
Language	English	Non-English
Research Type	Quantitative, qualitative and mixed method empirical research. Primary and secondary research including meta-analyses. Non-empirical research.	Individual offender case study, poster presentations, media pieces, blogs, theses/dissertations and unpublished research.
Gender	Males and mixed samples (males and females).	Female only samples.
Sample	Online facilitated sexual abuse (as determined through self-report or official conviction data). Offender and general population samples. Adult and adolescent samples.	Contact sexual offending only.
Year	January 1990 – March 2018	Prior to 1990
Access	Research that can be obtained in full via subscription or ResearchGate.	Where full text versions cannot be obtained (research that the organisation did not have a subscription to access or any other means of doing so)

Appendix B: Flow Diagram for Question One



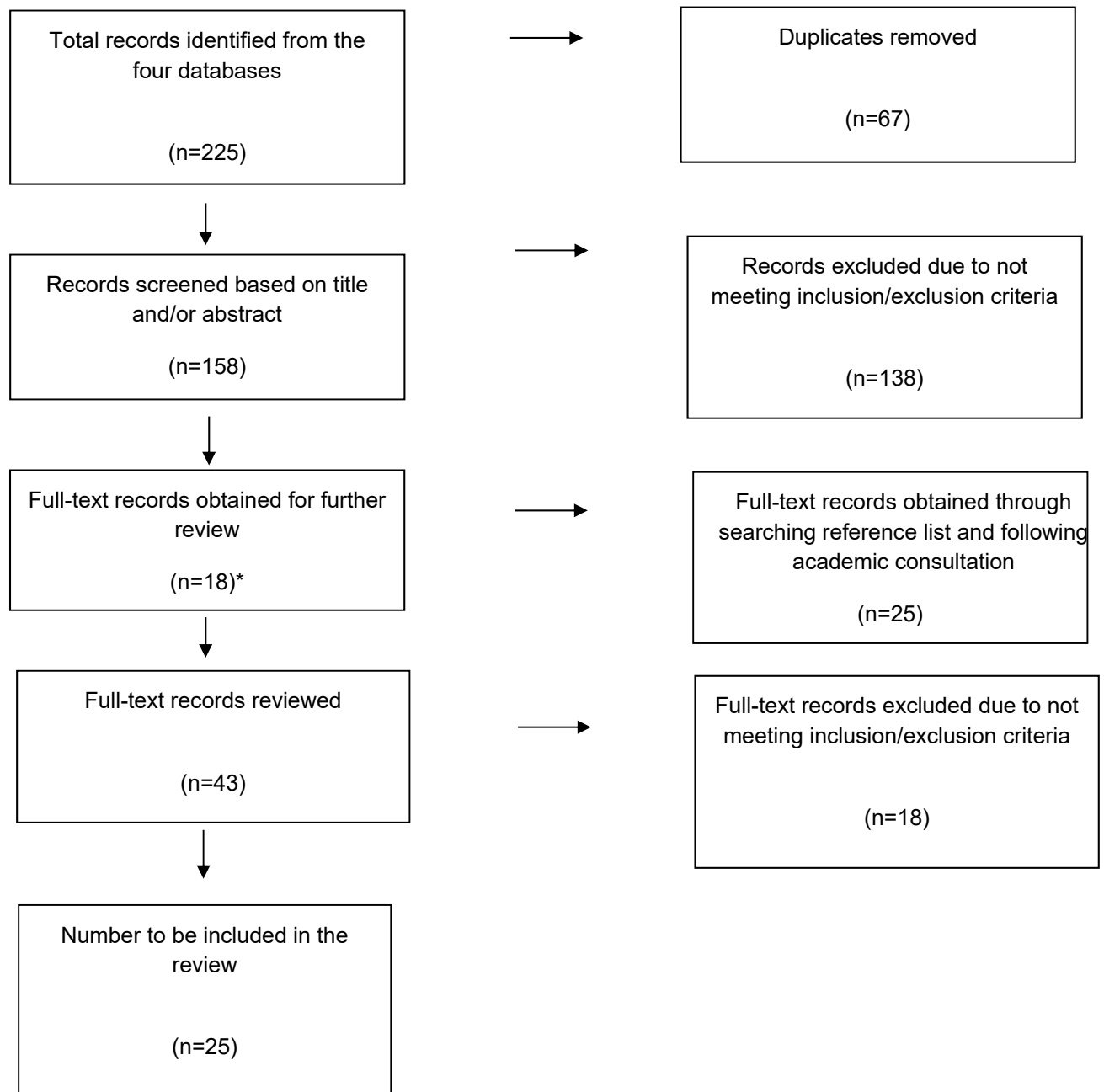
*After screening by title/abstract, 13 records were identified for further review. Out of these, only 10 could be obtained; therefore, 3 were excluded at this stage.

Appendix C: Flow Diagram of Question Two



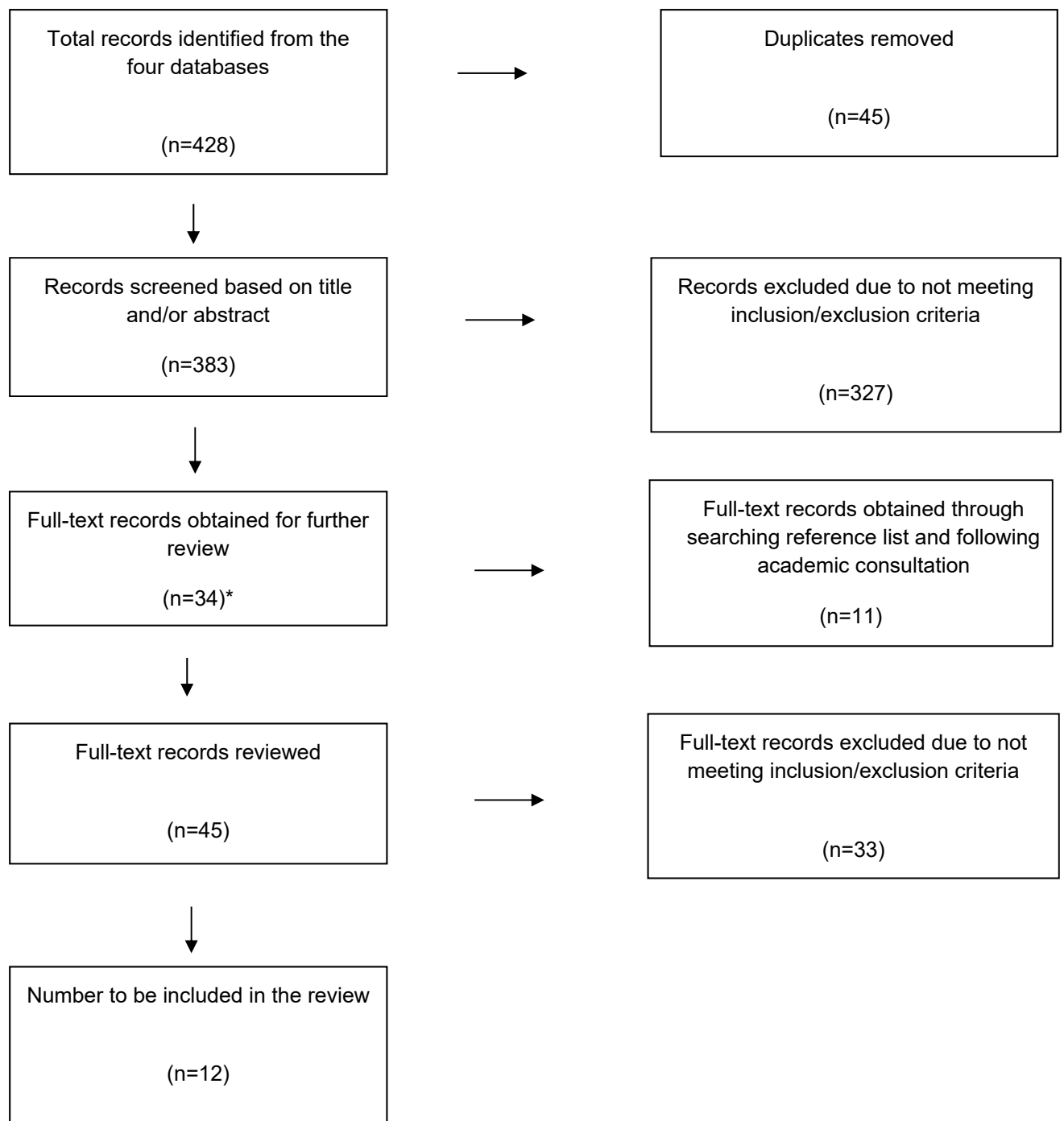
*After screening by title/abstract, 20 records were identified for further review. Out of these, only 15 could be obtained; therefore, 5 were excluded at this stage.

Appendix D: Flow Diagram of Question Three



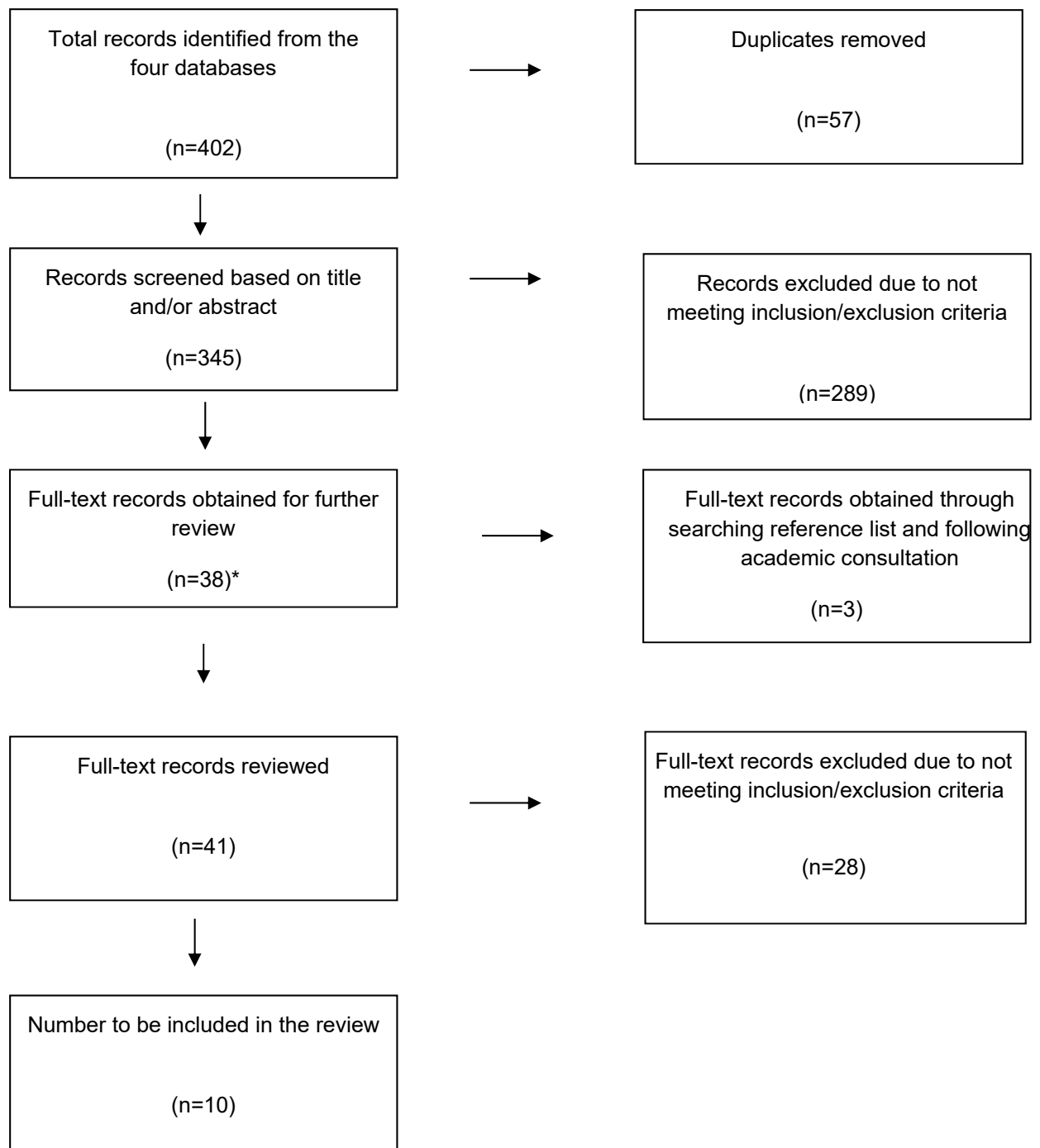
*After screening by title/abstract, 20 records were identified for further review. Out of these, only 18 could be obtained; therefore, 2 were excluded at this stage.

Appendix E: Flow Diagram of Question Four



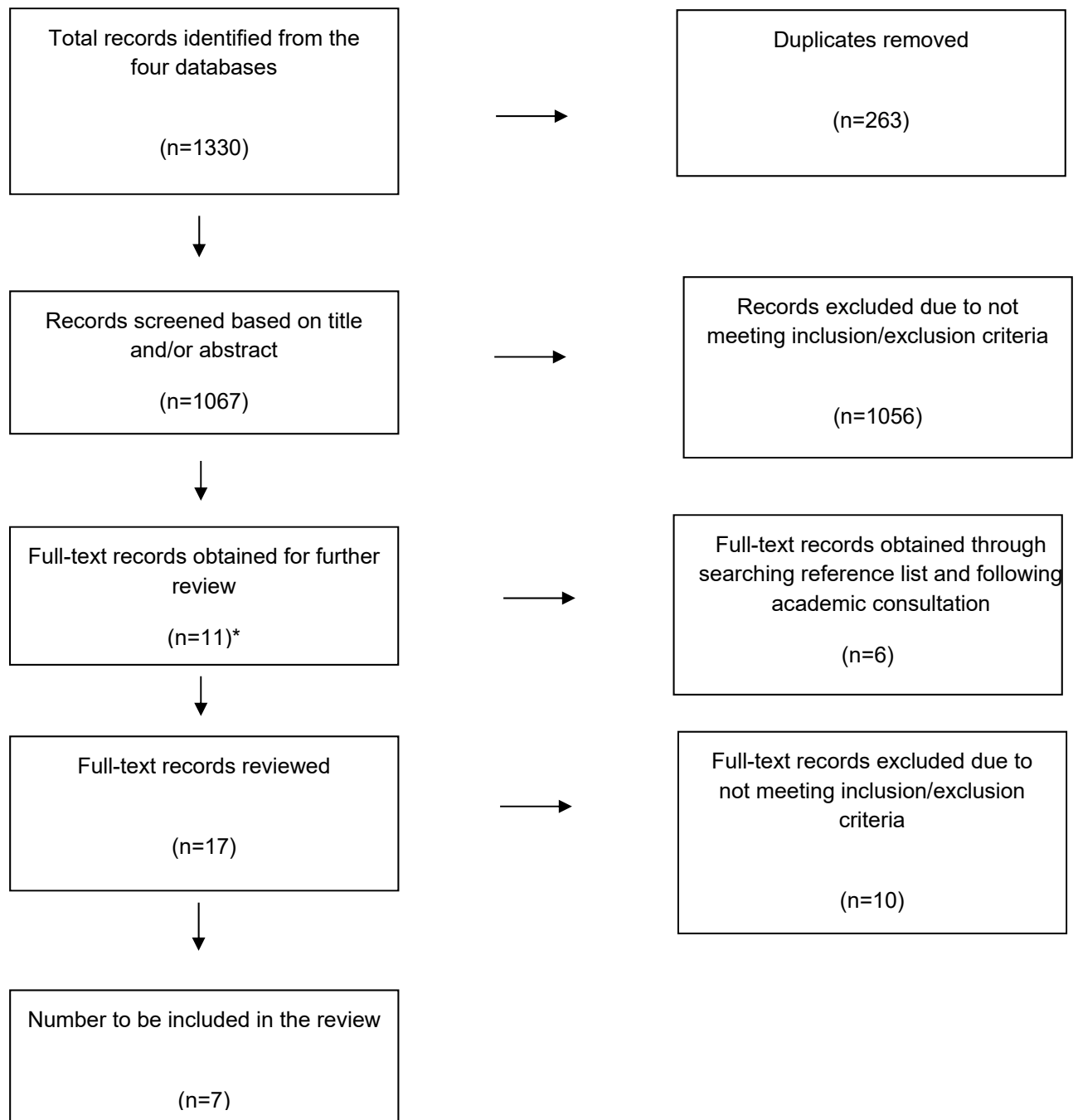
*After screening by title/abstract, 56 records were identified for further review. Out of these, only 34 could be obtained; therefore, 22 were excluded at this stage.

Appendix F: Flow Diagram of Question Five



*After screening by title/abstract, 56 records were identified for further review. Out of these, only 38 could be obtained; therefore, 18 were excluded at this stage.

Appendix G: Flow Diagram of Question Six



Appendix H: Legislation

Scottish Law

Protection of Children and Prevention of Sexual Offences (Scotland) Act 2005

1 Meeting a child following certain preliminary contact

(1) A person (“A”) commits an offence if—

(a) having met or communicated with another person (“B”) on at least one earlier occasion, A—

(i) intentionally meets B;

(ii) travels, in any part of the world, with the intention of meeting B in any part of the world; or

(iii) makes arrangements, in any part of the world, with the intention of meeting B in any part of the world, for B to travel in any part of the world;

(b) at the time, A intends to engage in unlawful sexual activity involving B or in the presence of B—

(i) during or after the meeting; and

(ii) in any part of the world;

(c) B is—

(i) aged under 16; or

(ii) a constable;

(d) A does not reasonably believe that B is 16 or over; and

(e) at least one of the following is the case—

(i) the meeting or communication on an earlier occasion referred to in paragraph (a) (or, if there is more than one, one of them) has a relevant Scottish connection;

(ii) the meeting referred to in sub-paragraph (i) of that paragraph or, as the case may be, the travelling referred to in sub-paragraph (ii) of that paragraph or the making of arrangements referred to in sub-paragraph (iii) of that paragraph, has a relevant Scottish connection;

(iii) A is a British citizen or resident in the United Kingdom.

9 Paying for sexual services of a child

(1) A person (“A”) commits an offence if—

(a) A intentionally obtains for himself or herself the sexual services of another person (“B”);

(b) before obtaining those services, A—

(i) makes or promises payment for those services to B or to a third person; or

(ii) knows that another person has made or promised such a payment; and

(c) either—

(i) B is aged under 18, and A does not reasonably believe that B is aged 18 or over; or

(ii) B is aged under 13.

(2) In subsection (1)(b) above, “payment” means any financial advantage, including the discharge of an obligation to pay or the provision of goods or services (including sexual services) gratuitously or at a discount.

(3) For the purposes of subsections (1) and (2) above, “sexual services” are—

(a) the performance of sexual activity; or

(b) the performance of any other activity that a reasonable person would, in all the circumstances, consider to be for the purpose of providing sexual gratification,

and a person’s sexual services are obtained where what is obtained is the performance of such an activity by the person.

10 Causing or inciting provision by child of sexual services or child pornography

(1) A person (“A”) commits an offence if—

- (a) A intentionally causes or incites another person (“B”) to become a provider of sexual services, or to be involved in pornography, in any part of the world; and
- (b) either—
 - (i) B is aged under 18, and A does not reasonably believe that B is aged 18 or over; or
 - (ii) B is aged under 13.

Protection of Children and Prevention of Sexual Offences (Scotland) Act 2005 (continued)

11 Controlling a child providing sexual services or involved in pornography

- (1) A person (“A”) commits an offence if—
 - (a) A intentionally controls any of the activities of another person (“B”) relating to B’s provision of sexual services or involvement in pornography in any part of the world; and
 - (b) either—
 - (i) B is aged under 18, and A does not reasonably believe that B is aged 18 or over; or
 - (ii) B is aged under 13.

12 Arranging or facilitating provision by child of sexual services or child pornography

- (1) A person (“A”) commits an offence if—
 - (a) A intentionally arranges or facilitates the—
 - (i) provision of sexual services in any part of the world by; or
 - (ii) involvement in pornography in any part of the world of, another person (“B”); and
 - (b) either—
 - (i) B is aged under 18, and A does not reasonably believe that B is aged 18 or over; or
 - (ii) B is aged under 13.

16 Indecent photographs of 16 and 17 year olds

“52B Sections 52 and 52A: exceptions for photographs of 16 and 17 year olds

- (1) If subsection (2) below applies, the accused is not guilty of an offence under section 52(1)(a) of this Act of taking or making an indecent photograph of a child.
- (2) This subsection applies if—
 - (a) either—
 - (i) the photograph was of the child aged 16 or over; or
 - (ii) the accused reasonably believed that to be so;
 - (b) at the time of the offence charged or at the time when the accused obtained the photograph, the accused and the child were—
 - (i) married to or civil partners of each other; or
 - (ii) partners in an established relationship; and
 - (c) either—
 - (i) the child consented to the photograph being taken or made; or
 - (ii) the accused reasonably believed that to be so.

UK Law

Protection of Children Act 1978

[An Act to prevent the exploitation of children by making indecent photographs of them; and to penalise the distribution, showing and advertisement of such indecent photographs.]

1.-It is an offence for a person-

- (a) to take, or permit to be taken, any indecent photograph of a child (meaning in this Act a person under the age of 16) ;or
 - (b) to distribute or show such indecent photographs ; or
 - (c) to have in his possession such indecent photographs, with a view to their being distributed or shown by himself or others ; or
 - (d) to publish or cause to be published any advertisement likely to be understood as conveying that the advertiser distributes or shows such indecent photographs, or intends to do so.
- (2) For purposes of this Act, a person is to be regarded as distributing an indecent photograph if he parts with possession of it to, or exposes or offers it for acquisition by, another person.

(2) References to an indecent photograph include an indecent film, a copy of an indecent photograph or film, and an indecent photograph comprised in a film.

(3) Photographs (including those comprised in a film) shall, if they show children and are indecent, be treated for all purposes of this Act as indecent photographs of children.

(4) References to a photograph include the negative as well as the positive version.

(5) " Film " includes any form of video-recording.

International Law

Directive 2011/92/EU on combating the sexual abuse and sexual exploitation of children and child pornography and replacing Council Framework Decision 2004/68/JHA

(1) Sexual abuse and sexual exploitation of children, including child pornography, constitute serious violations of fundamental rights, in particular of the rights of children to the protection and care necessary for their well-being, as provided for by the 1989 United Nations Convention on the Rights of the Child and by the Charter of Fundamental Rights of the European Union.

(3) Child pornography, which consists of images of child sexual abuse, and other particularly serious forms of sexual abuse and sexual exploitation of children are increasing and spreading through the use of new technologies and the Internet.

(8) In the context of criminalising acts related to pornographic performance, this Directive refers to such acts which consist of an organised live exhibition, aimed at an audience, thereby excluding personal face-to-face communication between consenting peers, as well as children over the age of sexual consent and their partners from the definition.

(9) Child pornography frequently includes images recording the sexual abuse of children by adults. It may also include images of children involved in sexually explicit conduct, or of their sexual organs, where such images are produced or used for primarily sexual purposes and exploited with or without the child's knowledge. Furthermore, the concept of child pornography also covers realistic images of a child, where a child is engaged or depicted as being engaged in sexually explicit conduct for primarily sexual purposes.

(18) Knowingly obtaining access, by means of information and communication technology, to child pornography should be criminalised. To be liable, the person should both intend to enter a site where child pornography is available and know that such images can be found there. Penalties should not be applied to persons inadvertently accessing sites containing child pornography. The intentional nature of the offence may notably be deduced from the fact that it is recurrent or that the offence was committed via a service in return for payment.

(19) Solicitation of children for sexual purposes is a threat with specific characteristics in the context of the Internet, as the latter provides unprecedented anonymity to users because they are able to conceal their real identity and personal characteristics, such as their age. At the same time, Member States acknowledge the importance of also combating the solicitation of a child outside the context of the Internet, in particular where such solicitation is not carried out by using information and communication technology. Member States are encouraged to criminalise the conduct where the solicitation of a child to meet the offender for sexual purposes takes place in the presence or proximity of the child, for instance in the form of a particular preparatory offence, attempt to commit the offences referred to in this Directive or as a particular form of sexual abuse. Whichever legal solution is chosen to criminalise 'off-line grooming,' Member States should ensure that they prosecute the perpetrators of such offences one way or another.

Appendix I: Search Strategies

Question One: What are the typologies/sub-groups of internet offenders?

Database	Search Terms
PsycINFO	(Internet OR online OR cyber OR child porn* OR indecent image* OR child abuse image*) AND (offend* OR offence* OR sex* offender) AND (typolog* OR taxonom* OR pattern* OR pathway OR profil* OR offend* classification OR dimension* OR fantasy driven OR contact driven)
PubMed	(Internet OR online OR cyber OR indecent image OR child porn* OR child abuse image*) AND (offender OR offend OR offence) AND (typology OR pathway OR classification OR taxonomy OR fantasy driven OR contact driven)
SCIE	Internet OR online OR child porn* AND typology OR pathway
Web of Science	TS=(Internet OR online OR child porn* OR indecent image* OR child abuse image*) AND TS=(offend* OR offen?e* OR sex* offender) AND TS=(typolog* OR taxonom* OR pattern* OR pathway OR profil* OR offend* classification OR dimension* OR fantasy driven OR contact driven)
Key Terms: Internet, online, child pornography, indecent image, child abuse image, offence/offense, offending, crime, sex offender, typology, taxonomy, pattern, pathway, profile, offender classification, fantasy driven, contact driven.	

Question Two: What are the characteristics or profiles of those involved in internet offending?

Database	Search Terms
PsycINFO	(Internet OR online OR indecent image* OR child porn*) AND (offend* OR offen?e OR sex* offender) AND (characteristic OR personalit* OR profil*)
PubMed	(internet OR online OR child porn* OR indecent image) AND (offend OR offence OR offense OR sex* offender) AND (characteristic OR personalit* OR profil*)

SCIE	Internet OR online OR pornography AND profile OR characteristic OR demographic OR personality
Web of Science	TS=(Internet OR online OR indecent image* OR child porn*) AND TS=(offend* OR offen?e OR sex* offender) AND TS=(characteristic OR personalit* OR profil*)
Key Terms: Internet, online, child pornography, indecent image, child abuse image, offence/offense, offending, crime, sex offender, characteristics, personality, profile.	

Question Three: Are there similarities/ differences between internet offenders and contact offenders?

Database	Search Terms
PsycINFO	Internet OR online OR indecent image* OR non-contact) AND (contact OR offline OR dual OR mixed) AND (offend* OR offen?e OR sex* offender) AND (profil* OR psychology OR characteristic OR difference* OR similarit* OR comparison)
PubMed	(Internet OR online OR indecent image*) AND (contact OR offline OR dual OR mixed) AND (offender OR offence OR offense) AND (profile OR difference OR similarity OR comparison)
SCIE	Internet offend* OR online offend* AND contact offend* OR offline offend* OR mixed offend* AND profile OR comparison* OR difference* OR characteristic*
Web of Science	TS=(Internet OR online OR indecent image* OR non-contact) AND TS=(contact OR offline OR dual OR mixed) AND TS=(offend* OR offen?e OR sex* offend*) AND TS=(profil* OR psychology OR characteristic OR difference* OR similarit* OR comparison)
Key Terms: Internet, online, indecent image, contact, offline, dual, mixed, offender, offence/offense, profile, difference, similarity, comparison, characteristics.	

Question Four: What are the offending and re-offending trajectories of internet offenders?

Database	Search Terms
PsycINFO	Internet OR online OR indecent image OR child porn* AND offend* OR offen?e* AND criminal history* or offend* trajectory OR recidivism
PubMed	Internet or online or indecent image or child porn* AND offend or offence or offense AND criminal history or past offend* or future offend* or recidivism AND dual offend*, contact offend*, non-contact offending.
SCIE	internet or online or child pornography AND criminal history* or future offend* or recidivism.
Web of Science	TS=(Internet OR online OR cyber OR child porn* OR indecent image* OR child abuse image*) AND TS=(offend* OR offen?e* OR crim*) AND TS=(criminal histor* OR past offend* OR offend* trajectory OR future offend* OR recidivism OR reoffend)
<p>Key Terms: Internet, online, child pornography, indecent image, child abuse image, offend, offence/offense, offending, crime, criminal history, past offending, offending trajectory, offence/offense trajectory, recidivism, reoffending, future offending, dual offending.</p>	

Question Five: What are the risks/needs of internet offenders?

Database	Search Terms
PsycINFO	(Internet OR online OR child porn* OR indecent image OR child abuse image) AND (offend* OR offen?e OR crim*) AND (criminogenic OR criminogenic need OR risk factor).
PubMed	(Internet OR online OR child porn* OR indecent image*) AND (offend* OR offence OR offense) AND (criminogenic OR criminogenic need OR criminogenic risk)
SCIE	internet OR online OR child pornography OR child abuse images AND risk factor OR criminogenic need.

Web of Science TS=(Internet OR online OR child porn* OR indecent image*) AND TS=(offend* OR offen?e) AND TS=(criminogenic need OR criminogenic factor OR risk factor OR risk profile).

Key Terms: internet, online, child pornography, indecent image, child abuse image, offence/offense, offending, crime, criminogenic, criminogenic need, criminogenic risk, risk factor, risk profile.

Question Six: How is the risk posed by internet offenders assessed?

Database	Search Terms
PsycINFO	(Internet OR online OR indecent image* OR child porn* OR child abuse image*) AND (offend* OR offen?e* OR sex* offender OR perpetrator OR crim* OR convict* OR sexual interest) AND (risk assess* OR risk factor OR risk tool OR static factor* OR dynamic factor* OR psychological assessment OR recidivism OR risk management)
PubMed	(Internet OR online OR indecent image OR child pornography OR child abuse image*) AND (offend OR offence OR offense OR crime OR criminal OR perpetrator) AND (risk assessment OR risk factor OR risk tool OR risk measure OR static factor OR dynamic factor OR psychological assessment OR recidivism OR risk management)
SCIE	Internet OR online OR child pornography AND risk assessment OR risk tool OR risk factor OR actuarial
Web of Science	TS=(Internet OR online OR indecent image* OR child porn* OR child abuse image* OR child sexually explicit material) AND TS=(sex* offend* OR offen?e* OR offend* OR crim* OR convict* OR perpetrator) AND TS=(risk assess* OR risk factor* OR risk tool OR static factor* OR dynamic factor* OR psychological assessment OR recidivism OR risk management)
Key Terms: Internet, online, indecent image, child porn, child abuse image, child sexually explicit material, sex offender, offence/offense, offender, crime, convict, perpetrator, risk assessment, risk factor, risk tool, static factor, dynamic factor, psychological assessment, recidivism, risk management.	

Appendix J: Data Extraction Table Question One

Author	Year	Research	Sample Size	Study Results
Alexy, Burgess & Baker	2005	Empirical quantitative	225	The 225 media cases were categorised into three types of offenders, traders, travelers or combination trader-travelers. Traders view and exchange IIOC; travelers attempt to meet a victim offline; and trader-travelers do a combination of both.
Briggs, Simon & Simonsen	2011	Empirical quantitative	51	Two identifiable sub-groups of offenders were found: a fantasy driven group and a contact driven group. The fantasy driven group were motivated to engage in online sexual activities such as cybersex; whereas the contact driven group were motivated to engage in offline sexual behaviour.
DeHart, Dwyer, Seto, Moran, Letourneau & Schwarz-Watts	2017	Empirical mixed method	200	It was found that the 200 cases could be categorised into four types of offender: cybersex-only, schedulers, cybersex/schedulers and buyers. The proposed typology provides support for the fantasy versus contact driven distinction.
Elliot & Beech	2009	Non-empirical	*	*
Krone	2004	Non-empirical	*	*
Lanning	2001	Non-empirical	*	*
Meridian, Curtis, Thakker, Wilson & Boer	2013	Non-empirical	*	*
Tener, Wolak & Finkelhor	2015	Empirical qualitative	75	It was found that the 75 cases could be categorised into four types of offender: the expert, the cynical, the attention-focused and the sex-focused. Each type of offender was characterised by patterns of online communication, online/offline identities, relationship dynamics with victims and the level of sex crime expertise.

Appendix K: Data Extraction Table Question Two

Author	Year	Research	Sample Size	Gender	Mean Age	Study Results
Burgess, Carretta & Burgess	2012	Empirical quantitative	101	Male	40.8 years	At the time of arrest, over half of the men were employed, educated, had children and had not committed a prior offence.
Clevenger, Navarro & Jasinski	2016	Empirical quantitative	755	Mixed	41% - <30 23% - 30 -39 20% - 40-49 15% - 50>	The study examined indicators of low self-control, which included prior arrests for sexual offences, previous use of violence and problems with drugs/alcohol at the time of the offence. Results indicate that producers/distributors of IIOC exhibit greater signs of low self-control in comparison to IIOC possessors.
Henry, Mandeville-Norden, Hayes & Egan	2010	Empirical quantitative	422	Male	39.3 years	The study found that the offenders could be assigned to three groups: the normal, the inadequate and the deviant. Offenders were assigned based on their responses to measures assessing socio-affective function and pro-offending attitudes. The normal group obtained scores that were near or within normal range on all measures. The inadequate group obtained scores within the normal range on the pro-offending measures but obtained lower scores on the socio-effective measures. The deviant cluster had deficits across both the socio-affective and the pro-offending measures.
Laulik, Allam & Sheridan	2007	Empirical quantitative	30	Male	40.73 years	Internet offenders differed significantly from the normal population when compared on the Personality Assessment Inventory (PAI). The most significant difference was found in relation to the interpersonal scales of Dominance and Warmth.

Author	Year	Research	Sample Size	Gender	Mean Age	Study Results
Middleton, Elliot, Mandeville-Norden & Beech	2006	Empirical quantitative	72	Male	43.17 years	Psychometric tools were used to measure deficits associated with each of the five pathways of Ward and Siegart's (2002) Pathways Model. It was found that 60% obtained elevated scores in one or more of the psychometric indicators. The <i>intimacy deficits</i> and <i>emotional regulation</i> pathways were the most common. It was not possible to assign 40% of the sample to any of the five pathways, as they did not obtain above average scores.
Niveau	2010	Empirical quantitative	36	Male	35 years	Following a clinical interview, it was reported that 78% of the sample met the diagnostic criteria for some form of personality disorder. Analyses found addictive behaviour particularly in relation to internet use.
Price, Lambie & Krynen	2015	Empirical quantitative	46	Male	39 years	The study found that in comparison to general population norms (New Zealand), mental health issues such as depression, loneliness and anxiety appear elevated amongst the sample of the internet offenders.
Ray, Kimonis & Seto	2014	Empirical quantitative	175	Male	31.1 years (full sample) 28.9 years (IIOC users only)	The study compared pornography users who report IIOC consumption with those who do not. One fifth of the sample reported consuming IIOC. Consumption of IIOC was greatest amongst those who scored high on a measure of sensation seeking who reported frequent pornography use. IIOC consumers reported a greater interest in sexual contact with a minor in comparison to non-IIOC consumers.
Seigfried, Lovely & Rogers	2008	Empirical quantitative	307	Mixed	34.6 years (full sample)	Of a survey of 307 internet users, 30 self-reported using IIOC. Of the 30, 10 were female; thus, there was a 2:1 ratio of men consuming IIOC to women. The study found a relationship between higher scores on exploitative-manipulative amoral dishonesty (EMAD) traits, lower scores on internal moral choice (IV) and the viewing of IIOC.

Author	Year	Research	Sample Size	Gender	Mean Age	Study Results
Stevens, Hutchin, French & Craissati	2013	Empirical quantitative	184	Male	16.7 years (full sample)	The full sample was comprised of 184 adolescent sex offenders. The sample was divided into sub-groups based on their prior sexual offences. The small size of the internet offender subgroup prohibited statistical analysis. Of the 6 internet offenders, all lived with family at the time of the offence and 3 were bullied, and 4 reported friendship difficulties.
Winters, Kaylor & Jeglic	2017	Empirical quantitative	100 transcripts	Male	Actual – 35.33 years Online – 32.35 years	The study examined 100 transcripts of adults sexually grooming decoy victims online. It was found that one-third of the offenders lied about their age with all but one presenting themselves online as younger. Offenders attempted to arrange an in-person, offline meeting after a short period of time. The offenders were contacting who they believed to be females between the ages of 12 and 15.

Appendix L: Data Extraction Table Question Three

Author	Year	Type	Sample Size	Sample	Study Results
Bates & Metcalf	2007	Empirical quantitative	78	39 internet offenders (not specified what this involves); 39 contact offenders (includes rape and indecent assault of children and adults, as well as indecent exposure and obscene phone calls).	Findings from psychometric test assessments showed that social desirability reporting levels were higher in internet offenders; whilst scores were lower for sexualised attitudes towards children, empathy distortions and emotional congruence with children.
Aslan & Edelmann	2014	Empirical quantitative	230	74 internet sex offences (possession of IIOC); 118 contact offenders (direct abuse of children); 38 dual offenders (both of these).	Evaluating the demographic and offence characteristics showed that internet offenders tend to be single, white, male, younger, better-educated, in employment and less likely to have previous convictions. Contact offenders were more likely to report childhood adversity. Dual offenders accessed more extreme IIOC than internet only.
Babchishin, Hanson & Hermann	2011	Meta-analysis	N/A	4844 (total combined, median=100) of online offenders (those with internet offences, including those who have also committed contact offences); 1342 (total combined, median=104) offline offenders (those who have committed contact offences only).	Results from meta-analyses showed offline offenders were older and more likely to be a racial minority. Online offenders had greater levels of sexual deviancy and lower rates of victim empathy. Offline offenders possessed more cognitive distortions and greater emotional identification with children.

Author	Year	Type	Sample Size	Sample	Study Results
McCarthy	2010	Empirical quantitative	110	56 internet offenders (convicted of only IIOC offences); 51 dual offenders (history or conviction of sexually abusing a child and IIOC offences).	Dual offenders were more likely to have a history of substance abuse, paedophilia diagnosis and previous convictions. Dual offenders are more likely to masturbate to IIOC and possess a larger collection.
Seto, Wood, Babchishin & Flynn	2012	Empirical quantitative	146	38 contact offenders (contact sexual offences against children); 38 internet offenders (IIOC); 70 non-contact offenders (solicitation).	Results showed that internet offenders were more likely to admit paedohhebophilia and have deviant sexual preferences. Non-contact and internet offenders were better-educated than their contact counterparts.
Sheldon & Howitt	2008	Empirical quantitative	51	16 internet offenders (IIOC offences); 25 contact offenders (contact sexual offences against children); 10 dual (internet and IIOC offences as well as those who had indecently exposed themselves to children).	It was discovered that internet offenders have more sexual fantasies, which the authors suggest may be linked to higher intelligence levels. Contact offenders tend to instead use memory of the sexual abuse perpetrated.
Merdian, Curtis, Thakker, Wilson & Boer	2014	Empirical quantitative	68	22 internet offenders (history of or interest in the possession, distribution or production of IIOC); 29 contact offenders (history of interest in sexual contact with a child); 17 dual offenders (both types of offences).	Internet offenders were less likely to endorse cognitive distortions around justification, children as sexual agents and entitlement; although they did endorse those relevant to their offending behaviours. Dual offenders were the most likely to endorse cognitive distortions.

Author	Year	Type	Sample Size	Offending Population	Study Results
Webb, Craissati & Keen	2007	Empirical quantitative	210	90 internet offenders (IIOC offences); 120 contact offenders (child molestation offences).	Antisocial variables were more prevalent in contact offenders. Internet offenders had less intimate relationships and were younger than contact offenders; they were also less likely to recidivate and have fewer criminal histories.
Neutze, Seto, Schaefer, Mundt & Beier	2011	Empirical quantitative	137	42 internet offenders (use of IIOC); 45 contact offenders (child sexual abuse offences); 50 dual (involvement in both types).	Those diagnosed as paedophilic and/or hebephillic were recruited from the community. There were more similarities relating to dynamic risk factors across the groups than differences. Internet offenders scored lower on offense-supportive cognitions scale.
Reijnen, Bulten & Nijman	2009	Empirical quantitative	134	22 internet offenders (downloading IIOC); 47 contact offenders (sexual physical abuse with children and adults); 65 non-sexual offenders (domestic violence, property and fraud offences).	Participants were selected on the basis of them having been subjected to the MMPI-2 screening and a psychological examination. Internet offenders were more likely to live alone and not have an intimate partner; they also had a lower Ma scoring suggesting they are less impulsive, energetic and extraverted.
Merdian, Moghaddam, Boer, Wilson, Thakker, Curtis & Dawson	2016	Empirical quantitative	68	22 internet offenders (history or interest in possession, distribution or production of IIOC); 29 contact offenders (history or interest in sexual contact with a child); 17 dual offenders (those with both offence types).	Internet offenders possessed fewer cognitive distortions about children, less sexual entitlement and justification for their behaviour; contact offenders were more likely to act out. Looking at sub-groups within internet offenders found contact-driven ones were more likely to endorse cognitive distortions; whilst fantasy-driven ones surprisingly had more online contact with children.

Author	Year	Type	Sample Size	Sample	Study Results
McManus, Long, Alison & Almond	2015	Empirical quantitative	244	120 dual offenders (IIOC offences and contact child sexual offences); 124 internet offenders (IIOC offences only).	Dual offenders were more likely to have previous convictions and access to children. Production of IIOC and larger IIOC collections were also distinguishing characteristics of dual offenders; although internet offenders were more likely to possess extreme IIOC.
Magaletta, Faust, Bickart & McLearn	2014	Empirical quantitative	61	35 internet offenders (only IIOC); 26 contact offenders (history of contact offending against a child).	Internet offenders had more difficulties in interpersonal functioning, depression and mood regulation. They scored lower on the aggression and dominance scales than contact offenders and a comparative male normative sample.
Tomak, Weschler, Ghahramanlou-Holloway, Virden & Nademin	2009	Empirical quantitative	152	48 internet offenders (online sex crimes including solicitation, grooming, receiving or distributing IIOC); 104 general sex offenders (rape, paedophilia or both).	The MMPI-2 scale was used to assess psychometric variables. Internet offenders were less deviant, impulsive and aggressive than general sex offenders.
Aebi, Plattner, Ernest, Kaszynski & Bessler	2014	Empirical quantitative	264	54 internet offenders (possession of IIOC); 42 possessors of other types of illegal pornography (e.g. bestiality); 168 contact offenders (64 contact sexual offence against a child; 104 against an adult).	Juvenile possessors of IIOC downloaded this over a longer period of time and more frequently than those who possessed other types of illegal pornography. They also showed less criminal histories than those who committed contact offences.

Author	Year	Type	Sample Size	Sample	Study Results
Seto, Cantor & Blanchard	2006	Empirical quantitative	685	57 internet offenders; 43 dual offenders; 178 contact offences against children aged under 14 years; 216 for contact offences for victims aged 17 and older; 191 general sexology patients.	Phallometric assessments were administered to 685 male patients using a variety of nude images, consisting of adults and children of both genders. Results evidenced that internet offenders (both solely internet offences and dual) showed greater sexual arousal to children than adults than the other types of patients. Based on this, the authors maintain that internet offending may be a stronger diagnostic indicator of paedophilia than contact offences against children.
Henshaw, Ogloff & Clough	2018	Empirical quantitative	1205	456 internet offenders; 493 contact offenders; 256 dual offenders.	An examination of the demographic, mental health and offending characteristics showed that internet offenders differed from their contact and dual counterparts. Internet offenders had fewer criminal histories, less offending versatility and the other type of sexual offending they tended to engage in was solicitation. Contact offenders were older at the time of index and first offences. Internet offenders had greater educational attainments; whilst contact offenders had more contact with mental health and crisis services. Antisociality was low for internet offenders whilst sexual deviancy was high; the reverse was the case for contact offenders; dual offenders rated highly on both factors.

Author	Year	Type	Sample Size	Sample	Study Results
Kuhle et al.	2017	Empirical quantitative	190	Last six months: 44 non-offenders; 102 internet offenders; 44 dual offenders. Lifetime offending: 11 non-offenders; 97 internet offenders; 11 contact offenders; 71 dual offenders.	Using a sample of undetected paedophilebephiles, sexual preoccupation was explored across internet, dual, contact and non-offenders. Sexual preoccupation seems to be associated with dual offending over a stable period of time; whereas internet offenders tend to be sexually preoccupied within the temporal proximity of viewing IIOC.

Appendix M: Data Extraction Table Question Four

Author	Year	Type	Sample Size	Study Results
Jung, Ennis, Stein, Choy & Hook	2013	Empirical quantitative	196	Comparing internet, non-contact (exhibitionism and voyeurism) and contact offenders found that each group recidivated with the same type of offence. Internet offenders had the lowest rate of reoffending. It is speculated a lack of access to children may be the reason for internet offenders not progressing onto contact offences.
Howard, Barnett & Mann	2014	Empirical quantitative	14804	Looking at criminal histories and recidivism found that sexual offenders tended to reoffend with the same type of offence, which the authors describe as 'sexual specialisation.' Of note were that some contact offenders crossed over to IIOC offending.
Eke, Seto & Williams	2010	Empirical quantitative	541	Exploring the recidivism trends of internet offenders found that those who reoffended most did so with further IIOC offences. Contact offending was predicted by criminal history and release failures.
Endrass, Urbaniok, Hammermeister, Benz, Elbert, Laubacher & Rossegger	2009	Empirical quantitative	231	Examining the recidivism rates of internet offenders found that these were very low, particularly for contact offences. Reoffending was linked to criminal histories.
Smid, Schepers, Kamphuis, van Linden & Bartling	2015	Empirical quantitative	150	Results indicated that internet offenders who went onto contact offend had criminal histories and more extreme IIOC material. It is theorised that incentive theory applies where internet offenders are more interested in pornographic images; whilst contact offenders are more sexually interested in children.
Owens, Eakin, Hoffer, Muirhead & Shelton	2016	Empirical quantitative	251	Looking at cases of 'online sexual exploitation of children' found that almost two-fifths of internet offenders crossed over to other types of offending categories. For those that did contact offend, the characteristics of victims tended to match those in the IIOC viewed.

Author	Year	Type	Sample Size	Study Results
Lee, Li, Lamade, Schuler & Prentky	2012	Empirical quantitative	349	Internet preoccupation in terms of the impact of the internet on one's life increased the odds of being an internet offender. By contrast, antisocial behaviour was associated with contact offenders. An increased presence of both of these had a link to dual offending.
Faust, Bickart, Renaud & Camp	2015	Empirical quantitative	638	Comparing the recidivism rates of contact and internet offenders found there were lower rates for the latter offending group. It is speculated that the pro-social lives of internet offenders (e.g. better education) may be a deterrent to reoffending.
Lee, Li, Lamade, Schuler & Prenty	2012	Empirical quantitative	349	Although follow-up data was not used, recidivism risk was predicted using the results from scales measuring internet preoccupation and antisocial behaviour. It was surmised that the presence of both internet preoccupation and antisocial behaviour increased the chances of dual offending.
Fortin, Paquette & Dupont	2018	Non-empirical	N/A	Extrapolating themes from existing literature on internet offending, the authors devise a potential pathway from internet to contact offending. Episodes of activity are suggested, alongside potential obstacles to progressing between these. Script theory is utilised to theorise about the scripts influencing different types of behaviours from grooming to distributing IIOC.
Bourke et al.	2015	Empirical quantitative	127	Secondary data from tactical polygraph examinations is utilised to explore undetected contact offending in internet offenders. Just over half of the sample provided disclosures about contact sexual abuse following polygraph examinations. For those who did not disclose any contact offending, almost a third of them had a 'Deception Indicated' result.
Drouin, Boyd & Romaneli	2018	Empirical quantitative	334	Linguistic patterns within chat transcripts of internet child sex sting offenders were assessed. Significant of reoffending were found to be 'clout' (a measure of social dominance), personal pronoun use, percentage of sexual and time category words. This suggests an internet sex reoffender who is dominant, non-equivocating and predatory.

Appendix N: Data Extraction Table Question Five

Author	Year	Type	Sample Size	Risk Factors	Study Results
Klein, Schmidt, Turner & Briken	2015	Empirical quantitative	8718	Paedophilic sexual interests, sex drive (measured by total sexual outlets), hypersexuality, antisocial behaviour.	Aggregated sex drive, sexual fantasies involving children and antisocial behaviour were identified as risk factors for consumption of IIOC. Sex drive was quantified by 'total sexual outlets' (the sum of orgasms derived from sexual activities) per week.
Neutze, Grundmann, Scherner & Beier	2012	Empirical quantitative	346	Sexual self-regulation, sexual preferences, offence-supportive cognitions, socio-affective deficits, indicators of social functioning (e.g. education).	Dual, contact and internet offenders were divided into detected and undetected. Dual and internet offenders had the highest levels of 'undetected status.' Internet offenders were found to have greater socio-affective deficits.
Seto, Hanson & Babchishin	2011	Meta-analysis	4464 (study 1) 2630 (study 2)	Socio-demographic characteristics, offending histories, intimacy deficits, antisociality and sexual deviance.	Reviewing the research suggests that the same risk factors are applicable for offline and online offenders: emotional identification with children, loneliness, poor social skills, psychopathy, antisocial attitudes, paedophilia and sexual sadism and having a prior criminal history of any kind.
Long, Alison & McManus	2012	Empirical quantitative	120	Previous convictions, access to children, quantity and type of IIOC, online offending behaviours, explanations given in police interviews.	Comparing dual and internet offenders finds there are risk factors specific to each. Internet offenders possess a greater quantity of IIOC collected over a longer period of time and admit a sexual attraction to this material. Dual offenders are more likely to have access to children and engage in grooming behaviours.

Author	Year	Type	Sample Size	Risk Factors	Study Results
Lee, Li, Lamade, Schuler & Prentky	2012	Empirical quantitative	349	Antisocial behaviour, internet preoccupation.	Internet preoccupation in terms of the impact of the internet on one's life increased the odds of being an internet offender. By contrast, antisocial behaviour was associated with contact offenders. An increased presence of both of these had a link to dual offending.
McManus, Long, Alison & Almond	2015	Empirical quantitative	244	Socio-demographic characteristics, previous convictions and IIOC possession.	Internet offenders possessed more IIOC, were more likely to live alone and had a 'passive viewer' attitude towards their offending. Dual offenders had more access to children and greater criminal histories.
Buschman, Wilcox, Krapohl, Oelrich & Hackett	2010	Empirical quantitative	38	Sexual behaviours and interests, masturbatory preferences.	Self-reported data was compared with the results of polygraph examinations. The polygraph disclosures indicated that offenders masturbated to the most severe images and other offending behaviours such as grooming and exhibitionism were also disclosed.
Elliott, Beech, Mandeville-Norden & Hayes	2009	Empirical quantitative	1031	Offense-supportive beliefs, empathic concern, interpersonal functioning, emotional management, impulsivity.	Internet offenders were marked by under-assertiveness, had a greater ability to identify with fictional characters and distanced themselves from their offending behaviours. Contact offenders had deficits in antisocial cognitions and possessed more cognitive and victim empathy distortions.
Seto, Hermann, Kjellgren, Priebe, Svedin & Langstrom	2015	Empirical quantitative	1978	Personality, offence-supportive attitudes and beliefs, sexual behaviours, sexual interest in children, consumption of pornography.	Surveying a population-representative sample indicated that viewing of IIOC was significantly associated with antisocial behaviour, sexual history, viewing other atypical pornography and interest in having sex with a child. These factors were used to developed a 'Child Pornography Correlates Scale.'

Appendix O: Data Extraction Table Question Six

Author	Year	Type	Sample Size	Instrument, scale or system tested	Study Results
Long, Alison, Tejeiro, Hendricks & Giles	2016	Empirical quantitative	374	KIRAT-2 case management system	The resource prioritisation and management system, KIRAT-2, was found to correctly classify 97.6% and 62.3% of high and low/medium risk offenders respectively. The categorisations of offenders are based on previous contact offences, with the argument advanced that a previous contact offender will always have a higher chance of reoffending.
Seto & Eke	2015	Empirical quantitative	266	CPORT risk assessment instrument	Seven predictors of sexual recidivism were identified and thereafter used to develop the structured checklist of the CPORT. The CPORT was found to significantly predict any recidivism, any sexual recidivism and contact sexual recidivism. The only exception to this was with internet only offenders, where the predictions were not significant.
Seto & Eke	2017	Empirical quantitative	286	CASIC scale	The CASIC scale is intended to measure sexual interest in children. Testing this scale found it was significantly associated with the admission of sexual interest in children. To improve the predictive accuracy of the CPORT, it is therefore recommended that the CASIC scale substitutes item 5 in this tool.
Wakeling, Howard & Barnett	2011	Empirical quantitative	1344	RM2000 risk assessment tool Revised RM200 risk assessment tool (RM2000-R) OGRS3 risk assessment tool	The RM2000 was found to overestimate risk for internet offenders. When this tool was revised to omit two aggravating items, it became a more accurate predictor of risk. The OGRS only showed moderate predictive accuracy for predicting sexual recidivism in internet offenders.
Osborn, Elliott, Middleton & Beech	2010	Empirical quantitative	73	RM2000 risk assessment tool Static-99 risk assessment tool	The RM2000 and Static-99 both overestimated the risk posed by internet offenders. The RM2000-R gave a more realistic measure of risk in this population, reducing the risk level by one category.

Author	Year	Type	Sample Size	Instrument, scale or system tested	Study Results
Eke & Seto	2016	Tool scoring guide	286 ³¹	CPORT risk assessment tool CASIC scale	This document provides an overview about how the CPORT was developed. Instructions on how to score are provided for each item within the tool. Further details are also provided for the CASIC scale.
Eke, Helmus & Seto	2018	Empirical quantitative	250	CPORT risk assessment tool CASIC scale	This study provides further validation of the CPORT using a combined sample of the development and validation samples. Using this combined sample, the CPORT predicted any sexual and internet offending recidivism. The usefulness of the CASIC was also tested through it replacing item 5 on the CPORT.

³¹ *In original development sample, as discussed in Seto & Eke 2015

Appendix P: Quality Assessment Questions

Quality Assessment Questions
Are the research aims of the study clear and concise?
Is the background context of the topic clearly and fully examined?
Is the research design appropriate to achieve these aims?
Are the research methods employed suitable to achieve these aims?
Is the analytical approach thorough and apt?
Are the results of the research presented in an understandable and illustrative manner?
How relevant is the focus of this study to the current research project?
Overall Score - Low/ Medium/ High

Appendix Q: Quality Assessment Table

This table details the WoE scores assigned to the research reviewed for Questions One to Six.

Authors	Year	Score
Aebi, M., Plattner, B., Ernest, M., Kaszynski, K., & Bessler, C.	2014	Medium
Alexy, E. M., Burgess, A. W., & Baker, T.	2005	Medium
Aslan, D., & Edelmann, R.	2014	Medium
Babchishin, K. M. Hanson, R. K., & Hermann, C. A.	2011	Medium
Babchishin, K. M. Hanson, R. K., & VanZuylen, H.	2015	High
Bates, A., & Metcalf, C.	2007	Medium
Bourke, M. L., Fragomeli, L., Detar, P. J., Sullivan, M. A., Meyle, E., & O'Riordan, M.	2015	Low
Briggs, P., Simon, W. T., & Simonsen, S.	2011	Medium
Burgess, A. W., Carretta, C. M., & Burgess, A. M.	2012	Low
Buschman, J., Wilcox, D., Parohl, D., Oelrich, M., & Hackett, S.	2010	Low
Clevenger, S.L., Navarro, J.N., & Jasinski, J.L.	2016	Medium
DeHart, D., Dwyer, G., Seto, M. C., Moran, R., Letourneau, E., & Schwarz-Watts, D.	2017	High
Drouin, M., Boyd, R. L., & Romanelli, M. G.	2018	Medium
Eke, A. W., & Seto, M. C.	2016	High
Eke, A. W., L. M. Helmus., & Seto, M. C.	2018	High
Eke, A.W., Seto, M.C., & Williams, J.	2011	Medium
Elliott, I. A., & Beech, A. R.	2009	Medium
Elliott, I. A., Beech, A. R., & Mandeville-Norden, R.	2013	Medium
Elliott, I. A., Beech, A. R., Mandeville-Norden, R., & Hayes, E.	2009	High
Endrass, J., Urbaniok, F., Hammermeister, L.C., Benz, C., Elbert, T., Laubacher, A., & Rossegger, A.	2009	Medium
Faust, E., Bickart, W., Renaud, C., & Camp, S.	2014	High
Faust, E., Bickart, W., Renaud, C., & Camp, S.	2015	High
Fortin, F., Paquette, S., & Dupont, B.	2018	Medium
Henry, O., Mandeville-Norden, R., Hayes, E., & Egan, V.	2010	Medium
Henshaw, M., Ogloff, J. R. P., & Clough, J. A.	2018	High
Howard P. D., Barnett G. D., & Mann, R. E.	2014	Medium

Authors	Year	Score
Howitt, D., & Sheldon, K.	2007	Medium
Jung, S., Ennis, L., Stein, S., Choy, A.L., & Hook, T.	2013	High
Klein V., Schmidt A. F., Turner D., & Briken P.	2015	Low
Krone, T.	2004	Medium
Kuhle, L. F., Schlinzig, E., Kaiser, G., Amelung, T., Konrad, A., Röhle, R., & Beier, K. M.	2017	Low
Lanning, K.	2001	Medium
Laulik, S., Allam, J., & Sheridan, L.	2007	Medium
Lee, A. F., Li, N.-C., Lamade, R., Schuler, A., & Prentky, R. A.	2012	Medium
Long, M. L., Alison, L. A., McManus, M. A. & McCallum, C.	2012	High
Long, M. L., Alison, L. A., Tejeiro, R. Hendricks, E., & Giles, S.	2016	Medium
Magaletta, P. R., Faust, E., Bickart, W., & McLearn, A. M.	2014	Medium
McCarthy, J. A.	2010	Medium
McManus, M. A., Long, M. L., Alison, L., & Almond, L.	2015	High
Merdian, H. L., Curtis, C., Thakker, J., Wilson, N., & Boer, D. P.	2014	Medium
Merdian, H. L., Curtis, C., Thakker, J., Wilson, N., & Boer, D. P.	2013	Low
Merdian, H. L., Moghaddam, N., Boer, D. P., Wilson, N., Thakker, J., Curtis, C., & Dawson, D.	2016	Medium
Middleton, D., Elliot, I. A., Mandeville-Norden, R., & Beech, A. R.	2006	Medium
Neutze, J., Grundmann, D., Scherner, G., & Beier, K. M.	2012	Low
Neutze, J., Seto, M. C., Schaefer, G. A., Mundt, I. A., & Beier, K. M.	2011	Low
Niveau, G.	2010	Low
Osborn, J., Elliott, I. A., Middleton, D., & Beech, A. R.	2010	Low
Owens, J. N., Eakin, J. D., Hoffer, T., Muirhead, Y., & Shelton, J. L. E.	2016	Low
Price, M., Lambie, I., & Krynen, A. M.	2015	Low
Ray, J. V., Kimonis, E. R., & Seto, M. C.	2014	Medium
Reijnen, L., Bulten, E., & Nijman, N.	2009	Low
Seigfried, K., Lovely, R., & Rogers, M.	2008	Medium
Seto, M. C., & Eke, A. W.	2005	Low
Seto, M. C., & Eke, A. W.	2015	High
Seto, M. C., & Eke, A. W.	2017	Medium
Seto, M. C., Cantor, J. M., & Blanchard, R.	2006	Medium
Seto, M. C., Hanson, R. K., & Babchishin, K. M.	2011	Medium
Seto, M. C., Hermann, C. A., Kjellgren, C., Priebe, G., Svedine, C. G., & Långström, N.	2015	Low

Authors	Year	Score
Seto, M. C., Wood, J. M., Babchishin, K. M., & Flynn, S.	2012	Low
Sheldon, K., & Howitt, D.	2008	Medium
Smid, W., Schepers, K., Kamphuis, J.H., Linden, S. van & Bartling, S.	2015	Medium
Stevens, P., Hutchin, K., French, L., & Craissati, J.	2013	Medium
Tener, D., Wolak, J., & Finkelhor, D.	2015	Medium
Tomak, S., Weschler, F. S., Ghahramanlou-Holloway, M., Virden, T., & Nademin, M. E.	2009	Low
Wakeling, H. C., Howard, P., & Barnett, G.	2011	Medium
Webb, L., Craissati, J., & Keen, S.	2007	Low
Winters, G. M., Kaylor, L. E., & Jeglic, El. L.	2017	Low

Appendix R: Question One Table (Typologies)

Lanning (2001)						
<p>'Normal' offenders include adolescents searching online for pornography in addition to adults who are impulsive and/or curious.</p>	<p>Morally indiscriminate offenders tend to be motivated by anger or power and have a history of violent behaviour.</p>	<p>Profiteer offenders are trying to make money from IIOC. They may be motivated by the increased potential for profit and the lowered risk of identification.</p>	<p>Paedophiles are sexually attracted to children.</p>	<p>Diverse offenders have a variety of sexual interests.</p>	<p>Latent offenders are considered to offend due to the features of the internet as it disinhibits behaviours.</p>	<p>Miscellaneous offenders include those who encounter IIOC primarily for non-sexual purposes, despite not having the authority to legally access such content.</p>

Krone (2004)								
<p>Browser includes those who unintentionally encounter IIOC but intentionally keep the material.</p>	<p>Private Fantasy offenders knowingly develop narrative or images which depicts child sexual abuse.</p>	<p>Trawler offenders search for IIOC without employing security measures. Low level of networking with other offenders.</p>	<p>Non-secure collector purchases, downloads or trades IIOC using sources with no security or barriers. High level of networking with other offenders.</p>	<p>Secure collector employs security measures when searching for IIOC. High level of networking with other offenders.</p>	<p>Online groomer includes those who contact children online with the intent of developing a sexual relationship.</p>	<p>Physical abuser includes those who actively abuse children. They may record the abuse for their purposes only. They may also view IIOC.</p>	<p>Producer includes those who record the abuse of children and distribute it to others.</p>	<p>Distributor may or may not have a sexual interest in IIOC; however, they are responsible for distributing it.</p>

Alexy, Burgess & Baker (2005)

<p>Traders collect and trade IIOC online. They may obtain convictions pertaining to the production, possession or distribution of IIOC but not contact sexual offences.</p>	<p>Travellers establish a relationship with a victim online with the intention of progressing to meet them offline. Manipulation and coercion may be used.</p>	<p>Trader-travellers include those who trade IIOC but also travel to meet a victim to engage in contact sexual offences.</p>
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Elliot & Beech (2009)

<p>Periodically prurient offenders may view IIOC as part of their wider interest in pornography. They are motivated to view IIOC by impulsivity/curiosity.</p>	<p>Fantasy only offenders have no known history of contact sexual offences. They view and trade IIOC to fuel their sexual interest.</p>	<p>Direct victimisation offenders use the internet to facilitate contact and non-contact sexual offending, which may include viewing IIOC in addition to grooming children online to facilitate the commission of a contact sexual offence.</p>	<p>Commercial exploitation offenders are involved with the production or distribution of IIOC for the purposes of financial gain.</p>
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The following typologies were proposed of online solicitation offenders.

Briggs, Simon & Simonsen (2011)	
<p>Fantasy driven offenders include those who offend online only. They engage in masturbation, exhibitionism or cybersex to achieve sexual gratification. They engage in a range of online sexual behaviours including cybersex.</p>	<p>Contact driven offenders include those who use the internet as a means to arrange to meet victims offline with the purposes of engaging in a contact sexual offence. They engage in a few sexual behaviours except for grooming.</p>

Tener, Wolak & Finkelhor (2015)			
<p>Expert offenders may or may not use their real identity online. These offenders have a high-level expertise.</p>	<p>Cynical offenders tend to know their victim offline before offending. They may or may not present their true identity online. The sexual relationship may develop quickly and the relationship is seemingly reciprocal in the early stages. These offenders have a moderate to low level of expertise.</p>	<p>Attention-focused offenders meet victims online but progress to meeting them offline. They present their true identity. The relationship develops gradually and is thought to be reciprocal. These offenders have a low level of expertise.</p>	<p>Sex-focused offenders meet victims online but quickly progress to meeting offline. These offenders present their true identities. The relationship is considered to be reciprocal.</p>

DeHart, Dwyer, Seto, Moran, Letourneau & Schwarz-Watts (2017)			
<p>Cybersex-only offenders often engage in prolonged communication. They do not plan to meet victims offline. They may expose themselves online or seek to obtain sexually explicit images.</p>	<p>Cybersex/schedulers offenders tend to communicate with victims for long period of time. Whilst they may discuss meeting offline, they are likely to cancel or not show up. They may expose themselves online and seek to obtain sexually explicit victims.</p>	<p>Schedulers only communicate with victims for a short period of time as they seek immediate sexual gratification. They do not tend to expose themselves online but seek sexually explicit images instead.</p>	<p>Buyers are focused on arranging to meet the victim in person. They tend to discuss/negotiate the sexual behaviours they will engage in.</p>

Appendix S: Question Two Table (Characteristics)

Below are some of the findings which emerged from the research reviewed for Question Two regarding the characteristics of internet offenders.

The studies which report findings relating to the characteristics listed below have been recorded for reference. It is important to note that not all studies included information pertaining to the characteristics listed below.

Demographic Characteristics	Studies found in
Tend to be Male	Burgess et al. (2012) Clevenger et al. (2016) Henry et al. (2010) Middleton et al. (2006) Niveau (2010) Price et al. (2015) Seigfried et al. (2008) Stevens et al. (2013) Winters et al. (2016)
Tend to be White	Burgess et al. (2012) Clevenger et al. (2016) Laulik et al. (2007) Price et al. (2015) Ray et al. (2014) Seigfried et al. (2008)
Tend to be well-educated	Burgess et al. (2012) Seigfried et al. (2008)
Tend to be employed	Burgess et al. (2012) Clevenger et al. (2016) Laulik et al. (2007) Niveau, (2010) Price et al. (2015)
Tend to be young to middle aged	Burgess et al. (2012) Clevenger et al. (2016) Henry et al. (2010) Laulik et al. (2007) Niveau (2010) Price et al. (2015) Ray et al. (2014) Seigfried et al. (2008) Stevens et al. (2013) Winters et al. (2017)
Previous convictions (sexual and non-sexual)	Burgess et al. (2012) Clevenger et al. (2016) Laulik et al. (2007) Niveau (2010) Price et al. (2015)

Psychosocial Characteristics	
May experience interpersonal/social skills deficits	Henry et al. (2010) Laulik et al. (2007) Middleton et al. (2006) Price et al. (2015)
May experience intimacy deficits	Henry et al. (2010) Laulik et al. (2007) Middleton et al. (2006) Price et al. (2015)
Situational characteristics	
May have children or access to children through living arrangements/employment/recreational activities	Burgess et al. (2012) Clevenger et al. (2016) Laulik et al. (2007) Niveau (2010)
Individual Factors	
Likely to spend a significant amount of time online	Laulik et al. (2007) Niveau (2010) Ray et al. (2014)
May be sexually preoccupied	Niveau (2010)

Appendix T: Question Three (Characteristics)

Below are some of the findings extrapolated from the research reviewed for Question Three.

The studies which report findings relating to the characteristics/factors listed below have been recorded for reference. It is important to note that not all studies included information pertaining to the characteristics/ factors listed below.

CONTACT OFFENDERS

Situational Factors	Studies Found In
Access to children	Babchishin, Hanson & VanZuylen (2015) Seto, Wood, Babchishin & Flynn (2012)
More likely to have been in a relationship (including divorced/separated)	Aslan & Edelman (2014) Webb, Craissati & Keen (2007)
Alcohol and Substance Abuse	Aslan & Edelman (2014) Babchishin, Hanson & VanZuylen (2015) Magaletta, Faust, Bickart & McLearn (2014) McCarthy (2010)
Engaged in sexually risky behaviour	Webb, Craissati & Keen (2007)
Racial minority	Babchishin, Hanson & Hermann (2011) Magaletta, Faust, Bickart & McLearn (2014) Tomak, Weschler, Ghahramanlou-Holloway, Virden & Nademin (2009) Webb, Craissati & Keen (2007)

Individual Factors	Studies Found In
Experienced childhood abuse	Aslan & Edelman (2014) McCarthy (2010) Merdian et al. (2016) Sheldon & Howitt (2008)
Mental health problems similar to internet	Aslan & Edelman (2014)
More contact with mental health and crisis services	Henshaw, Ogloff & Clough (2018)
More likely to 'act out'	Elliot, Beech & Mandeville-Norden (2013) Merdian et al. (2016) Webb, Craissati & Keen (2007)
Higher levels of psychopathy	Webb, Craissati & Keen (2007)
Higher degree of antisociality	Babchishin, Hanson & VanZuylen (2015) Elliot, Beech, Mandeville-Norden & Hayes (2009) Henshaw, Ogloff & Clough (2018)
Overassertiveness	Elliot, Beech & Mandeville-Norden (2013)
Externalised locus of control	Bates & Metcalf (2007) Elliot, Beech & Mandeville-Norden (2013)

Perceive themselves to be a greater risk of reoffending	Neutze et al. (2011)
Caucasian	Aslan & Edelmann (2014)

Cognitive Factors	Studies Found In
More problematic attitudes to sexual assault	Webb, Craissati & Keen (2007)
More likely to endorse children as sexual agents and display a sense of sexual entitlement	Merdian et al. (2016)
Higher levels of self-delusion	Bates & Metcalf (2007)
More cognitive distortions	Babchishin, Hanson & Hermann (2011) Bates & Metcalf (2007) Elliot, Beech, Mandeville-Norden & Hayes (2009) Merdian et al. (2016)
Emotional deficits, sexual self-regulation, non-conformity, loneliness and self-esteem similar to internet offenders.	Babchishin, Hanson & Hermann (2011) Neutze et al. (2011)
Similar fantasies and paedophilic interests as internet offenders	Sheldon & Howitt (2008)
Greater emotional congruence with children	Babchishin, Hanson & Hermann (2011) Bates & Metcalf (2007)

Victim Factors	Studies Found In
Sexual fantasies adhered to the gender of their victims	Sheldon & Howitt (2008)
Appear to use the memories of abuse to generate sexual fantasies	Sheldon & Howitt (2008)
Victims more likely to be known and female	Aslan & Edelmann (2014)
Less victim empathy	Babchishin, Hanson & Hermann (2011) Bates & Metcalf (2007) Elliot, Beech, Mandeville-Norden & Hayes (2009) Elliot, Beech & Mandeville-Norden (2013)

DUAL OFFENDERS

Situational Factors	Studies Found In
Caucasian	Aslan & Edelmann (2014)
Greater access to children	Long, Alison & McManus (2012) McManus, Long, Alison & Almond (2015) Merdian et al. (2016)
Substance abuse	Babchishin, Hanson & VanZuylen (2015) McCarthy (2010)
Unemployment	Babchishin, Hanson & VanZuylen (2015)

Individual Factors	Studies Found In
Spends more time viewing legal pornography	McCarthy (2010)
More likely to have violent histories and previous convictions	Babchishin, Hanson & VanZuylen (2015) Henshaw, Ogloff & Clough (2018) Long, Alison & McManus (2012) McManus, Long, Alison & Almond (2015)
Higher scores of antisociality	Babchishin, Hanson & VanZuylen (2015)
Greater ability to relate to fictional characters	Elliot, Beech, Mandeville-Norden & Hayes (2009) Elliot, Beech & Mandeville-Norden (2013)
More likely to groom online and communicate with like-minded individuals	Long, Alison & McManus (2012) McCarthy (2010) McManus, Long, Alison & Almond (2015)
More likely to engage in adult cybersex	McCarthy (2010)
More sexually preoccupied over a stable period of time	Kuhle et al. (2017)

Cognitive Factors	Studies Found In
Greater sexual interest in children/paedophilia	Babchishin, Hanson & VanZuylen (2015) McCarthy (2010)
Do not hold offence-supportive beliefs about sexual activity between children and adults	Elliot, Beech, Mandeville-Norden & Hayes (2009)
Sexual fantasies involve both genders	Sheldon & Howitt (2008)
Strongest endorsement of cognitive distortions relating to sexual behaviours, children as sexual agents and sexual entitlement	Merdian, Curtis, Thakker, Wilson & Boer (2014) Merdian et al. (2016)

Victim Factors	Studies Found In
Sexual fantasies contained both boys & girls	Sheldon & Howitt (2008)
Victims more likely to be strangers & girls	Aslan & Edelmann (2014)

Engagement with IIOC	Studies Found In
More likely to produce IIOC	Long, Alison & McManus (2012) McManus, Long, Alison & Almond (2015)
More likely to masturbate to IIOC	McCarthy (2010)
Greater collection of IIOC than legal porn	McCarthy (2010)
Possess IIOC with smaller age range and gender of victims	Long, Alison & McManus (2012)
Possess less IIOC than internet offenders	McManus, Long, Alison & Almond (2015)
Indirect means to achieve sexual stimulation	Merdian et al. (2016)

INTERNET OFFENDERS

Situational Factors	Studies Found In
More secure employment/higher incomes	Aslan & Edelman (2014) Babchishin, Hanson & VanZuylen (2015) Jung, Ennis, Stein, Choy & Hook (2013) Merdian et al. (2016) Seto, Wood, Babchishin & Flynn (2012)
More likely to be single and lead isolated lives	Aslan & Edelman (2014) Babchishin, Hanson & Hermann (2011) Jung, Ennis, Stein, Choy & Hook (2013) McManus, Long, Alison & Almond (2015) Reijnen, Bulten & Nijman (2009) Webb, Craissati & Keen (2007)
More likely to be married	Faust, Bickart, Renaud & Camp (2015) McCarthy (2010) Tomak, Weschler, Ghahramanlou-Holloway, Virden & Nademin (2009)
More likely to be Caucasian	Babchishin, Hanson & Hermann (2011) McCarthy (2010) Magaletta, Faust, Bickart & McLearn (2014) Seto, Wood, Babchishin & Flynn (2012) Tomak, Weschler, Ghahramanlou-Holloway, Virden & Nademin (2009) Webb, Craissati & Keen (2007)
Higher educational attainment/spent more time in education	Aslan & Edelman (2014) Babchishin, Hanson & VanZuylen (2015) Henshaw, Ogloff & Clough (2018) Jung, Ennis, Stein, Choy & Hook (2013) Merdian et al. (2016) Seto, Wood, Babchishin & Flynn (2012) Tomak, Weschler, Ghahramanlou-Holloway, Virden & Nademin (2009)
Pro-social lives	Faust, Bickart, Renaud & Camp (2015)
Substance abuse higher than contact and dual	Aslan & Edelman (2014)
Less likely to have a troubled family background	Aebi, Plattner, Ernest, Kaszynski & Bessler (2014)
More likely to live alone or with parents	McManus, Long, Alison & Almond (2015) Reijnen, Bulten & Nijman (2009)
Tend to have no biological children	Jung, Ennis, Stein, Choy & Hook (2013) McManus, Long, Alison & Almond (2015) Reijnen, Bulten & Nijman (2009) Webb, Craissati & Keen (2007)
Access to internet	Babchishin, Hanson & VanZuylen (2015)

Cognitive Factors	Studies Found In
More sexual fantasies involving children	Sheldon & Howitt (2008)
Higher scores on the 'children as sexual beings' scale	Howitt & Sheldon (2007)
Similarities in emotional deficits, sexual self-regulation, non-conformity, loneliness and self-esteem to contact offenders	Babchishin, Hanson & Hermann (2011) Neutze et al. (2011)
Less likely to endorse themes around justification, sexual entitlement and children as sexual beings	Merdian, Curtis, Thakker, Wilson & Boer (2014)
Endorsed cognitive distortions related to their offending	Merdian, Curtis, Thakker, Wilson & Boer (2014)

Engagement with IIOC	Studies Found In
More likely to admit their attraction to IIOC	Long, Alison & McManus (2012) Webb, Craissati & Keen (2007)
Provide a positive justification for using IIOC	Long, Alison & McManus (2012) Webb, Craissati & Keen (2007)
More likely to pay for IIOC	Long, Alison & McManus (2012) McManus, Long, Alison & Almond (2015) Webb, Craissati & Keen (2007)
Possess more IIOC than dual offenders	McManus, Long, Alison & Almond (2015)
Possess more extreme IIOC than dual offenders	McManus, Long, Alison & Almond (2015)
Downloaded IIOC more frequently and over a longer period of time	Aebi, Plattner, Ernest, Kaszynski & Bessler (2014)
More reliant on IIOC for sexual stimulation	Long, Alison & McManus (2012) Merdian et al. (2016) Webb, Craissati & Keen (2007)

Individual Factors	Studies Found In
Fewer criminal histories	Aslan & Edelmann (2014) Faust, Bickart, Renaud & Camp (2015) Median et al. (2016) Neutze et al. (2011)
Higher self-esteem	Bates & Metcalf (2007)
Passive view of their offending	Elliot, Beech & Mandeville-Norden (2013)
Lower rates of recidivism	Faust, Bickart, Renaud & Camp (2015) Jung, Ennis, Stein, Choy & Hook (2013) Webb, Craissati & Keen (2007)
Greater ability to relate to fictional characters	Elliot, Beech, Mandeville-Norden & Hayes (2009)
Avoids emotional closeness	Babchishin, Hanson & Hermann (2011)

Problems with sexual self-regulation	Webb, Craissati & Keen (2007)
Sexual preoccupation	Kuhle et al. (2017)
Greater self-control	Babchishin, Hanson & Hermann (2011) Elliot, Beech, Mandeville-Norden & Hayes (2009)
Psychological barriers to acting on deviant interests	Babchishin, Hanson & Hermann (2011) Elliot, Beech, Mandeville-Norden & Hayes (2009)
Underassertiveness	Bates & Metcalf (2007) Elliot, Beech & Mandeville-Norden (2013)
Locus of control scores are lower	Bates & Metcalf (2007)
Emotional loneliness	Babchishin, Hanson & Hermann (2011) Bates & Metcalf (2007) Elliot, Beech, Mandeville-Norden & Hayes (2009) Elliot, Beech & Mandeville-Norden (2013) Jung, Ennis, Stein, Choy & Hook (2013)
Mental health problems are similar to contact	Aslan & Edelman (2014)
Higher impression management	Bates & Metcalf (2007)
Interpersonal deficits	Jung, Ennis, Stein, Choy & Hook (2013) Magaletta, Faust, Bickart & McLearn (2014)
Depression	Jung, Ennis, Stein, Choy & Hook (2013) Magaletta, Faust, Bickart & McLearn (2014)
Mood regulation problems	Magaletta, Faust, Bickart & McLearn (2014)
Less deviant	Tomak, Weschler, Ghahramanlou-Holloway, Virden & Nademin (2009)
Less impulsive	Tomak, Weschler, Ghahramanlou-Holloway, Virden & Nademin (2009)
Less aggressive	Magaletta, Faust, Bickart & McLearn (2014) Tomak, Weschler, Ghahramanlou-Holloway, Virden & Nademin (2009)
Lower levels of dominance	Magaletta, Faust, Bickart & McLearn (2014)
Lower levels of hostility	Magaletta, Faust, Bickart & McLearn (2014)
Less extraverted	Reijnen, Bulten & Nijman (2009)
Less energetic	Reijnen, Bulten & Nijman (2009)
Less impulsive	Reijnen, Bulten & Nijman (2009)
More sexual deviancy	Babchishin, Hanson & Hermann (2011) Babchishin, Hanson & VanZuylen (2015) Henshaw, Ogloff & Clough (2018)

Distinct psychological profile	Seto, Wood, Babchishin & Flynn (2012) Merdian et al. (2016)
Older	Aebi, Plattner, Ernest, Kaszynski & Bessler (2014) Faust, Bickart, Renaud & Camp (2015) Merdian et al. (2016)
Younger	Babchishin, Hanson & Hermann (2011) McCarthy (2010) Reijnen, Bulten & Nijman (2009)

Victim Factors	Studies Found In
Greater empathy for victims	Babchishin, Hanson & Hermann (2011) Babchishin, Hanson & VanZuylen (2015) Bates & Metcalf (2007) Elliot, Beech, Mandeville-Norden & Hayes (2009)
Victims of both genders and likely to be strangers	Aslan & Edelmann (2014)

Appendix U: Question Four (Offending Trajectories)

Below are some of the findings extrapolated from the research reviewed for Question Four.

The studies which report the potential risk factors have been recorded for reference.

Risk factors for internet offenders progressing to contact offences	Studies Found In
Previous criminal histories	Endrass et al. (2009) Owens, Eakin, Hoffer, Muirhead & Shelton (2016) Seto, Hanson & Babchishin (2011)
Antisociality	Lee, Li, Lamde, Schuler & Prentky (2012)
Internet Preoccupation	Lee, Li, Lamde, Schuler & Prentky (2012)
Access to children	Jung, Ennis, Stein, Choy & Hook (2013)
Extreme IIOC of children aged ≤ 5 years? <i>Needs further research</i>	Smid, Schepers, Kamphuis, Linden & Bartling (2015)
Fewer pro-social factors? <i>Needs further research</i>	Faust, Bickart, Renaud & Camp (2015)
Predisposition? <i>Needs further research</i>	Lee, Li, Lamde, Schuler & Prentky (2012)

Appendix V: Question Five (Risk Factors)

Sexual distortions	Details	Studies Found In
Consumption of violent pornography	The consumption of adult pornography that is violent in nature seems to link to the other factors of aggregated sex drive/lust and sexual deviancy.	Seto et al. (2015)
Sexual fantasies and interest in children	Also included in this is an attraction to children, with there being overlaps with sexual deviancy.	Klein, Schmidt, Turner & Briken (2015) Long, Alison & McManus (2012) Seto, Hanson & Babchishin (2011) Seto et al. (2015)
Aggregated sex drive	An increased sense of 'sexual lust' and 'sexual preoccupation' (although dual offenders have more of this).	Klein, Schmidt, Turner & Briken (2015) Neutze, Grundmann, Scherner & Beier (2012) Seto et al. (2015)
Masturbation to extreme images	All participants in one study admitted masturbating to IIOC, with a high number doing so with the more extreme categories (assault, gross assault and sadistic/bestiality).	Buschman, Wilcox, Krapohl, Oelrich & Hackett (2010)

Social and situational factors	Details	Studies Found In
Less likely to have a criminal history than contact or dual	Those with a criminal history are more likely to reoffend in future. Internet offenders are more likely to be 'undetected' than contact only – is this why criminal histories are lower?	Long, Alison & McManus (2012) McManus, Long, Alison & Almond (2015) Seto, Hanson & Babchishin (2011)
Less access to children	This ties in with the other item of internet offenders mainly living alone or with parents; whereas contact are more likely to live with children.	Long, Alison & McManus (2012) McManus, Long, Alison & Almond (2015)
Living arrangements	Internet offenders are likely to live alone or with parents.	Long, Alison & McManus (2012) McManus, Long, Alison & Almond (2015)
Internet behaviours	They have a higher level of internet preoccupation [amount of time spent online or impact on life] and are more likely to engage in risky behaviour online such as paying for access to IIOC.	Lee, Li, Lamade, Schuler & Prentky (2012) Long, Alison & McManus (2012) McManus, Long, Alison & Almond (2015)

Personality and emotional factors	Details	Studies Found In
Low self-esteem and under-assertiveness	This likely ties into the other factor of emotional loneliness and identification with fictional characters.	Elliott, Beech, Mandeville-Norden & Hayes (2009)
Emotional loneliness and intimacy deficits	Although the emotional coping of internet offenders is greater than contact or dual offenders.	Elliott, Beech, Mandeville-Norden & Hayes (2009) Neutze, Grundmann, Scherner & Beier (2012) Seto, Hanson & Babchishin (2011)
Antisocial behaviour and orientation	This was, however, found to be less than for dual and contact. Increased anti-sociality was found to increase the chances of an internet offender becoming a dual offender.	Elliott, Beech, Mandeville-Norden & Hayes (2009) Klein, Schmidt, Turner & Briken (2015) Lee, Li, Lamade, Schuler & Prentky (2012) Seto, Hanson & Babchishin (2011) Seto et al. (2015)
Identification with fictional characters	This may feed into the other factor of being in denial/passive towards their offending.	Elliott, Beech, Mandeville-Norden & Hayes (2009)
Denial/passive attitude for their behaviour	Internet offenders are more likely to have a 'passive viewer attitude' or distance themselves from their offending. This was further explicated into a polygraph examination which showed a marked difference from self-report data.	Buschman, Wilcox, Krapohl, Oelrich & Hackett (2010) Elliott, Beech, Mandeville-Norden & Hayes (2009)
Greater awareness if the harm caused to children than contact offenders	This likely feeds into the 'denial' to admit certain behaviours and the marked difference between self-report data and polygraph examinations.	Elliott, Beech, Mandeville-Norden & Hayes (2009)

Engagement with IIOC	Details	Studies Found In
Greater number of images	Within this collection of movies and stills are a greater age range of victims.	Long, Alison & McManus (2012) McManus, Long, Alison & Almond (2015)
Collection of images for a longer duration	This was found to have a greater link to more extreme materials of levels 4 and 5.	Long, Alison & McManus (2012) McManus, Long, Alison & Almond (2015)
Less likely to produce IIOC and 'groom'	Internet offenders are less likely to groom both online and offline.	Long, Alison & McManus (2012) McManus, Long, Alison & Almond (2015)
Type of images	These studies contradict each other. Long, Alison & McManus (2012) says internet offenders have less extreme IIOC than dual offenders; whilst McManus and colleagues (2015) says the opposite.	Long, Alison & McManus (2012) McManus, Long, Alison & Almond (2015)

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