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The Contributory Role of Autism Symptomology in Child Pornography Offending: Why there is an urgent need for empirical research in this area

Abstract

Purpose

As recently highlighted by Creaby-Attwood and Allely (2017) it is crucial that the possible innate vulnerabilities that contributed to sexual offending behaviour in an individual with an autism spectrum disorder (ASD) are taken into consideration for the application of a diversion program to avoid the stigma of a criminal conviction or during sentencing for a non-custodial outcome. Specifically, in those defendants with a diagnosis of what used to be referred to as Asperger's Syndrome (AS) and now is recognised as an ASD and who are charged and convicted of a non-contact sexual offence, education and mental health intervention will best serve the interests of justice.

Design/methodology/approach

This paper focuses on one particular type of sexual offending behaviour, namely, possession of child pornography. A systematic PRISMA review was conducted.

Findings

The authors linked examples of child pornography in the research literature to the ASD symptomology and describe how the symptomology explains such behaviour as not reflecting actual sexual deviance.

Originality/value

Downloading and viewing of child pornography by individuals with ASD has received relatively little research outside the mental health field. This review is of particular importance to those in the criminal justice system who may not have much knowledge and understanding of ASD. It is suggested that diversion programmes and mental health courts should be set up for this particular population charged with this particular crime in mind so that the necessary treatment/intervention/support and care can be given to this particular group.

Keywords: Autism Spectrum Disorder; Asperger's syndrome; child pornography; child exploitative material; pretrial diversion

Autism spectrum disorders (ASDs) are neurodevelopmental disorders characterized by reciprocal social interaction and communication impairments and restricted repetitive behaviours (Wing, 1997). The Diagnostic Statistical Manual fifth edition's (DSM-5, American Psychiatric Association, 2013) now categorizes two core domains of impairment in ASD (previously it was three core areas of impairment, APA, 2000) which vary across individuals, symptoms, and levels of severity: (1) "persistent deficits in social communication and social interaction" and (2) "restricted, repetitive patterns of behaviour, interests, or activities" (American Psychiatric Association, 2013). The DSM-5 criteria for ASD deviates from the previous criteria set out in The Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition-Text Revision published by the American Psychiatric Association (APA) (2000) in a number of ways. For instance, the DSM-5 no longer distinguishes subtypes of ASD, such as autistic disorder and Asperger disorder. There is now just a single category of ASD. Brugha and colleagues (2011) estimated the prevalence and characteristics of adults with ASD living in the community in England. They estimated that the weighted prevalence of ASD in adults was 9.8 per 1000.

ASD and Sexual Offending Behaviour

A number of follow-up studies have found that individuals with ASDs are no more likely to engage in violent offending behaviour compared to the general population (Wing, 1981; Ghaziuddin et al., 1991; Hippler et al., 2010; Robinson et al., 2012). Indeed, there have been some studies which have even found that they may be less likely to engage in such behaviour (Mouridsen et al., 2008; Lundström et al., 2014; Woodbury-Smith et al., 2006). The modest number of studies which have been done actually indicate that individuals with developmental disabilities (e.g., ASD) are more likely to be the victims of crime as opposed to being the perpetrators (Sobsey et al., 1995; Modell & Mak, 2008). Recently, Mogavero and Mogavero (2016)

highlighted that the association between ASD and sexual deviance or sexual offending has been reported for some time (e.g., Chesterman & Rutter, 1993; Hart-Kerkhoffs et al., 2009; Sevelever et al., 2013; Higgs & Carter, 2015). Deviant and sexual offending behaviours include giving a stranger a kiss (Clements and Zarowska, 2000), invading the personal space of an individual who is the target of their affection (Green et al., 2000; Howlin, 1997; Katz & Zemishlany, 2006), inappropriate acts of masturbating (e.g., masturbating in public) (Haracopos and Pendersen, 1992; Ray et al., 2004), touching others in a sexual manner, to downloading child pornography (Mahoney, 2009; Steel, 2016). The majority of studies supporting this association utilised qualitative methods in 'select settings or clinical accounts' (Chesterman & Rutter, 1993; 't Hart-Kerkhoffs et al., 2009; Sevelever et al., 2013; Griffin-Shelley, 2010; Barry-Walsh & Mullen, 2004). Recently, Kumar and colleagues (2017) reviewed the possible factors associated with offending in five individuals with AS, who presented with a history of abnormal sexual behaviours (Kumar, Devendran, Radhakrishna, Karanth, & Hongally, 2017). Inappropriate sexual behaviours may be attributable to the core features of ASD (such as failure to conform to social conventions; impaired ability to decode language and social gestures; a limited repertoire of appropriate behaviour; inappropriate use of speech; impaired theory of mind (ToM); repetitive patterns of behaviour and obsession or preoccupation with specific things such as women's underwear) (Murrie et al., 2002; Allely & Creaby-Attwood, 2016). An attorney who has defended many ASD males on charges of possession of child pornography incorporates the concept of "counterfeit deviance" in understanding what might seem like acts of deviance ...*"but lacks the culpable mental state or blameworthiness which would normally attend such actions by persons who are typically developed."* (Mahoney, 2017). "Counterfeit deviance" was a term first coined by Dorothy Griffiths (see Griffiths, Hingsburger, Hoath, & Ioannou, 2013).

John Robison, who is on the autism spectrum has summarised the reasons that ASD males are at risk for being criminally charged with possession of child pornography on their computers:

1. Developmental delay may align young adults with children or adolescents
2. Weak theory of mind (ToM) can make it hard to know right from wrong

3. Autistic people can be easy marks for law enforcement
4. Autism can isolate us, and we may become desperate for human contact. Desperate people do things others would never consider
5. Neurological vulnerability (Robinson, 2013).

There is some indication that the lack of social skills and other deficits of ASD individuals' correlates to a vulnerability for prosecution of sex related crimes. A group of psychologists in a juvenile facility examined 37 male adolescents who were found to have committed sexual offenses. A determination was made that 22 (60%) of these convicted offenders were on the autism spectrum. The authors discussed the need for bridging the gap between social deficits, Theory of Mind (ToM) deficits and sexual knowledge acquisition (Sutton et al., 2013).

ASD and Sexuality

Research has shown that although considerable challenges in sexual development is experienced by many on the spectrum, the intensity of their sexual interest is no different to that of the neurotypical population (e.g., Henault, 2006, see also Byers, Nichols, & Voyer, 2013; Byers, Nichols, Voyer, & Reilly, 2013; Turner, Briken, & Schöttle, 2017). It is also important to emphasise that there is no evidence which suggests that physical maturation of adolescents with ASD follows a different trajectory compared to typically developing peers (Gabriels & Van Bourgondien, 2007). Natalie Gougeon in a detailed study acknowledged that ASD individuals are sexual beings but are often frustrated in being able to develop that part of themselves. This fact causes the sexual experience to significantly lag behind their sexual hormonal development (Gougeon, 2010, see also Gougeon, 2013).

One of the challenges for some individuals with ASD is in expressing their sexuality within the 'context of an appropriate relationship'. There are a number of explanations for this including the following:

little or no experience of being in an intimate relationship (and as a result a lack of appropriate courtship scripts) and little or no opportunities to learn from peers. It is important to recognise how such factors may have contributed to sexual offending behaviour due to sexual frustration (Murrie et al., 2002; Stokes & Kaur, 2005). Sugrue (2017) highlighted some of the other issues surrounding ASD and sexuality. If an individual is identified as being 'developmentally disabled or emotionally impaired' as they were growing up, it is likely that they will be placed in special education classrooms. As a result, they are not offered the same sex education which is given to neurotypical students. Sugrue (2017) then goes on to highlight that frequently the only time an individual with ASD who are in the special education classrooms ever receive any type of 'sex education' is when they are found by the teacher self-stimulating themselves in the classroom. Even then, the only thing that the teachers will do given such an event is tell them that they should only engage in such private behaviours within the privacy of their own room. Moreover, there are some parents of children with ASD who do not engage in any sex education discussions because they assume that because their ASD child is asocial they are also asexual or that it would be potentially dangerous to give explicit sexual instruction to their ASD child because they would not be able to handle the information or apply it in an inappropriate way (Gougeon, 2010). Given all the above, when considering ASD and sexuality, "we are often talking about people with strong sexual impulses, little or no information about healthy sexual behavior, and few suitable outlets for sexual gratification" (Sugrue, 2017, pp. 177). Given this, many adolescents and adults with ASD turn to the internet for information and for a sexual outlet. The internet becomes the ideal solution because it has already established itself as being their "preferred conduit to the outside world" (Sugrue, 2017 pp. 117, see also Attwood, 2007).

Child Pornography is not a victimless crime: The impact of child pornography

The viewing of child pornography is not a victimless crime as to produce these images it will necessarily involve the abuse of a minor (Taylor, Holland, & Quayle, 2000) and there is a significant body of research which has investigated this over the last few decades. For instance, Silbert (1989) reported on her clinical

experiences with 100 survivors of child pornography who were interviewed at the time of their abuse and in subsequent years. She found that the CP survivors reported (when the abuse took place) the physical pain they experienced (e.g., around the genitals) and the somatic symptoms (e.g., headaches, loss of appetite, and sleeplessness) as well as the feelings of psychological distress (e.g., emotional isolation, anxiety, and fear). What the study by Silbert also revealed was that the majority felt pressure to cooperate and did not report the crime or the perpetrator. Over the years following the time of the abuse, the survivors described that their feelings of shame and anxiety did not fade rather they intensified to feelings of deep despair, worthlessness, and hopelessness (Silbert, 1989). Child pornography has also been found to exacerbate the abuse and trauma (Martin, 2015). Another issues for survivors of child pornography that has been highlighted in the literature is the lack of control that they have over the ongoing sharing of their abuse images as well as the public accessibility of those abuse images. This can be one of the hardest things to overcome (Canadian Centre for Child Protection, 2017). Importantly, trauma symptoms do not just occur in the aftermath of abuse, the abuse has no definable end for the children in the images (Martin, 2015). Leonard presented two case studies of victims depicted in CP that was distributed online. The individuals in the cases studies reported that the thought about who is potentially viewing the images online caused them to feel continually traumatised (Leonard, 2010).

Furthermore, Gewirtz-Meydan and colleagues (2018) investigated the complex experiences of survivors of child pornography production. They used an online survey which consisted of a number of open-ended questions. In the convenience sample of child pornography adult survivors (N = 133), approximately half of the sample reported feeling worried all the time about other people thinking that they were willing participants or that people would recognise them from the images. Additionally, one-third of the sample refused to discuss the images and 22% denied the existent of the images. Three key themes from the survivors' perspective as adults were identified by Gewirtz-Meydan and colleagues in the qualitative analysis of the responses that the participants gave to the open ended questions. These were feelings of guilt and shame, their ongoing vulnerability and an empowerment dimension that the images could sometimes bring (Gewirtz-Meydan, Walsh, Wolak, & Finkelhor, 2018).

Escalation and the progression from non-contact to grooming and/or contact offences

Based on a sample of 201 adult male child pornography offenders identified using police databases, Seto and Eke (2005) investigated their charges or convictions after the index child pornography offense(s). Criminal records were also investigated in order to identify factors which may be predictive of later offenses. Findings revealed that 56% of the sample of 201 adult male child pornography offenders had a prior criminal record, 24% had been convicted of a prior contact sexual offense(s) and 15% had a prior child pornography offenses. One-third were, at the same time, charged with another crime at the time they were charged for child pornography offenses. Interestingly, Seto and Eke found that the average time before another conviction was made was 2.5 years. Specifically, they found that 17% of the sample offended again in some way (any type of offense) during this time and also 4% of the sample had committed a new contact sexual offense.

Using two meta-analyses, Seto, Hanson and Babchishin (2011) investigated the prior criminal histories and rates of reoffending of online sexual offenders, in particular child pornography offenders. In the first meta-analysis, findings revealed that about one in eight online child pornography offenders (12%) had an officially recorded prior history of contact sexual offending at the time of their index offense (n = 4,464). Additionally, based on the six studies that contained self-report data (n = 523) it was found that about one in two (55%) online offenders admitted to a contact sexual offense. In the second meta-analysis findings showed that 4.6% of online offenders had committed some type of new sexual offense during a follow-up of between 1.5- to 6-years (k = 9, N = 2,630); 2.0% had committed a contact sexual offense and 3.4% had committed a new child pornography offense.

In another study Seto and Eke (2015) designed a 'structured risk checklist' which they called the Child Pornography Offender Risk Tool (CPORT), to predict any sexual recidivism among adult male offenders with a conviction for child pornography offenses. Predictors of sexual recidivism were identified using a 5-year fixed follow-up analysis from a police case file sample comprising of 266 adult male child pornography

offenders in the community after their index offense. Findings from the 5-year follow-up showed that of the sample of 266 adult males 29% had committed a new offense, 11% had committed a new sexual offense, 3% had committed a new contact sexual offense against a child and 9% had committed a new child pornography offense (Seto & Eke, 2015). Endrass and colleagues (2009) study comprised of a sample of 231 men charged with consumption of illegal pornographic material. Using the criminal records from 2008, both criminal history and recidivism was examined. Findings showed that 4.8% (n = 11) had a previous conviction for a sexual and/or violent offense, 1% (n = 2) for a contact sex offense, involving child sexual abuse, 3.3% (n = 8) for a non-contact sex offense and one for a nonsexual violent offense. When Endrass and colleagues (2009) used a broad definition of recidivism (including ongoing investigations, charges and convictions), 3% (n = 7) had reoffended with a violent and/or sex offense, 3.9% (n = 9) with a non-contact sexual offense and 0.8% (n = 2) with a contact sexual offense (Endrass et al., 2009).

More recently, Goller and colleagues (2016) carried out a national cohort study comprising of all individuals in Switzerland who received a conviction for illegal pornography since 1973 and were followed-up until 1st November 2008. Criminal records from the Federal Office of Justice of Switzerland were used to get details on reconvictions. This resulted in a total of 4612 offenders (which contained 4249 illegal pornography offenders and 363 dual offenders). The comparison of 3-year reconviction rates found that only 0.2% of the illegal pornography offenders were convicted of contact child sex offences. Reconviction was found in 2.6% of the dual offenders (Goller, Jones, Dittmann, Taylor, & Graf, 2016). Therefore, Goller and colleagues study showed that illegal pornography offenders were significantly less likely to be reconvicted (either generally or sexually). These findings are consistent with previous studies (Seto & Eke, 2005; Webb, Craissati, & Keen, 2007; Endrass et al., 2009). Goller and colleagues (2016) argue that “the very low “progression rate” among illegal pornography offenders to contact child sexual offences, and their low rate of even repeat pornography offences suggests that community sentences remain appropriate” (Goller et al., 2016, pp. 48). However, it is important to caution at this point that there is the tendency for conviction rates to underestimate “the true offending rates, and that with greater access to the Internet, characteristics of

pornography users may change over time” (Goller et al., 2016, pp. 49). In sum, prior convictions for child pornography possession only are not a risk factor for future contact sex offending (Endrass et al., 2009).

Present Review

One of the primary aims of this paper is to highlight the need to understand and recognise the importance of considering the potential contribution of ASD symptomology in individuals who have been identified as engaging in viewing child pornography. By doing this, we also highlight the real need for empirical research investigating this. Currently there are no empirical studies, only the anecdotal reports and the expertise and knowledge of a relatively small number of professionals whom we have quoted and referred to in this article. These individuals are highly respected in the field (e.g., Gary Mesibov, Melissa Sreckovic, Kenneth M. Mogill, Dennis P. Sugrue). In this review we highlight some of the current issues in this area (e.g., issues surrounding appropriate risk assessment in cases involving individuals with ASD who are charged or convicted of possession of child pornography) based on the relatively little work that exists that is predominantly the expert opinions and experience of internationally very well respected and recognised clinicians in the field. We hope that this paper will stimulate debate on the subject of how ASD symptomology can contribute to online child pornography offending. This paper highlights some of the issues across both the legal systems in the UK and the US. It is important to point out that the issues surrounding the relative lack of awareness surrounding the potentially contribution of ASD symptomology to possession of child pornography is a global issue.

Methodology

The following six internet-based bibliographic databases were searched in order to access studies which examined to any degree the association between ASD and child pornography: PsycARTICLES Full Text, AMED

(Allied and Complementary Medicine) 1985 to October 2018, Ovid MEDLINE(R) without Revisions 1946 to October Week 1 2018, [Database Field Guide] PsycEXTRA 1908 to October 08, 2018, PsycINFO 1806 to October Week 2 2018, and Ovid MEDLINE(R) and Epub Ahead of Print, In-Process & Other Non-Indexed Citations and Daily - without Revisions 2014 to October 10, 2018. The search was conducted on 11th October 2018. The search followed PRISMA guidelines (see: Liberati et al., 2009; Moher, Liberati, Tetzlaff, & Altman, 2009). There was no date restriction set on the search conducted. The following search criteria were entered into the six databases: (ASD or "autis* spectrum disorder*" or autis* or "autis* spectrum condition*" or asperger*).m_titl. AND ("child pornography" or "online child related sex offend*" or "online child pornography" or "online child pornography offend*" or "online child sexual exploitation" or "internet child abuse" or "online child sex offend*").m_titl. Only one article was returned from this search on the databases (Steel, 2016) and this paper was a review not an empirical study paper.

In addition to the searches conducted on the six database, numerous permutations of ASD and sexual offending were entered into Google Scholar and thoroughly searched for articles which were not identified through the database searches, for instance, (ASD AND "child pornography"); (autism AND "child pornography"); (ASD AND "online child abuse"). These searches only returned three additional potentially relevant articles and one highly relevant recently published book. None of which were empirical studies but were review papers based predominantly on clinical experience (Mahoney, 2009; Taylor, Mesibov, & Debbaudt, 2009; Cutler, 2013). All the papers or books identified are included in this review paper. The main source included a recently published book on the topic (Caught in the Web of the Criminal Justice System: Autism, Developmental Disabilities, and Sex Offenses, 2017). A number of chapters in this book were reviewed for relevant material and integrated in the present review (most notably chapters by: Mesibov, G., & Sreckovic, M.; Sugrue, D. P.; Mogill, K. M.; Douard, J., & Schultz, P.).

ASD and Child Pornography

It has been suggested that individuals may explore the internet for sexual education or to satisfy sexual needs due to a lack of sexual outlets with peers/friends (Attwood et al., 2014). Many individuals with ASD

will have average or above average intelligence while their social maturity is that of someone much younger. This frequently results in them being more interested in befriending people who are much younger than themselves but who are socially and emotionally at the same level (Cutler, 2013). Regarding the viewing of child pornography, issues occur when individuals with ASD are unaware that what they have done is a criminal offense. One explanation for the lack of awareness that they have committed a crime is their inability to recognize the facial expressions in the images of the children. Such an inability to recognise facial expressions (such as fear) is supported by a large amount of studies (e.g., Woodbury-Smith et al., 2005; Uljarevic & Hamilton, 2013). Another issue that needs to be considered is that many individuals with ASD may inadvertently view child pornography as a result of their inability to guess correctly the age of the individuals in the images and sometimes the boundaries/distinction between an adult and a child is blurry. This is important to understand given that the legality and severity of the offense is determined by the age of the victims in the images being viewed by the defendant (Mahoney, 2009).

For individuals with ASD, exploring sexuality on the internet through child pornography is one way for them to try to understand relationships and sexuality as opposed to being a precursor to any sexual offending towards a minor. As with many things that interest them, the desire for this material can end up being particularly excessive and compulsive in individuals with ASD (Mesibov & Sreckovic, 2017). The internet coupled with sexuality can result in what Mark Mahoney calls a “lethal combination” for individuals with ASD (Mahoney, 2009). There are a number of cases where the individual with ASD has been found to have large collections of pornographic material (e.g., involving children) (as part of the ritualistic nature of ASD) with thousands of files not even opened. They are unaware of the broader issues like where and how they got those files, who else might be able to access them and what the consequences (and impact on) are for the minors in the images they are viewing. Because of their literal view of the world, they would not consider that something that is illegal could be so freely available on the internet (Mesibov & Sreckovic, 2017). It is also worth mentioning how the media is fraught with marketing materials with risky images of teenage models or images where they have made the older models look “barely legal”. Such images can be

confusing for the individual with ASD, making it more difficult to determine what is illegal pornography. (Mesibov & Sreckovic, 2017).

Sugrue (2017) points out that there is an assumption that the level of risk is associated with the number of images that the individual has accumulated or the nature of the content. This is because it is believed by some that the more images the greater the obsession and they are more at risk of acting on these urges as a result. However, studies do not support this (Stabenow, 2011, Mahoney, 2009). It is even more inappropriate for individuals with ASD because it does not take into consideration the relationship between the volume of collected pornography and the compulsive and obsessive features of ASD. There is also no research which indicates that extreme sexual content is predictive of dangerousness (Osborn, Elliott, Middleton, & Beech, 2010). Looking at extreme sexual material is not always a reflection of the presence of deviant sexuality. Instead, it can be what is referred to as “counterfeit deviance” (e.g., naïve curiosity) in offenders with ASD (Hingsburger, Griffiths, & Quinsey, 1991; Mahoney, 2009). However, proper sex education can provide the information necessary to help people with ASD to understand the rules for proper sexual conduct accepted by society that will help prevent watching child pornography or improper sexual conduct as these population are rule followers (Mahoney, 2009).

In the book *Caught in the Web of the Criminal Justice System: Autism, Developmental Disabilities, and Sex Offenses*, Sugrue (2017) provides an illustrative example of how the individual with ASD who engages in viewing child pornography differs to that from a neurotypical individual who engages in the same material. He provides the example of Norman and Albert, both men are 32 years of age, college graduates, single and have little sexual experience. However, Albert is on the autism spectrum and Norman is a neurotypical. The internet has been found to be a convenient outlet for frustrated sexual urges by both men. After some time, both men have developed an obsession with internet pornography and spend considerable time viewing and downloading pornography material. Both men eventually come across child pornography material. Either because of a morbid curiosity or some degree of inherent sexual interest, they both become intrigued with the material. Both of these cases appear to be similar. However, this is where is

becomes essential to examine these two cases in more detail and it is only then that the differences between the two cases become apparent. The compulsive pattern of viewing pornography exhibited by Norman is likely stemming from a sexual addiction (Carnes, 2001). Here, the repetitive patterns of pornography use has become reinforced by the associated sexual pleasure or reduction in levels of stress as a direct result of the distraction afforded by the pornographic material. Whereas, for Albert, the underlying reasons are completely different. Albert's diagnosis of ASD means that he has features which predispose him to develop obsessions with things. Such obsessions develop not because they provide pleasure or cause of reduction in levels of stress (in the way it does for Norman) but because that is the way, to use Sugrue's expression, he is "wired". As with many individuals with ASD, Albert will very quickly develop a strong preoccupation or fixation with the pornographic material. This preoccupation hinders his ability to be able to appreciate the wider implications and potential consequences of his actions (Sugrue, 2017). However, it is important to highlight that by no means is a diagnosis of ASD a guarantee that a person will not commit contact offence (Griffiths et al., 2013).

In terms of their 'responses' to the minors they are viewing in the material, both Norman and Albert also differ. In the case of Norman, he will actively avoid thinking about the obvious as it would only have a negative impact on his sexual arousal while viewing the images. Later, he may feel shame about what he has done and say that he will never do it again. However, he will inevitably resume engaging in the material over and over again. Whereas, to Albert, the implications of his actions are not obvious as it is for Norman. He has little or no empathy for the minors in the materials he views. The reason for this is that he is unable to see their distress or fear. Further, he cannot see the situation from their perspective (commonly referred to as impaired ToM or mindblindness). His impaired ToM would lead him to believe that because he is aroused by the images then so are the minors in the material. It does not occur to him that they have different feelings and emotions to him. This comparison given by Sugrue clearly highlights some of the differences between a neurotypical and an individual with ASD who engages in the act of viewing of illegal material – child exploitative material. It is also noteworthy that the case of Albert in this example represents someone

with ASD who is high-functioning. Here, even someone who is at the high functioning end of the spectrum like Albert lacks criminal capacity or is impaired in his ability to fully appreciate the wrongfulness of his actions compared with a neurotypical individual like Norman (Sugrue, 2017). This situation is avoidable as it is possible for individuals with ASD to learn that child pornography is illegal. However, they need to be explicitly taught this. To the authors' knowledge, there is currently no sexual education curriculum which is designed for individuals with ASD which includes the issue of child pornography (Mesibov & Sreckovic, 2017).

Conventional Sex Offender Treatment and ASD

In any discussion of sex offending and ASD, it is important to look at the clinical utility of sex offender treatment programs for this population. Conventional sex offender treatment focuses predominantly on group therapy. There is a focus on the offender's understanding of his offending pattern, learning about thinking errors, practicing empathic responses to the victims, and stopping deviant thoughts and fantasies. Sugrue (2017) argues that this style of treatment (which can be effective with neurotypicals) is not suitable for individuals with ASD (Griffiths, Richards, & Fedoroff, 2009; Ray, Marks, & Bray-Garretson, 2004). A specialised treatment which includes very explicit sex education with a focus on learning 'specific responses to specific situations' is needed for individuals with ASD (Griffiths et al., 2009). Moreover, repetition is also important in treatment for individuals with ASD due to their difficulty in understanding abstract concepts (Klin, Volkmar, Sparrow, Cicchetti, & Rourke, 1995).

The treatment programs for those who are convicted of child pornography are not only inappropriate for adolescents and adults with ASD but they are potentially harmful. Specifically, it could cause further harm by "confusing them about the law, their privacy rights and what and how they are supposed to deal with certain situations that present themselves when they are using their computer in their home" (pp. 88). There is an urgent need for autism-specific training in this field. For instance, for individuals with ASD on diversion programs, there would need to be explicit training on the consequences of child

pornography (Mesibov & Sreckovic, 2017). Douard and Schultz (2017) argue that to classify individuals with an ASD as sex offenders and for them to be criminally liable for behaviour which they fail to appreciate is morally wrong. Attorney Mark Mahoney stated in his paper, *Asperger's Syndrome and the Criminal Law: The Special Case of Child Pornography*:

"The aptitude and comfort of AS individuals with computers, and the prevalence of pornography as a vehicle for AS individuals to try to learn about sexuality and romance, what neurotypical youth learn from their social interactions, has exposed more than a few AS male individuals to child pornography. Their curiosity, unrestrained by social or legal taboos, of which they are unaware, leads them to view images of "underage" (i.e., younger than 18-years old) girls who are nearly their own age and years older than the level of their own social adaptation skills. This has resulted in criminal convictions, lengthy mandatory prison sentences, and a lifetime of reporting, ostracization, and residency restrictions as "sex offenders." (Mahoney, 2009, pp.1).

Given the difficulties that individuals with ASD who have been found guilty of violating child pornography statutes have in fully appreciating the wrongfulness and consequences of their actions, having the expertise of a psychologist or psychiatrist who has experience of working with both sex offenders and individuals on the spectrum would be most suitable. Unfortunately, mental health professionals who have both these strands of expertise are rare. Therefore, the consultation with more than one professional may be prudent (Sugrue, 2017).

Clinical Utility of Risk Assessments for Individuals with ASD

Sex offender risk assessments are crucial for informing appropriate and effective strategies for individual offender management (e.g., community management) (Grubin, 2008). There are two main categories of risk assessments - those which measures 'static' risk and those which measure 'dynamic' risk. Static risk factors are unchangeable (e.g., criminal history, age of the offender) (Broadly, 2012). Dynamic risk predictors are divided into two categories, stable and acute risk factors (Hanson and Harris, 2000, 2001). Stable dynamic

risk factors are relatively stable but can change over time (i.e., belief systems). Acute factors are ones which can fluctuate (e.g., mood state, drug and alcohol use; relationships). Some examples of dynamic risk assessments include the Structured Risk Assessment (SRA, Thornton, 2002; Webster et al., 2006), the Beech Deviancy Classification (Beech, 1998), and STABLE-2007/ACUTE-2007 (Hanson et al., 2007). Numerous assessments are used to measure 'static' risk, which are collectively referred to as 'actuarial' assessments. Some examples include: Risk Matrix 2000/Sexual (RM2000/S, Thornton et al., 2003), which is widely used in the UK; the Rapid Risk Assessment of Sexual Offence Recidivism (RRASOR, Hanson, 1997), STATIC-99 (Hanson & Thornton, 1999, 2000); STATIC-2002 (Hanson & Thornton, 2003; Phenix, Doren, Helmus, Hanson, & Thornton, 2008); and the Sex Offender Risk Appraisal Guide (SORAG, Quinsey, Harris, Rice, & Cormier, 2006). It is regarded as unethical and unprofessional by many to not use actuarial risk assessments (e.g., Grove & Meehl, 1996; Quinsey et al., 2006; Craig, Beech, & Cortoni, 2013). Sugrue (2017) has highlighted that these risk assessments have not been normed for individuals with ASD. They also have not been normed for people whose only offense is viewing child pornography. Due to the lack of normed risk assessment for use with offenders with ASD, clinicians have to rely on the published literature which is limited in relation to ASD and child pornography in particular. Research based on neurotypicals frequently has to be extrapolated based on clinicians' and other health professionals' knowledge and understanding of ASD (Sugrue, 2017).

Moral Panic in Legislating Harsh Penalties for Possession of Child Pornography

In the United States, having a single image of a child under the age of 18 deemed to be pornographic can lead to a mandatory five year prison term in a federal prison. Sentencing guidelines have escalated in federal cases putting increasing pressure on federal judges to sentence people without any criminal record to lengthy prison sentences for the non-contact crime of possession of child pornography. Some federal judges

have refused to follow the guidelines, which are advisory and not mandatory, in recognizing the panic that has caused these onerous laws to be passed (Sullum, 2017).

The Potential Impact of ASD in the Court and Prison Environment

In the court (and also throughout the entire criminal justice system), the unique behaviours which can be exhibited by individuals with ASD may result in lawyers, prosecutors, judges, juries and interrogators getting the wrong impression of them. For instance, the defendant with ASD during the court proceedings, may speak in a monotone voice, laugh at inappropriate times, exhibit negative affect and misread subtle cues (e.g., when the Judge makes a facial expression in order to signal to everyone in the courtroom to be quiet (Taylor, Mesibow, & Debbaudt, 2009). It is easy to see how this type of behaviour may be interpreted as being disrespectful, rude and, potentially, the behaviours of a guilty person. The impact of such interpretation of these unique behaviours of a defendant with ASD can be detrimental, resulting in harsher sentencing and possibly more likely to be perceived as guilty by juries (see Allely & Cooper 2017; Cooper & Allely, 2017).

Another issues which needs greater awareness and understanding is the fact that the high-functioning individuals academic ability and language and vocabulary skills can be perceived by the prosecutors, judge, and jury as someone who surely must have understood the implications of their actions (Taylor et al., 2009; Mesibov & Sreckovic, 2017).

Allely (2015a) carried out a review of the literature investigating the experiences of individuals with ASD in the prison environment. The relatively small number of studies identified in the review highlighted the possible increased risk of bullying, confrontations, exploitation, anxiety and social isolation faced by prisoners with ASD. This is likely due to some of the features of ASD they display such as obsessions, social naivety and impaired empathy (Gordon, 2002; Allen, Evans, Hider, Hawkins, Peckett, & Morgan, 2008; Paterson, 2008; Morris, 2009). Compared to neurotypical individual, individuals with ASD are far less

psychologically equipped to adapt to and exist within the prison context. They will likely be a target for other inmates to abuse and exploit due to their direct style, impaired ability to read social interactions, eccentric behaviours (e.g., unusual preoccupations or repetitive behaviours) and communication difficulties. These behaviours will also be misinterpreted by prison staff as being disrespectful, deliberately disruptive and arrogant (Taylor et al., 2009; Sugrue, 2017).

The impact of the environment on individuals with ASD is being recognised during the court proceedings. Below is one Australian case, *Dennis v R* [2017] VSCA 251 (28 August, 14 September 2017), where the mental health expert, Mr Jackson stated:

“[The appellant’s] conditions will clearly make imprisonment or any other penalty that the Court may impose difficult for him. He will be slow to process what people are saying to him in prison, he will be overwhelmed and miss detail and he will have difficulty learning routines, etc. This would place him at significant risk of ‘getting into trouble’ from staff and other prisoners for not learning the rules and routines of the prison system. Because of his poor verbal executive skills, he would certainly miss any nuances [in] what people are saying to him and will take people very literally. He could potentially be at risk of being used by other prisoners to do their ‘dirty work’ because of his literal thinking.

[The appellant] would certainly be at risk of exacerbating any current mood condition that he has if he is sent to prison ... He does have a history of mood issues and therefore will be at greater risk than the average person of an exacerbation of mood (such as depression and anxiety) with a further period of incarceration” (*Dennis v R* [2017] VSCA 251 (28 August, 14 September 2017, pp. 6, paragraph 33). Additionally, the judge referred to the opinions of the mental health experts (Mr Cummins, Dr Clayer and Mr Jackson) about the impact of incarceration on the appellant. The judge in this case made the following statement:

“Having regard to the expressed opinion of both Mr Cummins, Dr Clayer, and Mr Jackson in his report, I have taken into consideration the fact that imprisonment will be more burdensome for you than the ordinary gaol inmate and also there is a risk of your mental health deteriorating” (*Dennis v R* [2017] VSCA 251 (28 August, 14 September 2017, pp. 10, paragraph 50).

There is growing discussion in the literature regarding the ‘draconian sentences’ that individuals with ASD face after being found guilty of violating child pornography statutes (Mahoney, 2009, pp, 48-52). Usually, sentences will involve mandatory extended prison terms and mandatory minimum sentences that defendants need to serve before they can be considered eligible for parole. Unlike in ordinary cases (involving neurotypical offenders) when the defendant has neurological deficits (such as ASD) the sentences not only seem unduly harsh but also serves no ‘reasonable protective purpose’ (e.g., protecting children). Individuals with ASD will be unable to download child exploitative material while in prison. However, currently the rigorous educational regime which such individuals need to learn how to discern appropriate social responses is simply not available to them in prison. As a result, upon release back into the community, they still lack the kind of control required to modulate their behaviour given social and moral norms (Douard & Schultz, 2017). In sum, prison sentences are not necessary in order to protect the public from an individual with ASD who has downloaded child pornography, because of the extremely low risk presented by the individual with ASD of harming a child (Mesibov & Sreckovic, 2017).

The Optimum Resolution for ASD Men Charged with Possession of Child Pornography without Any Criminal History is Diversion

There is a gradually increasing number of lawyers who are now advocating for “pretrial diversion” for select child pornography-only offenders (Long, 2014). A pretrial diversion program places offenders in a supervision program. Those who complete the program without reoffending are either not charged or have their charges dismissed. In federal child pornography cases, pretrial diversion is available as a possible disposition and within the prosecutor's discretion to grant without even court approval. However, it has been found to be effective in multiple state jurisdictions in the United States. Sugrue emphasises that pretrial diversion coupled with appropriate treatment and supervision provides the best approach for public protection and providing a fair disposition for someone with a condition like ASD. Such provisions means that individuals with ASD do not need to suffer the distress and trauma that they would highly likely face in

prison and enables them instead to receive appropriate supervision and intervention. Another important aspect of these provisions is that an individual with ASD who has engaged in viewing child pornography is not put on the sex offender registration which has obvious negative consequences (Sugrue, 2017).

Autism experts at the Child Study Center, Yale University in conjunction with many autism groups in the United States created a document entitled “Principles for Prosecutors Considering Child Pornography Charges against Persons with Asperger's Syndrome”. This document was written to educate prosecutors and judges about the vulnerability of ASD men committing the serious criminal offense of possession of child pornography without any intent to violate the law or present any danger to children. The purpose of this effort was to help prosecutors as “ministers of justice” and judges at sentencing to recognize that stigmatising this population with a criminal conviction and the possibility of a prison sentence was unjust and unnecessary with a greater understanding of this population of people who are born with a developmental disability. This document states, in part:

“Given the lack of social adaption on the part of AS patients, interest in pornography as a means to explore ideas of sexuality...is expected. At these times AS is directly involved in the individual’s obliviousness to the social and legal taboos surrounding child pornography and the inability to intuit that the visual depictions are the product of any kind of abusive relationships. This behaviour is not predictive of future involvement with child pornography or offenses against children. There is nothing inherent in Autism Spectrum Disorders to make individuals inclined to sexual deviance of any kind. ...Persons with AS are far less likely to be predators than victims...” (Carley et al., 2008).

Additionally, Dr. Ami Klin, Head of the Autism Center, Emory University, Atlanta, Ga. also emphasised the devastating impact of men with ASD who innocently are charged with possession of child pornography and are given a long prison sentence as opposed to being given a more appropriate disposition of diversion from the criminal justice system (Attwood, Henault, & Dubin, 2014). It has been suggested that diversion programmes and mental health courts should be set up for this particular population with this crime in mind

so that the necessary treatment/intervention/support and care can be given to this particular group (Dubin, 2017, pp. 272).

Clinical Recommendations and Implications

Issues with the application of risk assessment tools for online child pornography offenders

There are a wide range of risk assessment tools for use with contact sexual offenders. However, the application of these to online child pornography offenders is currently in its infancy (Garrington et al., 2018). Existing sexual offender risk assessment and treatment methods for sexual offenders were not specifically designed for online child pornography offenders (as opposed to contact sexual offenders) and therefore lack any validated or reliability when used with this group of offenders (Ly, Dwyer, & Fedoroff, 2018). Currently, there exists no valid and reliable risk assessment tool(s) to assess the risk of contact offending among online child pornography offenders. Such a risk assessment would be extremely useful for law enforcement. Moreover, the development of a tool which would help law enforcement and other criminal justice professionals prioritise offenders for further investigation (Sinclair, Duval, & Fox, 2015). It has also been argued that when the sexual offending risk assessments are used with the child pornography offenders (e.g., the STATIC-99/R (Helmus, Thornton, Hanson, & Babchishin, 2012), Risk Matrix 2000/R (Thornton et al., 2003), The Violence Risk Scale-Sexual Offender version (VRS-SO; Wong, Olver, Nicholaichuk, & Gordon, 2003) and Sexual Violence Risk-20 (SVR-20, Boer, Hart, Kropp, & Webster, 1997), studies have found evidence that they either over estimate, underestimate or have an untested application to individuals who have been convicted of a child pornography offence (Garrington et al., 2018). Henshaw and colleagues (2017) highlighted that preliminary study has indicated that current static risk assessment tools are likely to overestimate the risk in online child pornography offenders. They also suggest that the removal of certain

items from existing risk assessment may make them more accurate for this population (such as the items about noncontact offenses and the relationship the offender has to the victims) (Henshaw, Ogloff, & Clough, 2017).

Additionally, Osborn, Elliott, Middleton, and Beech (2010) found that two traditional static risk assessment tools, namely, the Static-99 (Harris, Phenix, Hanson, & Thornton, 2003) and also the Risk Matrix 2000 (RM2000; Thornton et al., 2003), severely over-estimated risk of recidivism severely among online child pornography offenders (CPOs). There were no offenders in the sample who had reoffended during the 1.5- to 4-year follow-up despite the fact that none had been categorised as low risk. However, the accuracy of the RM2000 was found to improve substantially when the some of the items were removed, specifically the ones which were related to the relationship to the victim (known or stranger) and having a history of non-contact offenses. When these items were removed, 72.6% of offenders were classified as low risk (Henshaw, Ogloff, & Clough, 2017). Henshaw and colleagues (2017) highlight that there is a lack of understanding and knowledge of the risk profiles of individuals who commit child pornography offenses alone (Henshaw et al., 2017).

In sum, given the increase in the number of individuals who commit online child pornography offenses, Garrington and colleagues (2018) has emphasised the need for the development of tools which are specific to this population. Currently, sexual offending tools which are frequently used are either not validated on such populations (such as the Static-99 Coding Rules Revised: Harris et al., 2003), or fail in being able to provide levels of predictability which are within the acceptable range (e.g., Osborn et al., 2010). There is a significant need for further research to develop more accurate assessments for this population (in addition to the development of appropriate treatment and management (Garrington, Chamberlain, Rickwood, & Boer, 2018).

What are the recommendations for carrying out risk assessment(s) with online child pornography offenders?

Garrington and colleagues (2018) identified five tools which were specifically for online child pornography offenders. Three of the five tools focused on risk assessment and two assessed cognitions and behaviours (Garrington et al., 2018). Some of the new tools which have been developed specifically for online child pornography offenders include the Child Pornography Offender Risk Tool (CPORT) and Kent Internet Risk Assessment Tool (KIRAT). The two tools identified with assess cognitions and behaviours include the Children, Internet and Sex Cognitions (CISC) Scale and the Internet Behaviours and Attitudes Questionnaire (IBAQ). It is important to point out that the CISC Scale and the IBAQ are not risk assessment tools per se. Instead, they enable the assessment of cognitions and behaviours which are relevant to child pornography offenders. The information that is gathered relating to the relevant cognitions and behaviours may be indicative of areas of risk for the individual (Sinclair, Duval, & Fox, 2015).

Child Pornography Offender Risk Tool (CPORT, Seto & Eke, 2015)

Seto and Eke (2015) were the first to develop an actuarial risk-assessment tool which was specifically designed for use with online child pornography offenders. They called the risk-assessment tool, the Child Pornography Offender Risk Tool (CPORT: pronounced “seaport”). Eke, Helmus and Seto (2018) recently published a paper which presented the findings from a validation study of the CPORT. Developed through data analysis of the police files of 286 male sexual offenders in Canada (Seto & Eke, 2015), the CPORT is a structured risk assessment checklist for ranking the likelihood that men convicted of child pornography offenses will sexually reoffend (either a contact or noncontact offense) (Seto & Eke, 2015). This tool reflects criminality or evidence of atypical sexual interests. Factors such as volume of collected child exploitative material is not considered in this risk tool. In offenders with child pornography offenses, the CPORT assess the risk of future offending by considering a number of static factors, many of which were identified in Eke and colleagues (2011), including offender age, prior offending, prior contact offenses, prior conditional release failures, admission of paedophilic interests and interest in pornographic material featuring boys

(Sinclair, Duval, & Fox, 2015). The CPORT comprises of seven items: (a) age at the time of the index investigation, (b) any prior criminal history, (c) specifically, any contact sexual offending (pre or at index), (d) any failure on conditional release, (e) indication (admission or diagnosis) of sexual interest in prepubescent or pubescent children, (f) more boy than girl content in child pornography, and (g) more boy than girl content in other child related materials (Seto & Eke, 2017).

Preliminary evaluation indicates that the CPORT has moderate levels of predictive accuracy which indicates that, with additional cross validation, it may be useful in the risk assessment of adult male child pornography offenders (Seto & Eke, 2015). Helmus and colleagues (2016) administered the CPORT to 86 male offenders who had received a conviction for an online child pornography related offence. They found that the CPORT was accurate in being able to predict sexual offence reoffending via contact, non-contact and online child pornography related offences. Given that the volume of material is not considered when determining risk makes it potentially a more appropriate risk assessment tool for use with individuals with ASD who have engaged in online child pornography offending. As discussed earlier, there are some cases involving individuals with ASD who have become preoccupied or obsessed with the act of collecting, categorising and storage of pornography (Haskins & Silva, 2006). For this subgroup of individuals, the process is frequently about the gathering of new pornography material as opposed to being about viewing the material (e.g., Brown, Anderson, & Cooney-Koss, 2018). However, which the CPORT might be more useful for online child pornography offenders with ASD, Seto and Eke (2015) do not advise using the probability estimates of the CPORT without further research investigating the reliability and validity based on larger samples. Nevertheless, the CPORT could still be useful for ranking individuals by risk score and to offer a structured way of reporting information (see Glasgow, 2010; Merdian, Perkins, Dustagheer, & Glorney, 2018).

The Kent Internet Risk Assessment Tool (KIRAT; Long et al., 2012)

The Kent Internet Risk Assessment Tool (KIRAT) was developed in order to assist criminal justice professionals (e.g., police forces) in prioritising casework based on identified risk factors for contact sexual offending by those being investigated for online child pornography offences. It uses known intelligence on a variety of factors including prior criminal convictions, domestic or substance abuse history, evidence of (offline) grooming behaviours, what access the individual has to children and current living arrangements (Sinclair, Duval, & Fox, 2015). The KIRA, although not a risk assessment which can predict recidivism in offenders, it has been found to be statistically robust (Long et al., 2016) for police forces in being able to prioritise their case workload.

Two tools which assess cognitions and behaviours

Children, Internet and Sex Cognitions (CISC, Kettleborough & Merdian, 2013) Scale

The CISC scale (Kettleborough & Merdian, 2013) consists of a total of 108 items which are rated using a six-point Likert scale which ranges from “strongly disagree” to “strongly agree”. The main aim of the CISC scale is assessing offence supporting cognitions of individuals who have been convicted of child pornography offences. It has been indicated by the CISC scale that these cognitions differ between those individuals who engage in contact sexual offences compared to those who engage in online child pornography related offences (Kettleborough, 2015).

The Internet Behaviours and Attitudes Questionnaire (IBAQ, O’Brien and Webster, 2007)

The Internet Behaviours and Attitudes Questionnaire (IBAQ) comprises of two scales, namely, behaviour and attitude. Specifically, the IBAQ consists a series of 42 behaviour items that require a ‘yes’/ ‘no’ response and 34 attitude items. The questions in the IBAQ investigate the nature of the offender’s internet behaviour in relation to indecent child images and general attitudes towards internet abuse. A number of these

statements aim to explore denial and minimisation with respect to the seriousness and extent of the behaviour. The following are some examples of the IBAQ Behaviour Items: 'I used to carefully categorise into 'folders' the child pornography I'd downloaded'; 'I knew that the child pornography I was downloading was illegal' and 'I used to seek out progressively more intense sexual experiences'. The following are some examples of the IBAQ Attitude Items: 'Looking at sexual pictures of children on the internet does not mean I have committed a sexual offence'; 'There were no negative consequences associated with downloading child pornography'; 'The child was often smiling in the child pornography that I have looked at, and so I believe that the child is not being harmed' and 'Children pictured in sexual positions on the internet experience bad effects afterwards' (O'Brien and Webster, 2007). It has also been indicated that the IBAQ may be a useful screening and evaluative tool in order to guide the work of practitioners. However, there does need to be further evaluation of the tool (Davidson, 2007). Middleton and colleagues (2006) have suggested that the IBAQ may be useful in screening sex offenders for deviant internet use in future and categorising them into offence seriousness for research purposes.

What Interventions are available for online child pornography (non-contact) offenders?

Sheldon and Howitt (2007) and many others have highlighted the issues surrounding the appropriateness of conventional sex offender treatment programmes for Child Sexual Exploitation Material (CSEM) (to use the terminology of the authors of this paper) offenders on the basis that they have different risks and needs to contact child sexual offenders. There are community-based interventions which have been developed for child pornography related offenders (in addition to other types of interventions available such as individual therapy, group therapy and medication). Community-based treatment programs typically focus on cognitive distortions, victim empathy, problem-solving strategies, developing healthy relationships and developing a prosocial lifestyle (Ly, Dwyer, & Fedoroff, 2018). Henshaw and colleagues (2017) have argued that child pornography treatment is likely to be more effective through treatment programs which are specifically

designed for this particular population. So programmes which address their specific risks and needs as opposed to treating non-relevant factors such as anti-sociality (Magaletta, Faust, Bickart, & McLearn, 2014).

One such specialised treatment program, which is now implemented nationally throughout the United Kingdom (UK), is the Probation-run Internet Sexual Offender Treatment Program (i-SOTP; Middleton & Hayes, 2006). It was designed specifically for individuals who have committed online child pornography related offenses. Given this, as well as consisting of the traditional program content, it also includes a strong focus on online behaviour, problematic Internet use and sexual compulsivity. It can be delivered in an individual or group format and has six modules which target the following domains: (a) value identification and motivation to change; (b) functional analysis of offending behaviour; (c) offense-supportive beliefs and victim awareness; (d) intimacy and emotional self-regulation impairments; (e) compulsivity, problematic Internet use, and sexual deviancy; and lastly; (f) relapse prevention and development of a “new life plan” (Henshaw, Ogloff, & Clough, 2017). The i-SOPT is accredited by the National Probation Service in England and Wales (Middleton, Mandeville-Norden, & Hayes, 2009). The i-SOPT program consists of a combination of models, including the Sex Offender Treatment Programme (Beech, Beckett, & Fisher, 1998), the Model of Problematic Internet Use (Quayle & Taylor, 2003) and the Good Lives Model (Ward & Stewart, 2003). In the program, participants are given treatment exercises which are specifically tailored to their treatment needs. The i-SOPT was evaluated using a sample of 264 convicted offenders by Ly and colleagues who found that following participation in the programme, participants reported significantly greater levels of self-esteem, decreased feelings of loneliness, increased locus of control, increased perspective-taking, reduced levels of distress, increased assertiveness and also decreased levels of impulsiveness (Ly, Dwyer, & Fedoroff, 2018).

The Sex Offender Treatment and Assessment Program (SOTAP; Burke, Sowerbutts, Blundell, & Sherry, 2002) is another program specifically designed for online child pornography offenders. The SOTAP targets the following domains: motivation for treatment, cognitive distortions, victim impact and the offense cycle. The SOTAP is delivered in a group format over 25 weeks. The treatment targets increasing victim empathy. It also targets the cognitive distortions that perpetuate the cycle of viewing child pornography. It

must be highlighted here that, to date, there are no studies which have investigated the effectiveness of SOTAP (Ly, Dwyer, & Fedoroff, 2018). Another intervention programme specifically designed for male online child pornography offenders is the psycho-educational risk-reduction programme, Inform Plus (Lucy Faithfull Foundation, 2014, a UK-based charitable organisation).

Despite the development of these two interventions discussed above, there still is a dearth of research investigating programme efficacy in reducing the rate of recidivism for this particular group of offenders. It would also be useful to investigating the efficacy of these intervention for individuals with ASD.

Equipping Youth to Help One Another Programme (EQUIP)

Langdon and colleagues (2013) carried out a single case series study and piloted an adapted version of The Equipping Youth to Help One Another Programme (EQUIP) programme. The sample included three men with intellectual disabilities and four men with a diagnosis of Asperger Syndrome. All were detained in a medium-secure forensic unit for people with intellectual disabilities. The EQUIP programme (Gibbs et al. 1995, 1996; Potter et al. 2001) is a manualised treatment programme that was adapted and delivered over 12-weeks and participants took part in four-one-hour sessions every week (Langdon, Murphy, Clare, Palmer, & Rees, 2013). It is a multicomponent programme with two types of treatment sessions, namely, Mutual Help Meetings and Equipment Meetings. Mutual Help Meetings provide a forum for individuals to talk about their difficulties within a framework which enables a resolution which is appropriate. Equipment Meetings are 'active treatment' meetings which consist of three different kinds of sessions. Specifically, anger management and thinking error correction, social skills training and social decision-making training (For more detail about the EQUIP programme see Potter et al., 2001; Gibbs et al., 1995). Langdon and colleagues found that the programme was effective in that there was an increase in moral reasoning ability, reduced distorted cognitions and an improved ability to choose effective solutions to problems. However, there was no significant impact on levels of anger following treatment. It would also be useful to further investigate the efficacy of this adapted version of the EQUIP programme for individuals with ASD.

Future Research Directions

Applying an aetiological and offence formulation model specific to online child pornography offenders with ASD versus no ASD

The Risk, Need, and Responsivity principles (RNR; Andrews, Bonta, & Hoge, 1990) maintain that the level of treatment that the individual receives should be matched to their level of risk level. Moreover, it should also “identify, assess, and target criminogenic needs and should be presented in a way that corresponds with the ability and learning style of the individual client. The RNR principles thus highlighted the need to develop a CSEM-specific [child sexual exploitation material] case formulation tool that (a) informs about idiosyncratic risks and needs, (b) helps to target treatment in line with the identified issues, and (c) may contribute to the systematic exploration of group-based variables predictive of reoffending” (Merdian, Perkins, Dustagheer, & Glorney, 2018, pp. 3-4).

Recently, Merdian and colleagues (2018) developed an aetiological and offence formulation model which was specific to online child pornography offending (Child Sexual Exploitation Material offending). The aim of this model was to not only increase the conceptual understanding of individuals who have committed a child pornography related offense but to also provide some guidance to professionals who are working with this particular group of offenders. In order to develop this aetiological model, Merdian and colleagues (2018) investigated a sample of 20 individuals who had either viewed, distributed, and/or shared child pornography. The researchers interviewed the participants on a number of topics including their life and sexual history, relationships, substance use, details of the offending and also the circumstances leading up to their offending. Through these interviews, the researchers identified seven superordinate themes: 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. Merdian and colleagues combined these seven themes into a case formulation tool which was specific for child pornography offending behaviour. The tool assists in the systematic and comprehensive case formulation of the individual's specific risks and needs and is not an actuarial risk-assessment tool. More specifically, it is not a tool which would differentiate between child pornography offenders who are at high or low risk of recidivism or escalation in offending behaviour (Merdian, Perkins, Dustagheer, & Glorney, 2018).

This tool developed by Merdian and colleagues could potentially be particularly useful for individuals with ASD who are convicted for a child pornography related offense given that it works on the individual's risks and needs. Future research could apply this tool to offenders with ASD and a group of offenders with no diagnosis of ASD. By doing this, we can investigate whether there are any differences between these two groups.

Examining the Level of Image Severity

As highlighted recently by Henshaw and colleagues (2017) there is relatively very little understanding and knowledge surrounding the type of risk factors that are possibly unique to the online child pornography offender population. The association between the characteristics of an offender's child pornography collection and their level of risk is an area which is being increasingly recognised as being important to assess (Henshaw, Ogloff, & Clough, 2017). Taylor, Holland, and Quayle (2001) were the first to highlight this. They had the notion that it was likely that individuals would obtain material that they found particularly interesting. Therefore it was suggested that by exploring offenders collections could offer some insight into the psychological profile and motivations of offenders. Such information would be potentially helpful when making assessments about the likelihood and severity or 'seriousness' of their offending and future

behaviour. Given this, further research could also look at the level of image severity in individuals with ASD who have been convicted of a child pornography related offense. It would be useful to assess how, as a group, the level of severity of images viewed or distributed compares to that of a neuro-typical of individuals convicted for the same offense. There are a number of scales which are available to assess the level of image severity. One of these is The COmbating Paedophile Information Networks in Europe (COPINE) scale. It consists of a 10-level typology of 'Indecent Images of Children' (IIOC). The typology ranges images containing children in their underwear or swimming costumes which are non-erotic and non-sexualised (indicative) to images of children shown in a context of sadism or bestiality. Such a range enables the inclusion of material that typically would not meet the legal definitions of child pornography (Taylor et al., 2001). The development of this typology was based on the analysis of over 80,000 publicly available images which were obtained from newsgroups and websites (Quayle, 2008; Taylor et al., 2001). The COPINE was originally developed as a tool to indicate how children are victimised as a result of 'Indecent Images of Children' material.

Because of the COPINE scale's ability to quantify the severity of an individual's offending, it has been adapted for use within the legal setting. There are some jurisdictions in the United States (US) who are using this information in order to inform prosecutions and guide sentencing decisions in relation to cases involving child pornography (e.g., Mizzi, Gotsis, & Poletti, 2010; see also Henshaw et al., 2017). Specifically, courts in England and Wales have adapted it so it can be used as a measure of the seriousness of the offense and also the "dangerousness" of the individual (Quayle, 2008) (see also Kloess, Woodhams, Whittle, Grant, & Hamilton-Giachritsis, 2017).

Need to explore the profile of online child pornography offenders with ASD

As mentioned earlier in the section on 'Escalation and the progression from non-contact to grooming and/or contact offences', it is well-established in the literature that it is unlikely that individuals who view child

pornography only will transition to contact offenses (e.g., Bourke & Hernandez, 2009). As highlighted by Ly, Dwyer and Fedoroff (2018) internet child pornography offenders have been found to be significantly less likely to have a criminal history when compared with contact offenders (also see Long, Alison, & McManus, 2012). Studies have also found that they tend to score lower on antisocial features (Lee, Li, Lamade, Schuler, & Prentky, 2012) and are also less likely to have substance abuse problems. Studies have also found that contact offenders are much more likely to display behaviours which are sexually deviant (e.g., sending child and adult pornography to a minor, attempting to meet with a minor) (McCarthy, 2010). It would be clinically useful to explore the profile of online child pornography offenders who have a diagnosis of ASD. Is the profile similar to that of the general group of online child pornography offenders on some of the above factors including substance abuse problems; anti-sociality and criminal history; beliefs supportive of sexual contact; offender age; prior offending; prior contact offenses; prior conditional release failures; admission of paedophilic interests and interest in pornographic material featuring boys in addition to a number of relatively unexplored factors such as psychiatric comorbidities.

Conclusion

Mogavero and Mogavero (2016) identified numerous studies which suggested that, in those with ASD, a significant proportion of the deviant or sexual offending behaviour is often 'driven' by symptoms inherent to ASD rather than due to any malice. This creates difficulties given that such offenses cause harm (both physical and psychological) to the victim and punishment is demanded by society (Debbaudt, 2004). However, in many cases a prison sentence is not appropriate (e.g., Allely, 2015a, 2015b). Greater awareness and understanding of these ASD impairments are important to distinguish ASD symptomology from sexual perversion and informing appropriate treatments (Mouridsen, 2012), in addition to avoiding unjust harsh sentencing (Freckelton, 2009, 2013; Allely & Creaby-Attwood, 2016; Creaby-Attwood & Allely, 2017). Lastly, Sheldon and Howitt (2007) and many others have highlighted the issues surrounding the appropriateness of conventional sex offender treatment programmes for child pornography offenders on the basis that they

have different risks and needs to contact child sexual offenders. Henshaw and colleagues (2017) have argued that child pornography treatment is likely to be more effective through treatment programs which are specifically designed for this particular population. So programmes which address their specific risks and needs as opposed to treating non-relevant factors such as anti-sociality (Magaletta, Faust, Bickart, & McLearn, 2014).

Compliance with Ethical Standards

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Ethical Approval

This article does not contain any studies with human participants or animals performed by any of the authors.

Recommended Books

Caught in the Web of the Criminal Justice System: Autism, Developmental Disabilities, and Sex Offenses .

Edited by Lawrence A. Dubin, J.D. and Emily Horowitz, Ph.D. Foreword by Alan Gershel, J.D. Introduction by Mark Mahoney, J.D. Afterword by Tony Attwood. Jessica Kingsley Publishers, 2017.

Attwood, T., Hénault, I., & Dubin, N. *The Autism Spectrum, Sexuality and the Law: What every parent and professional needs to know*. Jessica Kingsley Publishers, 2014.

Recommended Resources

The Advocate's Gateway is hosted by the Inns of Court College of Advocacy (ICCA, formerly the ATC). See <www.theadvocatesgateway.org>. The website's guidance has been widely endorsed by the senior judiciary both in England and Wales and in Northern Ireland, for example, see R v Lubemba [2014] EWCA Crim 2064 and The Right Honourable Lord Justice Gillen/The Review Group, Review of Civil and Family Justice: The Review Group's Draft Report on Civil Justice (JSB 2016) 199, para 14.75.

References

Allely, C. S. and Cooper, P. (2017), "Jurors' and judges' evaluation of defendants with autism and the impact on sentencing: a systematic Preferred Reporting Items for Systematic Reviews and Meta-analyses (PRISMA) review of autism spectrum disorder in the courtroom", *Journal of Law and Medicine*, Vol. 25 No. 1.

Allely, C. and Creaby-Attwood, A. (2016), "Sexual offending and autism spectrum disorders" *Journal of Intellectual Disabilities and Offending Behaviour*, Vol. 7, No. 1, pp. 35-51.

Allely, C. S. (2015a), "Experiences of prison inmates with Autism Spectrum Disorders and the knowledge and understanding of the spectrum amongst prison staff: A review", *Journal of Intellectual Disabilities and Offending Behavior*, Vol. 6, No. 2, pp. 55 – 67.

Allely, C. S. (2015b). Autism spectrum disorders in the criminal justice system: police interviewing, the courtroom and the prison environment. *Recent Advances in Autism*, 1-13.

Allen, D., Evans, C., Hider, A., Hawkins, S., Peckett, H. and Morgan, H. (2008), "Offending behaviour in adults with Asperger syndrome", *Journal of Autism and Developmental Disorders*, Vol. 38 No. 4, pp. 748-58.

American Psychiatric Association. (1994). *Diagnostic and statistical manual of mental disorders* (4th ed.). Washington, DC: American Psychiatric Association.

American Psychiatric Association (APA) (2000). *Diagnostic and Statistical Manual of Mental Disorders*, 4th ed., Text Revision DSM-IV-TR, APA, Washington, DC.

American Psychiatric Association (APA) (2013). *Diagnostic and Statistical Manual of Mental Disorders*, 5th ed., DSM-5, APA, Washington, DC.

Andrews, D. A., Bonta, J. and Hoge, R. D. (1990), "Classification for effective rehabilitation: Rediscovering psychology", *Criminal Justice and Behavior*, Vol. 17, pp. 19-52.

Attwood, T. (2006). *The complete guide to Asperger's syndrome*. Jessica Kingsley Publishers.

Babchishin, K. (2014, September). Research developments in child sexual exploitation material offending. Symposium of the international working group on best practice in internet-based sexual offending. Conference of the international association for the treatment of sexual abusers, Porto, Portugal.

Barry-Walsh, J. B. and Mullen, P. E. (2004), "Forensic aspects of Asperger's Syndrome", *Journal of Forensic Psychiatry and Psychology*, Vol. 15, No. 1, pp. 96-107.

Beech, A., Beckett, R. C. and Fisher, D. (1998), "STEP 3: An evaluation of the prison sex offender treatment programme", London: Home Office. Retrieved from

https://www.researchgate.net/profile/Anthony_Beech/publication/8958723_Evaluation_of_a_National_Prison-based_Treatment_Program_for_Sexual_Offenders_in_England_and_Wales/links/0f3175304ffd3a866300000

f

Beech, A. R. (1998), "A psychometric typology of child abusers", *International Journal of Offender Therapy and Comparative Criminology*, Vol. 42, pp. 319-339.

Boer, D. P., Hart, S., Kropp, P. R. and Webster, C. D. (1997), "Sexual Risk Violence-20", Psychological Assessment Resources, Inc.

Bourke, M. L. and Hernandex, A. E. (2009), "The 'Butner Study' Redux: A report of the incidence of hands-on child victimization by child pornography offenders", *Journal of Family Violence*, Vol. 24, pp. 183–191.

Brendel, D. H., Bodkin, J. A., Hauptman, B. and Ornstein, A. (2002), "' I see dead people": Overcoming psychic numbness", *Harvard Review of Psychiatry*, Vol. 10, No. 3, pp. 166-178.

Brown, J., Anderson, G. and Cooney-Koss, L. (2018), "Autism Spectrum Disorder and Sexually Inappropriate Behaviors: An Introduction for Caregivers and Professionals", *The Journal of Special Population*, Vol. 1 No. 2.

Brugha, T. S., McManus, S., Bankart, J., Scott, F., Purdon, S., Smith, J., ... and Meltzer, H. (2011), "Epidemiology of autism spectrum disorders in adults in the community in England", *Archives of General Psychiatry*, Vol. 68, No. 5, pp. 459-465.

Burke, A., Sowerbutts, S., Blundell, B. and Sherry, M. (2002), "Child pornography and the Internet: Policing and treatment issues", *Psychiatry, Psychology and Law*, Vol. 9 No. 1, pp. 79–84.

Byers, E. S., Nichols, S. and Voyer, S. D. (2013), "Challenging stereotypes: Sexual functioning of single adults with high functioning autism spectrum disorder", *Journal of Autism and Developmental Disorders*, Vol. 43, No. 11, pp. 2617-2627.

Byers, E. S., Nichols, S., Voyer, S. D. and Reilly, G. (2013), "Sexual well-being of a community sample of high-functioning adults on the autism spectrum who have been in a romantic relationship", *Autism*, Vol. 17, No. 4, pp. 418-433.

Canadian Centre for Child Protection (2017), "Survivor's survey", Retrieved from

https://www.protectchildren.ca/pdfs/C3P_SurvivorsSurveyExecutiveSummary2017_en.Pdf

Carley, M. J., Gerhardt, P., Jekel, D., Klin, A., et al. (2008), "Principles for Prosecutors Considering Child Pornography Charges against Persons with Asperger's Syndrome". Accessed on 29th June 2018.

<https://www.aane.org/principles-for-prosecutors/>

Carnes, P. (2001), "Out of the shadows: Understanding sexual addiction". Hazelden Publishing.

Chesterman, P. and Rutter, S. C. (1993), "Case report: Asperger's syndrome and sexual offending", *The Journal of Forensic Psychiatry*, Vol. 4, No. 3, pp. 555-562.

Clements, J. and Zarkowska, E. (2000), "Behavioural concerns and autistic spectrum disorders: explorations and strategies for change". Jessica Kingsley Publishers.

Cooper, P. and Allely, C. S. (2017), "You can't judge a book by its cover: evolving professional responsibilities, liabilities and 'judgcraft' when a party has Asperger's Syndrome", *Northern Ireland Legal Quarterly*, Vol. 68, No. 1, pp. 35-58.

Craig, L. A., Beech, A. R. and Cortoni, F. (2013), "What works in assessing risk in sexual and violent offenders". *What Works in Offender Rehabilitation: An Evidence-Based Approach to Assessment and Treatment*, pp. 94-114.

Creaby-Attwood, A. and Allely, C. S. (2017), "A psycho-legal perspective on sexual offending in individuals with Autism Spectrum Disorder", *International Journal of Law and Psychiatry*, Vol. 55, pp. 72-80.

Cutler, E. (2013), "Autism and child pornography: a toxic combination", available at: <http://sexoffender-statistics.blogspot.com/2013/08/autism-and-child-pornography-toxic.html>

Davidson, J. (2007), "Current practice and research into internet sex offending", Risk Management Authority Research, Department of Social & Political Studies, University of Westminster, UK.

Debbaudt, D. (2004), "Beyond guilt or innocence", forum paper, Autism New Zealand Inc., Worcester, MA, available at: http://autismnz.org.nz/police/Pol_BeyGuilt.pdf

Douard, J. and Schultz, P. (2017). Chapter 12. Asperger's syndrome and downloading child pornography: Why criminal punishment is unjust and ineffective. In *Caught in the Web of the Criminal Justice System: Autism, Developmental Disabilities, and Sex Offenses*. Edited by Lawrence A. Dubin, J.D. and Emily Horowitz, Ph.D. Foreword by Alan Gershel, J.D. Introduction by Mark Mahoney, J.D. Afterword by Tony Attwood. Jessica Kingsley Publishers.

Douglas, K. S., Hart, S. D., Webster, C. D. and Belfrage, H. (2013), "HCR-20V3: Assessing risk of violence – User guide". Burnaby, Canada: Mental Health, Law, and Policy Institute, Simon Fraser University.

Eke, A. W., Helmus, L. M. and Seto, M. C. (2018), "A Validation Study of the Child Pornography Offender Risk Tool (CPORT)", *Sexual Abuse*, 1079063218762434.

Eke, A. W., Seto, M. C. and Williams, J. (2011), "Examining the criminal history and future offending of child pornography offenders: An extended prospective follow-up study", *Law and Human Behavior*, Vol. 35 No. 6, pp. 466–478.

Endrass, J., Urbaniok, F., Hammermeister, L. C., Benz, C., Elbert, T., Laubacher, A. and Rossegger, A. (2009), "The consumption of Internet child pornography and violent and sex offending", *BMC Psychiatry*, Vol. 9 No. 43.

Freckelton Sc, I. and List, D. (2009), "Asperger's disorder, criminal responsibility and criminal culpability", *Psychiatry, Psychology and Law*, Vol. 16, No. 1, pp. 16-40.

Freckelton, I. (2011), "Autism spectrum disorders and the criminal law", In Mohammadi, M.-R. (Ed.), *A Comprehensive Book on Autism Spectrum Disorders*, ISBN 978-953-307-494-8, p. 249, available at: www.intechopen.com/books/a-comprehensive-book-on-autism-spectrum-disorders/autism-spectrumdisorders-and-the-criminal-law

- Gabriels, R. L. and Van Bourgondien, M. E. (2007), "Sexuality and autism. Growing up with autism: Working with school-age children and adolescents", pp. 58-72.
- Garrington, C., Chamberlain, P., Rickwood, D. and Boer, D. P. (2018), "Risk assessment of online child abuse material (CAM) offenders: a review of existing tools", *Journal of Criminal Psychology*, Vol. 8 No. 2, pp. 150-161.
- Gewirtz-Meydan, A., Walsh, W., Wolak, J. and Finkelhor, D. (2018), "The complex experience of child pornography survivors", *Child Abuse and Neglect*, Vol. 80, pp. 238-248.
- Glasgow, D. (2010), "The potential of digital evidence to contribute to risk assessment of internet offenders", *Journal of Sexual Aggression*, Vol. 16, pp. 87-106.
- Goller, A., Jones, R., Dittmann, V., Taylor, P. and Graf, M. (2016), "Criminal recidivism of illegal pornography offenders in the overall population-a national cohort study of 4612 offenders in Switzerland", *Advances in Applied Sociology*, Vol. 6 No. 2, pp. 48-56.
- Gordon, R. (2002), "Asperger syndrome: one prisoner's experience", *Prison Service Journal*, Vol. 143, pp. 2-4.
- Gougeon, N. A. (2013), "Interest, understanding, and behaviour: Conceptualizations of sexuality education for individuals with an autism spectrum disorder using a socially inclusive lens". University of Ottawa (Canada).
- Gougeon, N. A. (2010), "Sexuality and autism: a critical review of selected literature using a social-relational model of disability", *American Journal of Sexuality Education*, Vol. 5, No. 4, pp. 328-361.
- Green, J., Gilchrist, A., Burton, D. and Cox, A. (2000), "Social and psychiatric functioning in adolescents with Asperger syndrome compared with conduct disorder", *Journal of Autism and Developmental Disorders*, Vol. 30, No. 4, pp. 279-293.

Griffiths, S., Jarrold, C., Penton-Voak, I. S., Woods, A. T., Skinner, A. L. and Munafò, M. R. (2017), "Impaired Recognition of Basic Emotions from Facial Expressions in Young People with Autism Spectrum Disorder: Assessing the Importance of Expression Intensity", *Journal of Autism and Developmental Disorders*, pp. 1-11.

Griffiths, D., Hingsburger, D., Hoath, J. and Ioannou, S. (2013). 'Counterfeit deviance' revisited. *Journal of Applied Research in Intellectual Disabilities*, Vol. 26 No. 5, pp. 471-480.

Griffiths, D., Richards, D. and Fedoroff, P. (2009), "Persons with intellectual disabilities who sexually offend", *Sex Offenders: Identification, Risks, Assessment, Treatment and Legal Issues*, pp. 353-378.

Griffin-Shelley, E. (2010), "An Asperger's adolescent sex addict, sex offender: A case study", *Sexual Addiction and Compulsivity*, Vol. 17, No. 1, pp. 46-64.

Grove, W. M. and Meehl, P. E. (1996), "Comparative efficiency of informal (subjective, impressionistic) and formal (mechanical, algorithmic) prediction procedures: The clinical–statistical controversy", *Psychology, Public Policy, and Law*, Vol. 2, pp. 293–323.

Grubin, D. (2008), "Validation of Risk Matrix 2000 for Use in Scotland Report Prepared for the Risk Management Authority".

Hanson, R. K. and Morton-Bourgon, K. E. (2007), "The accuracy of recidivism risk assessments for sexual offenders: A meta-analysis" (ResearchRep. No. 2007–01). Ottawa; Canada: Public Safety and Emergency Preparedness.

Hanson, R. K. and Thornton, D. (2003), "Notes on the Development of a Static-2002". Available at: http://ww2.psepc-sppcc.gc.ca/publications/corrections/200103_Static_2002_e.asp

Hanson, R. K. and Harris, A. J. R. (2001), "A structured approach to evaluating change among sexual offenders", *Sexual Abuse: A Journal of Research and Treatment*, Vol. 13, pp. 105–122.

Hanson, R. K. and Harris, A. J. R. (2000), "Where should we intervene? Dynamic predictors of sexual offense recidivism", *Criminal Justice and Behavior*, Vol. 27, pp. 6–35.

Hanson, R. K. and Thornton, D. (2000), "Improving risk assessments for sex offenders: a comparison of three actuarial scales", *Law and Human Behavior*, Vol. 24, No. 1, pp. 119.

Hanson, R. K. and Thornton, D. (1999), "Static 99: Improving actuarial risk assessments for sex offenders" (User report 1999-02). Ottawa: Department of the Solicitor General of Canada.

Hanson, R. K. (1997), "The development of a brief actuarial risk scale for sexual offense recidivism" (User report 1997-04). Ottawa: Department of the Solicitor General of Canada.

Haracopos, D. and Pedersen, L. (1992), "Sexuality and autism: A nationwide survey in Denmark". Unpublished manuscript.

't Hart-Kerkhoffs, L. A., Jansen, L. M., Doreleijers, T. A., Vermeiren, R., Minderaa, R. B. and Hartman, C. A. (2009), "Autism spectrum disorder symptoms in juvenile suspects of sex offenses", *The Journal of Clinical Psychiatry*, Vol. 70, No. 2, pp. 266-272.

Haskins, B. G. and Silva, J. A. (2006), "Asperger's disorder and criminal behavior: Forensic-psychiatric considerations" *The Journal of the American Academy of Psychiatry*, Vol. 34, No. 3, pp. 374-384.

Helmus, M., Eke, A. W. and Seto, M. C. (2016), "A cross-validation of the child pornography offender risk tool (CPORT)", presentation at the 35th Annual Research and Treatment Conference for the Association of the Treatment of Sexual Abusers, Orlando, FL, November.

Helmus, L., Thornton, D., Hanson, R. K. and Babchishin, K. M. (2012), "Improving the predictive accuracy of Static-99 and Static-2002 with older sex offenders: Revised age weights", *Sexual Abuse*, Vol. 24 No. 1, pp. 64-101.

Henault, I. (2006), "Asperger's Syndrome and Sexuality. From Adolescence through Adulthood". London, UK and Philadelphia, PA: Jessica Kingsley Publishers.

Henshaw, M., Ogloff, J. R. and Clough, J. A. (2017), "Looking beyond the screen: A critical review of the literature on the online child pornography offender", *Sexual Abuse*, Vol. 29 No. 5, pp. 416-445.

Higgs, T. and Carter, A. J. (2015), "Autism spectrum disorder and sexual offending: Responsivity in forensic interventions" *Aggression and Violent Behavior*, Vol. 22, pp. 112-119.

Hingsburger, D., Griffiths, D. and Quinsey, V. (1991), "Detecting counterfeit deviance: Differentiating sexual deviance from sexual inappropriateness" *The Habilitative Mental Healthcare Newsletter*, Vol. 10, No. 9, pp. 51-54.

Howlin, P. (1997), "Autism: Preparing for Adulthood", Routledge, London.

Katz, N. and Zemishlany, Z. (2005), "Criminal responsibility in Asperger's syndrome" *The Israel Journal of Psychiatry and Related Sciences*, Vol. 43, No. 3, pp. 166-173.

Kettleborough, D. (2015), "Understanding the cognitions of child sexual exploitation material offenders" Weblog post, available at: <http://wp.me/p2RS15-82> Accessed on 12th October 2018.

Kettleborough, D. and Merdian, H. (2013), "The development of the children, internet, and sex cognitions scale (CISC): understanding the cognitions of child pornography offenders", Presentation at the NOTA Conference, Cardiff, September.

Klin, A., Volkmar, F. R., Sparrow, S. S., Cicchetti, D. V. and Rourke, B. P. (1995), "Validity and neuropsychological characterization of Asperger syndrome: Convergence with nonverbal learning disabilities syndrome" *Journal of Child Psychology and Psychiatry*, Vol. 36, No. 7, pp. 1127-1140.

Kloess, J. A., Woodhams, J., Whittle, H., Grant, T. and Hamilton-Giachritsis, C. E. (2017), "The challenges of identifying and classifying child sexual abuse material", *Sexual Abuse*, 1079063217724768.

Kumar, S., Devendran, Y., Radhakrishna, A., Karanth, V. and Hongally, C. (2017), "A case series of five individuals with asperger syndrome and sexual criminality", *Journal of Mental Health and Human Behaviour*, Vol. 22, No. 1, pp. 63.

Langdon, P. E., Murphy, G. H., Clare, I. C., Palmer, E. J. and Rees, J. (2013), "An evaluation of the EQUIP treatment programme with men who have intellectual or other developmental disabilities" *Journal of Applied Research in Intellectual Disabilities*, Vol. 26 No. 2, pp. 167-180.

Leonard, M. M. (2010), "'I did what I was directed to do but he didn't touch me': The impact of being a victim of internet offending" *Journal of Sexual Aggression*, Vol. 16 No. 2, pp. 249–256.

Liberati, A., Altman, D. G., Tetzlaff, J., Mulrow, C., Gøtzsche, P. C., Ioannidis, J. P., ...and Moher, D. (2009), "The PRISMA statement for reporting systematic reviews and meta-analyses of studies that evaluate health care interventions: explanation and elaboration", *PLoS Medicine*, Vol. 6 No. 7, e1000100.

Long, M., Alison, L., Tejeiro, R., Hendricks, E. and Giles, S. (2016), "KIRAT: Law enforcement's prioritization tool for investigating indecent image offenders", *Psychology, Public Policy, and Law*, Vol. 22 No. 1, pp. 12-21.

Long, S. J. (2014), "The Case for Extending Pretrial Diversion to Include Possession of Child Pornography", *U. Mass. L. Rev.*, Vol. 9, pp. 306.

Long, M. L., Alison, L. A. and McManus, M. A. (2012), "Child pornography and likelihood of contact abuse: A comparison between contact child sexual offenders and noncontact offenders" *Sexual Abuse: A Journal of Research and Treatment*, Vol. 25 No. 4, pp. 370–395.

Ly, T., Dwyer, R. G. and Fedoroff, J. P. (2018), "Characteristics and treatment of internet child pornography offenders", *Behavioral Sciences and the Law*, Vol. 36 No. 2, pp. 216-234.

Magaletta, P. R., Faust, E., Bickart, W. and McLearn, A. M. (2014), "Exploring clinical and personality characteristics of adult Male internet-only child pornography offenders" *International Journal of Offender Therapy and Comparative Criminology*, Vol. 58, pp. 137–153.

Mahoney, M. (2017), "Introduction", In *Caught in the Web of the Criminal Justice System: Autism, Developmental Disabilities, and Sex Offenses*. Edited by Lawrence A. Dubin, J.D. and Emily Horowitz, Ph.D. Foreword by Alan Gershel, J.D. Introduction by Mark Mahoney, J.D. Afterword by Tony Attwood. Jessica Kingsley Publishers.

Mahoney, M. (2009), "Asperger's Syndrome and the Criminal Law: The Special Case of Child Pornography". Accessed on 29th June 2018.
<http://www.harringtonmahoney.com/content/Publications/AspergersSyndromeandtheCriminalLawv26.pdf>

Martin, J. (2015), "Conceptualizing the harms done to children made the subjects of sexual abuse images online" *Child and Youth Services*, Vol. 36 No. 4, pp. 267–287.

McCarthy, J. A. (2010), "Internet sexual activity: A comparison between contact and non-contact child pornography offenders", *Journal of Sexual Aggression*, Vol. 16 No. 2, pp. 181–195.

Merdian, H. L., Perkins, D. E., Dustagheer, E. and Glorney, E. (2018), "Development of a case formulation model for individuals who have viewed, distributed, and/or shared child sexual exploitation material" *International Journal of Offender Therapy and Comparative Criminology*, 0306624X17748067.

Mesibov, G. and Sreckovic, M. (2017), "Chapter 2. Child and juvenile pornography and autism spectrum disorder", In *Caught in the Web of the Criminal Justice System: Autism, Developmental Disabilities, and Sex Offenses*. Edited by Lawrence A. Dubin, J.D. and Emily Horowitz, Ph.D. Foreword by Alan Gershel, J.D. Introduction by Mark Mahoney, J.D. Afterword by Tony Attwood. Jessica Kingsley Publishers.

Middleton, D., Mandeville-Norden, R. and Hayes, E. (2009), "Does treatment work with Internet sex offenders? Emerging findings from the Internet Sex Offender Treatment Programme (i-SOTP)", *Journal of Sexual Aggression*, Vol. 15 No. 1, pp. 5–19.

Middleton, D., Elliott, I. A., Mandeville-Norden, R. and Beech, A. R. (2006), "An investigation into the applicability of the Ward and Siegert Pathways Model of child sexual abuse with Internet offenders", *Psychology, Crime and Law*, Vol. 12 No. 6, pp. 589-603.

Middleton, D. and Hayes, E. (2006), "Internet Sex offender treatment programme theory manual", London: National Offender Management Service (NOMS) Interventions Unit, Ministry of Justice.

Milton, J., Duggan, C., Latham, A., Egan, V. and Tantam, D. (2002), "Case history of co-morbid Asperger's syndrome and paraphilic behaviour", *Medicine, Science and the Law*, Vol. 42, No. 3, pp. 237-244.

- Mizzi, P., Gotsis, T. and Poletti, P. (2010), "Sentencing offenders convicted of child pornography and child abuse material offences", Vol. 12, Sydney: Judicial Commission of New South Wales.
- Mogavero, M. C. and Mogavero, M. C. (2016), "Autism, sexual offending, and the criminal justice system", *Journal of Intellectual Disabilities and Offending Behaviour*, Vol. 7, No. 3, pp. 116-126.
- Moher, D., Liberati, A., Tetzlaff, J. and Altman, D. G. (2009), "Preferred reporting items for systematic reviews and meta-analyses: the PRISMA statement", *Annals of Internal Medicine*, Vol. 151 No. 4, pp. 264-269.
- Mouridsen, S. E. (2012), "Current status of research on autism spectrum disorders and offending", *Research in Autism Spectrum Disorders*, Vol. 6, No. 1, pp. 79-86.
- Morris, A. (2009), "Offenders with Asperger's syndrome: experiences from within prison", doctoral dissertation, Pacific University, available at: <http://commons.pacificu.edu/spp/525> (accessed 15 September 2014).
- Murrie, D. C., Warren, J. I., Kristiansson, M. and Dietz, P. E. (2002), "Asperger's syndrome in forensic settings", *International Journal of Forensic Mental Health*, Vol. 1, No. 1, pp. 59-70.
- Nichols, H.R. and Molinder, L. (1984), "Multiphasic Sex Inventory", *Nichols and Molinder Assessments*, 437 Bowles Drive, Tacoma, WA.
- O'Brien, M. D. and Webster, S. D. (2007), "The construction and preliminary validation of the Internet Behaviours and Attitudes Questionnaire (IBAQ)", *Sexual Abuse*, Vol. 19 No. 3, pp. 237-256.
- Osborn, J., Elliott, I., Middleton, D. and Beech, A. (2010), "The use of actuarial risk assessment measures with UK internet child pornography offenders" *Journal of Aggression, Conflict and Peace Research*, Vol. 2, No. 3, pp. 16-24.
- Paterson, P. (2008), "How well do young offenders with Asperger syndrome cope in custody?", *British Journal of Learning Disabilities*, Vol. 36 No. 1, pp. 54-8.

Patrick, S. and Marsh, R. (2009), "Recidivism among Child Sexual Abusers: Initial Results of a 13-Year Longitudinal Random Sample", *Journal of Child Sexual Abuse*, Vol. 18, pp. 123-136.

Phenix, A., Doren, D., Helmus, L., Hanson, R. K. and Thornton, D. (2008), "Coding rules for Static-2002", Retrieved from: www.static99.org/pdfdocs/static2002codingrules.pdf

Quayle, E. (2008), "The COPINE project", *Irish Probation Journal*, Vol. 5, pp. 65-83.

Quayle, E. and Taylor, M. (2003), "Model of problematic Internet use in people with a sexual interest in children", *Cyberpsychology and Behavior*, Vol. 6 No, 1, pp. 93–106.

Quinsey, V. L., Harris, G. T., Rice, M. E. and Cormier, C. A. (2006), "Violent offenders: Appraising and managing risk", (2nd ed.). Washington DC. American Psychological Association.

Ray, F., Marks, C. and Bray-Garretson, H. (2004), "Challenges to treating adolescents with Asperger's Syndrome who are sexually abusive", *Sexual Addiction and Compulsivity*, Vol. 11, No. 4, pp. 265-285.

Robison, J. E., (2013), "Autism and Porn: A Problem No One Talks About. Are people with autism more vulnerable to the lure of pornography?", *Psychology Today*. Accessed on 29th June 2018.

<https://www.psychologytoday.com/gb/blog/my-life-aspergers/201308/autism-and-porn-problem-no-one-talks-about>

Sentencing Guidelines Council. (2013). Section six: Indecent images of children. Retrieved from

https://consult.justice.gov.uk/sentencing-council/indecent-images-children/supporting_documents/sexual%20offences_Indecent%20images%20of%20children.pdf

Seto, M. C. and Eke, A. W. (2017), "Correlates of admitted sexual interest in children among individuals convicted of child pornography offenses" *Law and Human Behavior*, Vol. 41 No. 3, pp. 305.

Seto, M. C. and Eke, A. W. (2015), "Predicting recidivism among adult male child pornography offenders: Development of the Child Pornography Offender Risk Tool (CPORT)", *Law and Human Behavior*, Vol. 39 No. 4, pp. 416-429.

- Seto, M. C., Hermann, C. A., Kjellgren, C., Priebe, G., Svedin, C. G. and Långström, N. (2015), "Viewing child pornography: Prevalence and correlates in a representative community sample of young Swedish men" *Archives of Sexual Behavior*, Vol. 44 No. 1, pp. 67–79.
- Seto, M. C., Hanson, R. K. and Babchishin, K. M. (2011), "Contact sexual offending by men with online sexual offenses", *Sexual Abuse: A Journal of Research and Treatment*, Vol. 23 No. 1, pp. 124–145.
- Seto, M. C. and Eke, A. W. (2005), "The Criminal Histories and Later Offending of Child Pornography Offenders", *Sexual Abuse*, Vol. 17, pp. 201-210.
- Sevlever, M., Roth, M. E. and Gillis, J. M. (2013), "Sexual abuse and offending in autism spectrum disorders" *Sexuality and Disability*, Vol. 31, No. 2, pp. 189-200.
- Silbert, M. H. (1989), "The effects on juveniles of being used for prostitution and pornography, sexual assault of prostitutes", In D. Zillmann, & J. Bryant (Eds.). *Pornography research advances and policy considerations*. Mahwah, New Jersey: Lawrence Erlbaum Associates, Inc.
- Sinclair, R., Duval, K. and Fox, E. (2015), "Strengthening Canadian law enforcement and academic partnerships in the area of online child sexual exploitation: The identification of shared research directions", *Child and Youth Services*, Vol. 36 No. 4, pp. 345-364.
- Sheldon, K. and Howitt, D. (2007), "Sex offenders and the internet", Chichester: West Sussex.
- Stabenow, T. (2011), "A method for careful study: A proposal for reforming the child pornography guidelines".
- Steel, C. (2016), "The asperger's defence in digital child pornography investigations", *Psychiatry, Psychology and Law*, Vol. 23, No. 3, pp. 473-482.
- Stokes, M.A. and Kaur, A.N. (2005), "High-functioning autism and sexuality: a parental perspective" *Autism*, Vol. 9, No. 3, pp. 266-89.

Sugrue, D. P. (2017), "Chapter 4. Forensic assessment of individuals with autism spectrum charged with child pornography violations", In *Caught in the Web of the Criminal Justice System: Autism, Developmental Disabilities, and Sex Offenses*. Edited by Lawrence A. Dubin, J.D. and Emily Horowitz, Ph.D. Foreword by Alan Gershel, J.D. Introduction by Mark Mahoney, J.D. Afterword by Tony Attwood. Jessica Kingsley Publishers.

Sullum, J. (2017). "Unjust, Irrational, and Unconstitutional Consequences of Paedophilia Panic," Reason Digital Edition. Accessed on 27th June 2018. <http://reason.com/archives/2017/03/15/sex-and-kids>.

Sutton, L. R., Hughes, T. L., Huang, A., Lehman, C., Paserba, D., Talkington, V., ... and Marshall, S. (2013), "Identifying individuals with autism in a state facility for adolescents adjudicated as sexual offenders: a pilot study" *Focus on Autism and Other Developmental Disabilities*, Vol. 28, No. 3, pp. 175-183.

Taylor, K., Mesiboy, G., & Debbaudt, D. (2009). Autism in the criminal justice system. *NC St. BJ*, 14, 32.

Taylor, M., Holland, G. and Quayle, E. (2001), "Typology of paedophile picture collections", *The Police Journal*, Vol. 74 No. 2, pp. 97-107.

Taylor, M., Holland, G. and Quayle, E. (2000), "A typology of child pornography", *Police Journal*, Vol. 74, pp. 97-107.

Thornton, D., Mann, R., Webster, S., Blud, L., Travers, R., Friendship, C. and Erikson, M. (2003)., "Distinguishing and combining risks for sexual and violent recidivism", In R. Prentky, E. Janus, M. Seto, & A. W. Burgess (Eds.), *Sexually coercive behavior: Understanding and management*, *Annals of the New York Academy of Sciences*, 989, 225-235.

Thornton, D. (2002), "Constructing and testing a framework for dynamic risk assessment" *Sexual Abuse: A Journal of Research and Treatment*, Vol. 14, pp. 139-154.

Turner, D., Briken, P. and Schöttle, D. (2017), "Autism-spectrum disorders in adolescence and adulthood: focus on sexuality", *Current Opinion in Psychiatry*, Vol. 30, No. 6, pp. 409-416.

Uljarevic, M. and Hamilton, A. (2013), "Recognition of emotions in autism: a formal meta-analysis" *Journal of autism and Developmental Disorders*, Vol. 43, No. 7, pp. 1517-1526.

Ward, T. and Stewart, C. (2003), "The Good Lives Model of offender rehabilitation of sex offenders", In T. Ward, D. R. Laws, & S. M. Hudson (Eds.), *Sexual Deviance: Issues and Controversies in Sexual Deviance* (pp. 3–20). London: Sage.

Webb, L., Craissati, J. and Keen, S. (2007), "Characteristics of Internet Child Pornography Offenders: A Comparison with Child Molesters", *Sexual Abuse*, Vol. 19, pp. 449-465.

Webster, S. D., Mann, R. E., Carter, A. J., Long, J., Milner, R. J., O'Brien, M. D., Wakeling, H. C. and Ray, N. L. (2006), "Inter-rater reliability of dynamic risk assessment with sexual offenders", *Psychology, Crime and Law*, Vol. 12, pp. 439-452.

Wing, L. (1997), "The autistic spectrum", *The Lancet*, Vol. 350, No. 9093, pp. 1761-1766.

Wong, S., Olver, M. E., Nicholaichuk, T. P. and Gordon, A. (2003), "The violence risk scale: Sexual offender version (VRS-SO)", Regional Psychiatric Centre and University of Saskatchewan, Saskatoon, Saskatchewan, Canada.

Woodbury-Smith, M. R., Clare, I. C., Holland, A. J., Kearns, A., Staufenberg, E. and Watson, P. (2005), "A case-control study of offenders with high functioning autistic spectrum disorders" *Journal of Forensic Psychiatry and Psychology*, Vol. 16, No. 4, pp. 747-763.