Aggression and Violent Behavior 40 (2018) 1–11

Contents lists available at ScienceDirect

Aggression and Violent Behavior

journal homepage: www.elsevier.com/locate/aggviobeh

Literature review on children and young people demonstrating technology-assisted harmful sexual behavior

Rhiannon Lewis

Barnardo's Better Futures Service, Cymru, United Kingdom

ARTICLE INFO

Keywords:
Children
Young people
Technology
Harmful sexual behavior
Indecent images of children
Pornography
Indecent exposure
Sexting

ABSTRACT

The review examines existing literature around the concept of technology-assisted harmful sexual behavior (TA-HSB) as demonstrated by children and young people. This is when a child or young person demonstrates sexual behavior online or through the use of technology that may be harmful to themselves or others, have a significant detrimental impact on their daily functioning, or leave them vulnerable for criminal prosecution. The review was motivated by the increase of children and young people referred to a sexual abuse service, due to their demonstration of TA-HSB. This review aimed to explore theories relating to TA-HSB and to develop awareness on identified treatment needs of these behaviors, so that professionals may better understand and support children and young people demonstrating them. Furthermore, it discusses assessment, intervention and risk management approaches as currently identified within best-practice, to support towards prevention of future criminalization and further victimization. The review initially aimed to include current literature based on children and young people (aged 5 to 21 years old) demonstrating TA-HSB; however due to the limited availability of this, the search parameters were expanded with tentative consideration on the implications of this when working with children and young people.

1. Introduction

This literature review is influenced by my role as a service practitioner at Barnardo's Better Futures Service, Cymru (BBF), a sexual abuse service in the United Kingdom. I refer to this service as an example throughout the review as it is through the referrals here that I have become familiar in practice with the concept of technology-assisted harmful sexual behaviors. BBF is one of the few services in the United Kingdom that works with harmful sexual behaviors as demonstrated by children and young people, and is one of the even fewer services that considers these behaviors within therapeutic consideration of child sexual abuse and exploitation.

BBF is a sexual abuse service that collectively works with children and young people that may have experienced child sexual abuse, may have been sexually exploited or may be demonstrating harmful sexual behaviors (HSB). It provides assessment, intervention, consultancy and teaching and training to support towards reducing the risk and vulnerability of children demonstrating these behaviors. The service works with both males and females, ages five to 21 years old and is inclusive of those with learning difficulties and/or additional needs. Referrals can be made by either Social Services or Youth Offending Services.

BBF accepts referrals for assessment and intervention of harmful sexual behavior if the child or young person's behavior is at risk of causing significant harm to themselves or others. Further to this, if their behavior is persistently problematic to the extent that is significantly impacting on day-to-day life or if the individual may soon be at risk of prosecution within the criminal justice system. Brook (2012) has identified a model that helps professionals to identify the margins between healthy, problematic and harmful sexual behavior dependent on age group. Through this tool, healthy behaviors are recognized as safe and indicative of positive natural curiosity between two children of similar age or developmental ability. Problematic behaviors are identified outside of usual development with some concern for the activity type, frequency, context, age differences and perception of others to be unusual. More concerning are harmful behaviors, which are likely to cause distress to others due to significant differences in age, development or power, or where the behaviors are excessive, forceful, planned and/or secretive. It is through assessing and providing intervention for these behaviors that BBF aims to reduce criminalization and further victimization for these children and young people.

Whilst technology is an increasing presence within society, BBF have also witnessed this within its referrals. Most specifically, an increase in referrals for technology-assisted harmful sexual behaviors (TA-HSB) has been observed; an area that is currently underrepresented in the literature and in the training available to practitioners in this field. Further to this, whilst assessing a child and young person around

E-mail address: rhiannon.lewis@barnardos.org.uk.

https://doi.org/10.1016/j.avb.2018.02.011
Received 5 September 2017; Received in revised form 20 February 2018; Accepted 21 February 2018
Available online 24 February 2018

their referring harmful sexual behavior, BBF is increasingly finding a technology aspect to be involved also. Whilst in the last 12 months, BBF has received 19 referrals for TA-HSB-only cases, as of November 2017 there were at one stage 92 cases open to the service, with 46 of these identified by practitioners and within referral as demonstrating some form of TA-HSB and seven to have suspected concerns. Some of these cases have not begun to undergo assessment or intervention, where further behavioral concerns are more likely to be disclosed and known to the practitioner. Further to this, from a review of the 21 referral cases that are awaiting allocation and submission of further referral information, five are identified to have demonstrated some form of TA-HSB, three suspected and thirteen had limited information available at this time.

Despite the growing practice-based evidence, there remains to be limited professional discussion or training around practice-based approaches in the assessment, intervention and management of TA-HSB, as demonstrated by children and young people. The NSPCC has recently published literature based on the increased prevalence of TA-HSB referrals within their service; however, within this they highlight that opportunities for developing practice in this area have not been addressed as of yet (Hollis & Belton, 2017). Therefore, whilst research supports BBF observations that the prevalence of TA-HSB is increasing, there is little practice development available in the wider field that advises on how to decrease future criminalization and victimization for these children and young people.

The search strategy for the inclusion of literature within this review was initially to explore research within the last ten years based on children and young people aged five to 21 years old demonstrating TA-HSB. However, due to the lack of research in this area, the scope of research publication date was extended to no limit, some young people studies (where specified) were inclusive of up to 25 years of age and in other instances adult literature and contact harmful sexual behavior research was included also. This allowed for the discussion of how alternative research may be applied when working with children and young people demonstrating TA-HSB, whilst also considering the limitations of this from a practice-based perspective.

2. What is technology-assisted harmful sexual behavior (TA-HSB)

The Office for National Statistics (2016) identified that in the UK 99% of households with children have an internet connection. Further to this, Ofcom's Children and Parents Media Use and Attitudes Report (2016) found that 62% of 5–15 year olds owned a mobile phone, with this statistic increasing by age group; 23% of 3–4 year olds, 28% of 5–7 year olds, 57% of 8–11 year olds and 91% of 12–15 year olds. These statistics emphasize how readily available technology and the internet are to children today, with these statistics only set to increase based on current trends.

Quayle (2007) identified that, as young people increasingly engage with technology, they are no longer passive consumers of a largely unregulated environment, but social actors. This insinuates that children and young people are not only actively involved in the unregulated environment, but that they are consciously shaping their environment by the choices available to them through technology. It may also be that by acting, they are at risk of demonstrating and exploring an unrepresentative depiction of themselves and their needs. Quayle continues that the internet becomes an extended society for children and young people, where they gain a distorted education of social norms and boundaries based on what they are exposed to through this medium. She concludes that with this technical progression and increased sexual curiosity and risk-taking amongst young people, is also the increased possibility and opportunity for harmful behavior.

The NSPCC most recently defined TA-HSB as “one or more children engaging in sexual discussions or acts – using the internet and/or any image-creating/sharing or communication device – which is considered inappropriate and/or harmful given their age or stage of development” (Hollis & Belton, 2017, p. 8). In consideration of this, my experience of BBF service user referrals and Quayle's (2007) discussion of sexually problematic behaviors online, this review will focus on the following TA-HSB:

1. Taking, making, possessing and/or distributing indecent images of children (IIOC).
2. Making, possessing and/or distributing extreme (illegal) pornography such as bestiality, necrophilia etc.
3. Soliciting, or sexually harassing behaviors.
4. Self-victimizing behaviors that in reality increase the vulnerability of the child or young person to self-criminalize.

Literature that explores prevalence, motivations and management of children and young people engaging in these behaviors are discussed within this review. However it should be noted that to date there is little research regarding children or young people demonstrating TA-HSB. The NSPCC (2016) conducted a systematic review of literature published between January 2000 and June 2015 and in 453 articles, they only found four articles based on young males and IIOC offences. Therefore, our understanding of children and young people's TA-HSB prevalence is still in its infancy, and the majority of theories around motivation and risk management strategies are based on research of adult populations.

2.1. Indecent images of children (IIOC)

Elliott and Beech (2009) report that Interpol's Child Abuse Image Database (ICAID) contained over 520,000 digital images of child abuse in 2008. Additionally, by May 2004 the COPINE (Combating Pedophile Information Networks in Europe) Project database contained over 700,000 abusive images (Holland, 2005). Since the update of Interpol's database to the International Child Sexual Exploitation (ICSE) database, increasingly more victims of IIOC have been identified and subsequently further offenders have been arrested (Interpol Annual Report, 2015). With this and consideration to the undiscovered collections of IIOC, it is important to note that the figures identified above may considerably under-represent the actual figures of IIOC currently circulating online.

Carr (2004) estimated up to 15% of IIOC consumers to be juveniles. More recently, in a large nationally representative study, a total of 84 men (4.2%) reported they have viewed indecent images of children (Seto et al., 2015). This was an anonymous, school-based sample of 1978 young Swedish men aged 17 to 20 years. Moreover, in 2014 an analysis of 159 Dutch police files relating to IIOC identified that 35% of suspects were under the age of 18 (Leukfeldt, Jansen, & Stol, 2014). It also appears that with time, younger people are able to or are choosing to access this material; Wolak, Finkelhor, and Mitchell (2011) conducted an investigation to compare trends in IIOC possession and found that possession amongst offenders under the age of 18 increased from 2% in 2000, to 5% in 2006. This raises questions around the current statistics of young people possessing IIOC given that this study only included offenders known to be in possession of the imagery, and that access to devices and technology continues to increase with time (Ofcom, 2016).

Whilst there is discrepancy and difficulty in identifying the actual prevalence of children and young people committing IIOC offences, the literature supports that this is a potentially growing population. There is also the debate around causal links between viewing IIOC and committing a contact sexual offence, particularly as alongside increased use of technology, convictions of general sexual offences perpetrated by young people has increased by 5% since 2015 (*Youth justice statistics 2015/2016 by England and Wales Youth Justice Board/Ministry of Justice: Statistics bulletin,* 2017). However, this may be due to the increased criminalization of young people engaging in sexual behaviors. Recidivism of TA-HSB and subsequent risk of contact offences are further

discussed later within this review.

Demographic patterns identified for offenders of IIOC includes that they predominantly engage in the offence alone, are male, this being their first offence or sometimes their first contact with law enforcement (Leukfeldt et al., 2014; Neto, Eyland, Ware, Galouzis, & Kevin, 2013). In a comparison between young people convicted of possessing extreme illegal pornography and young people convicted of possessing IIOC, the latter were found to have been downloading their imagery more frequently and for a longer duration of time (Aebi, Plattner, Ernest, Kaszynski, & Bessler, 2014). In a comparison with young people convicted of contact sexual offences, young people convicted of possessing IIOC were found to be more likely to be living with their family, to have experienced less abusive and neglectful backgrounds and to be less likely to have had disrupted educations (Aebi et al., 2014; Stevens, Hutchin, French, & Craissati, 2013). In both the studies discussed above, they also found little to no recidivism, sexual or otherwise, for young people convicted of IIOC possession. Seto et al. (2015) found in their sample that viewing IIOC was significantly related to experiences of sexual coercion. This, alongside other meta-analyses (Seto et al., 2010; Seto, Cantor, & Blanchard, 2006; Seto, Reeves, & Jung, 2010) suggests that a sexual abuse history may have a subsequent detrimental impact on psychosexual development offline and online.

2.2. Extreme pornography

In 2007, it was estimated that 2.5 billion emails per day were pornographic, with pornographic websites being visited monthly by an average of 72 million users (Ropelato, 2007). A study conducted by the London School of Economics found that within 12 months, 23% of 25,142 children aged 9–16 had seen sexual or pornographic content online (Livingstone, Haddon, Görzig, & Ólafsson, 2011). Whilst the type of pornography and children's intent to view this imagery is not discussed, it appears that technology and the internet has significantly facilitated access, unwanted or not, to pornographic and potentially illegal material. Furthermore, these statistics are based on a child's willingness to be open about their viewing of sexual material, which suggests that these statistics are probably still under representative of the actual figures.

In 2009, the Criminal Justice and Immigration Act 2008 introduced a new offence of possession of an extreme pornographic image. This specifically includes “images that depict acts which threaten a person's life; acts which result in or are likely to result in serious injury to the person's anus, breasts or genitals; bestiality; or necrophilia” (*The crown prosecution service: Extreme pornography,* n.d., “The Law: Possession of Extreme Pornographic Images”).

Easton (2011) identifies that with police resources concentrating on IIOC, the production and accessibility to extreme pornography has been able to increase. She highlighted that in 1994 there were 309 criminal prosecutions of extreme pornography, with only 39 in 2003, whereas for IIOC there were 1890 prosecutions in 2003 (in comparison to 93 in 1994). Therefore, literature relating to demographics and more specifically young people's participation in this offence is limited. The NSPCC (2016) summarized that based on their systematic review, potentially 4–17% of children and young people had viewed violent/illegal pornography (inclusive of IIOC).

Within the BBF referrals over the years, exposure to pornography has been and is a common historic factor for the children and young people that have demonstrated HSB. It has been suggested that exposure to pornography at a young age may result in disinhibition to sexual aggression, increase in skewed sexual attitudes or incitement into early sexual priming, depending on the type of pornography viewed (Greenfield, 2004). Early sexual priming meaning increased pressure on children and young people's readiness to engage in sexual behavior. From a practice-based perspective, children and young people referred to BBF have often been referred for engaging in progressive sexual behaviors outside of what would be anticipated as normative for their age; their explanations for this are often due to it being something they have viewed in pornography. With this, they have also often developed distorted perspectives around sex and relationships based on their learning through pornography, such as identifying that no one suggests contraceptive in pornography and no-one ever says no to sex in pornographic scenarios.

In a qualitative study on pornography viewing habits of low income, black or Hispanic youths (aged 16–18 years old) in the US, it was found that several of these youths had come across extreme pornography, with their general reaction being either “indifference” or “acceptance”. The authors concluded that the youths appeared to accept extreme pornography as an unremarkable presence online and in day-to-day life (Rothman, Kaczmarsky, Burke, Jansen, & Baughman, 2015). Whilst this relates to a small, specific sample, the conclusion that youths are becoming desensitized and potentially developmentally affected by viewing extreme pornography is perhaps not an unreasonable generalization and potential risk. However, with its ease of availability and young people's indifference and acceptance, indicates that they may not fully comprehend the implications of accessing extreme material, legal or otherwise.

2.3. Soliciting or sexually harassing behaviors

De Graaf and Vanwesenbeeck (2006) conducted a study on online sexual activity, with 84% of the sample being between the ages of 12 and 18 years old. They found that one in five of the females and one in four of the males had engaged in cyber sexual activities with someone online. However, Barak (2005) identified that sexual behaviors online are not always wanted or mutual, which can lead to online sexual harassment or solicitation. With online sexual behaviors continuing to become more normative and with influences such as pornography minimizing issues of consent, children and young people are subsequently more at risk of being unintentionally sexually harmful.

Finkelhor, Mitchell, and Wolack (2000) analyzed data on the online experiences of 1501 young internet users. They found that one in five that regularly used the internet had experienced a sexual solicitation, one in 33 had received an aggressive sexual solicitation, one in four had experienced unwanted exposure to sexual images and one in 17 were threatened or harassed. Within this data, the young internet users identified that juveniles accounted for 48% of the sexual solicitation behaviors overall, including both males and females, with 48% of the aggressive sexual solicitations also being incited by juveniles (with 27% of this sample's age being unknown). Considering that this study was conducted over 17 years ago and that youth accessibility to the internet continues to increase (Office of National Statistics, 2016), it could be concluded that the likelihood for children and young people to engage in this subgroup of TA-HSB has increased also.

2.4. Self-victimizing behaviors

For clarity, self-victimizing behaviors in this context are behaviors where a child or young person self-criminalizes by engaging in behaviors where they could be convicted, such as for distributing IIOC which are essentially themselves. However, due to the nature of the legal system, this is responded to as an offence and it is forgotten that it involves children and young people that are self-victimizing whilst self-criminalizing. It is recognized as a harmful behavior, as in essence the behavior is contributing to an illegal industry of criminality, but in practices these children and young people are victims also.

Young people often lack the awareness and understanding of how their online behavior may be circulated, inadvertently facilitating their vulnerability to be sexually exploited and as such, having engaged in self-victimizing behaviors (Bryce, 2011). According to UK law, it is illegal to produce or distribute indecent images of children under the age of 18 (*The crown prosecution service: Extreme pornography,* n.d.). Therefore, if a child takes a picture of themselves naked, exposing breasts

(female) or genitals (both), or is engaging in masturbation or sexual activity with others, they are breaking the law and at risk of getting into trouble for self-victimizing behaviors. Sexting, the sharing of nude pictures, amongst children and young people may be age-related sexual experimentation and boundary pushing (Horvath et al., 2013), but it also immediately self-victimizes the child or young person and has also been linked with other problematic behaviors (NSPCC, 2016) such as bullying, distribution of IIOC, young males feeling entitled to degrade or harass young females, and potentially sexually harmful contact behaviors (Ringrose, Gill, Livingstone, & Harvey, 2012).

Lenhart (2009) found in her study of 800 teenagers between 12 and 17 years old that 4% had sent nude or nearly nude pictures of them. This included 8% of 17 year olds who are still liable to be potentially prosecuted despite being over the legal age for sexual intercourse. In a similar study, Kerstens and de Graaf (2012) found that in the six months preceding their investigations, 3.1% of 4453 children aged between 11 and 18 years old self-reported to have sent nude or nearly nude pictures of themselves. With both of these studies focusing on mobile phone facilitated image sharing and depending on the self-reports of young people, it is possible that these statistics are under-representative of this population. The increased accessibility of devices, upgrades in technology and advancement of social media as of 2017 may also further impact these figures.

De Santisteban and Gámez-Guadix (2017) have also recently published research, which identified that in a large scale sample of 2731 young people aged between 12 and 15 years old, 7.4% of males and 8.2% of females self-disclosed to engaging in sexual interactions with adults. Again this is self-reported and it may be an underrepresentation of the true number, particularly given that the sexual interactions include the young person sending sexual images and videos, and Child Exploitation Online Protection (CEOP, 2013) alarmingly identify that one fifth of IIOC have been self-produced by the child or young person.

Sexting and self-nudes also bring with it the problem of unwanted online indecent exposure. This is an online behavior often overlooked in offending literature, but is regularly recognized as an appropriate referral for harmful sexual behavior at BBF and could be viewed as a cross-over between the subgroups of sexual solicitation and harassment, and self-victimizing behaviors. For the benefit of this review, it has been included in the self-victimization subgroup as “victimization” is not often associated with this behavior, despite the overall vulnerability of children and young people.

In a bibliographic search (Stevens et al., 2013), no investigations of adolescents who indecently expose online or offline were found prior to their study of this offence-subgroup; therefore their small sample research provides the most insight at this time. They found that within their indecent exposer male-only sample (n = 8), 88% lived at home and were in education at the time of their offence, and 88% had targeted female victims. Within the study, 38% of the indecent exposers reoffended, although due to the small sample size this statistic could be deemed unrepresentative of the offence population as a whole. However, this is somewhat consistent with adult research, where adult male indecent exposers have been found to have high rates of reoffending (Murphy & Page, 2008). Whilst this sample indecently exposed offline, it could be speculated that with the additional accessibility and anonymity of technology, there is potential for higher actual prevalence of indecent exposure by children and young people, through this approach.

3. Theories of TA-HSB

Firstly, there are currently no formal theories identified to explain children and young people engaging in TA-HSB. As such, this literature review discusses current descriptive typologies of online offending behavior, some newer theories relating to young people demonstrating a specific TA-HSB, and more renowned theories that have been fundamental in understanding motivations for sexual offending in adult populations, with some discussion of how these may be applied to differing offences and offender populations.

Lanning (2010) identified three typologies of individuals that use the internet for harmful sexual purposes, these include; Situational (“normal” adult/adolescent; morally indiscriminate; profiteers), Preferential (pedophile/hebephile; diverse; latent) and Miscellaneous (“media reporters”; pranksters; older “boyfriends”; overzealous civilians). These typologies are extensive in considering the range of behaviors demonstrated online and have been adapted from Lanning's (2001) seven typology theory to consider more adolescent-type behaviors such as sexting.

Other research has suggested a further simplified approach to online sexual offender typologies, identifying “contact-driven offenders” and “fantasy-driven offenders”. Contact-driven offenders prepare their victim for offline sexual contact through grooming and sexually explicit chats online. Fantasy-driven offenders may also engage in grooming behaviors and sexually explicit chats, but they tend to maintain an exclusively online relationship with their victim (Briggs, Simon, & Simonson, 2011; Sheldon & Howitt, 2007, 2008).

The contact/fantasy typology was initially devised as an explanation of IIOC offending, however in practice it could also apply to the other TA-HSB. For example, viewing of extreme pornography may be a fantasy for young people or it may be a pre-requisite for them to act out the behaviors in the future, with some using the material as a potential grooming tool. Similarly, indecent exposure or sexting self-victimizing behaviors may be with a desire to engage in the behavior physically or it may be a fantasy that the young person feels safer or socially obliged to engage in as a fantasy to, for example, be more desirable. These typology theories appear to be relatively up-to-date and inclusive of the variance of TA-HSB, however they lack consideration for the precursors and motives of these behaviors. They do not discuss the potential historic experiences of the typology or the drives behind their interests and behaviors, which is important when formulating interventions to manage the behaviors.

The Integrated Theory of Sexual Offending (ITSO; Ward & Beech, 2006) encompasses multiple theories from the sexual offending area of research (see Fig. 1; Ward & Beech, 2008) and has proved to be a clinically useful framework for assessment and intervention of sexual offenders (Ward & Beech, 2016). This was developed from Ward and Siegert (2002) which identified that harmful sexual behavior is more likely to occur if four pathways are activated in varying degrees. These include: intimacy deficits, distorted sexual scripts, emotional dysregulation and cognitive distortions. This model was viewed as flexible as it does not stipulate that all pathways need to be fully present for a sexual offence to occur. However, Ward and Beech (2006) recognized a need to further develop this model to account for the causal factors that could increase the likelihood that the pathways result in HSB.

The Integrated Theory of Sexual Offending (ITSO) identifies five distinct pathways that do not all have to be present for risk of HSB to be elevated. These five pathways were: intimacy deficits, distorted sexual scripts, emotional dysregulation, anti-social cognitions and multiple dysfunctional mechanisms. Ward and Beech outlined that these pathways exist through the individual's ecological experiences, biological factors and neuropsychological functioning. They suggested that if the influence of these factors compromised the integrity and function of these pathways, the risk of HSB will increase. A strength of this model is its propensity to be applied to TA-HSB with Elliott and Beech (2009) recognizing that online offenders share clinical symptoms of intimacy deficits, emotional dysregulation, offence-supportive cognitions and deviant sexual interest. Moreover, in a revised discussion of the model, Ward and Beech (2016) identify that it is individualized to the offender's risk and needs, with opportunity to reflect on the interaction between variables in creating conditions for HSB and TA-HSB to occur. This theory recognizes the multi-level explanations of individual development, whilst identifying personal influence in the engagement of offending behavior.

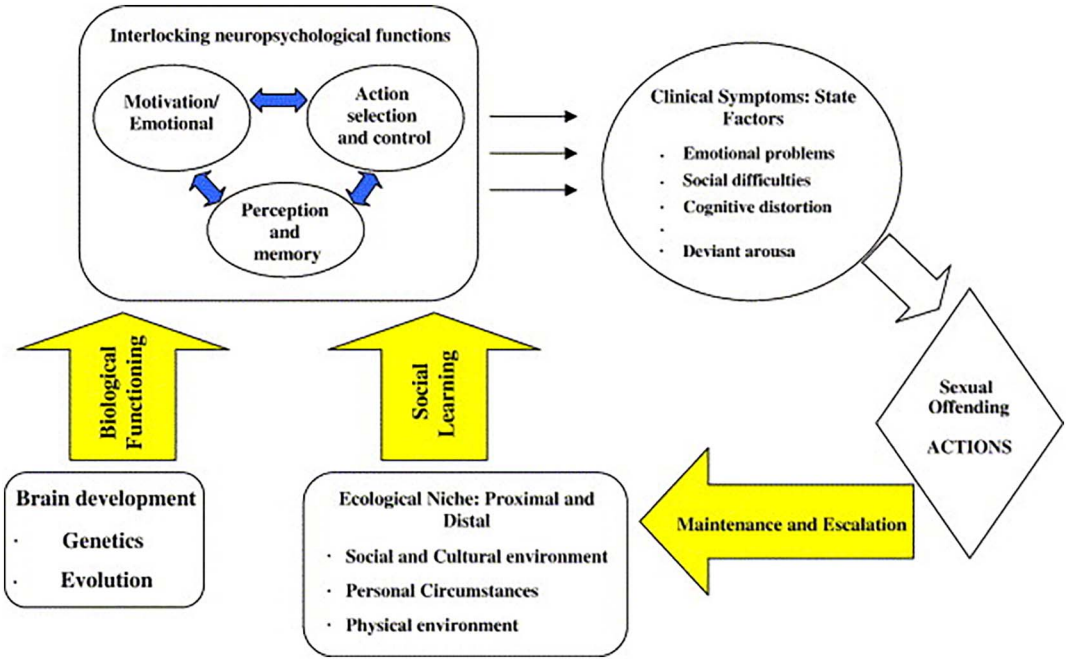

Fig. 1. The integrated theory of sex offending model (from Ward & Beech, 2008, p. 23).

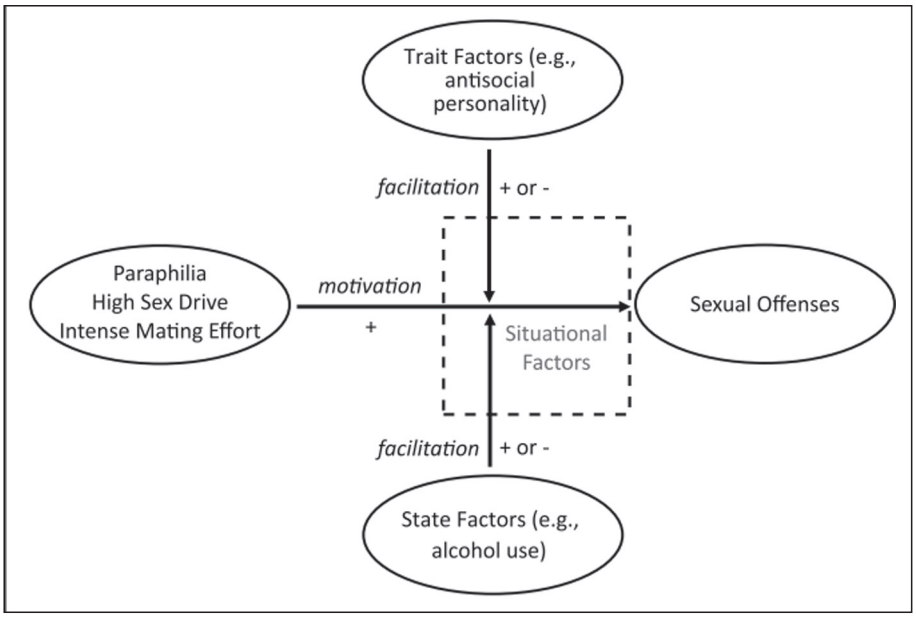

Fig. 2. The motivation-facilitation model of sexual offending (from Seto, 2017, p. 3).

More recently, Seto (2017) has outlined the Motivation-Facilitation Model of Sexual Offending (see Fig. 2), which is identified to be a flexible explanation in understanding IIOC offences and online solicitations of young adolescents. This model outlines three primary sexual motivations to engage in offending behavior, these include interest in paraphilias, a high sex drive and intense mating effort. Seto argues that motivation can be managed by those with strong inhibitions across state and trait, such as self-control. However, if facilitation factors that overcome a state or trait inhibition are present, such as difficulties with self-regulation or negative affect, this may further increase the likelihood of a sexual offence occurring. With the presence of motivation and facilitation factors, an offence may still not occur depending on opportunity. Key opportunities to offend include the availability of a vulnerable victim, limited supervision of the victim and opportunity of time or place that presents with limited risks. As such, as illustrated by Fig. 2, increased motivation, increased presence of state and trait facilitation factors, and low risk situational opportunities mean it is more likely for a person to engage in some TA-HSB.

The Motivation-Facilitation Model of Sexual Offending is a positive movement forward in that it accounts for TA-HSB and explains increased likelihood of reoffending through TA-HSB, as it may be that the offender has motivation and facilitation factors to engage in HSB but the opportunities to offend dictate an approach through technology is less risky than contact; this accounts for the recidivism literature that online offenders are more likely to reoffend online (Merdian, Curtis, Thakker, Wilson, & Boer, 2013). However, the model does not account for non-sexual motivations to engage in TA-HSB, which we often see with children and adolescents. Moreover, it does not account for ecological factors and social learning in the shaping of sexual development and interests for children and young people.

Theories and typologies are fundamental in identifying assessment needs and treatment pathways for TA-HSB offenders. However, whilst there is currently not one dominant TA-HSB theory and a lack of theory altogether regarding children and young people in this area, it is important to be open and flexible to the strengths of the existing theories and typologies, whilst remaining mindful of their limitations. At a time of limited resource, the evidence-based practice we currently have available is valuable to the continued development of learning and understanding in this area (Winder, Gough & Seymour-Smith, 2015).

3.1. Influence of technology

Perkins and Merdian (2017) identified that, based on current research of the internet and technology, the propensity to engage in TA-HSB has "dramatically and irreversibly shifted". This may be due to the growing Accessibility, Affordability and Anonymity of the internet, otherwise described as the "Triple A Engine" (Cooper, 1998). With the variety of devices that access the internet, the increasing number of free Wi-Fi portals and most homes having an internet connection (Office for National Statistics, 2016) technology and the internet is affordable and accessible to the majority of the UK population (Ofcom, 2016). Further to this, internet users also tend to have a false perception that they are untraceable and anonymous whilst using technology (Neto et al., 2013), hence adverse consequences are less likely to deter TA-HSB if there is a perception that they can't be caught. The NSPCC (2016) identified it is likely that young people's initial exposure to online harmful sexual material or behavior is likely to be accidental, due to its accessibility. However this exposure may generate an interest that may be further facilitated by affordability and anonymity of the material and behavior, which could encourage a child or young person to intentionally seek TA-HSB in the future.

Communicating through technology allows an individual to overcome interpersonal barriers and allows those that feel particularly isolated to develop a form of social relationships. This is particularly appealing for children and young people who are developing an understanding of social skills at a time when interpersonal feedback from peers is perhaps less sensitive than if they were mature adults. It is therefore somewhat understandable that they turn to their technology to explore social boundaries and why they report to value the internet most for communication (Gross, 2004; Moultrie, 2006). However, there are some risks associated with this; technology and the internet can be addictive and compulsive (Durkan & Bryant, 1995), with excessive use of online communication potentially being detrimental to an individual's offline social skills, exacerbating a child or young person's loneliness and leaving them feeling further isolated (Morahan-Martin & Schuhmacher, 2000; Neto et al., 2013).

Technology and the internet have also been found to change mood states, with those who excessively use it identifying it as an emotional management strategy (Kennedy-Souza, 1998; Morahan-Martin & Schuhmacher, 2000; Quayle, Vaughan, & Taylor, 2006). If masturbation or some reciprocal sexual interaction is achieved through TA-HSB, it can elevate mood or be a reward reinforcement for the behaviors (Gifford, 2002; Quayle et al., 2006). Through mapping adolescents' brain development, Blakemore (2014) found that adolescents are able to feel emotionally gratified and rewarded from taking a risk, but are less able and still developing in being able to prevent risk-taking decisions; thus increasing their likelihood to accidentally or intentionally engage in TA-HSB.

Further to this, Imhoff and Schmidt (2014) identified that sexual arousal in both males and females increases self-reported likelihood to engage in risky and coercive sexual activities. This finding within the discussion of technology implies that viewing sexually inappropriate material online whilst sexually aroused, may increase the risk of the viewer seeking more extreme and illegal imagery. For children and young people this will be further confusing and unpredictable whilst they are transgressing through puberty and understanding the new concept of their sexual arousal. This research implies a need to consider situational sexual arousal when assessing and formulating risk to re-engage in TA-HSB and other HSB.

Technology and the internet enable children and young people to explore areas of interest that they may have found too embarrassing otherwise (Moultrie, 2006). Taylor, Holland, and Quayle (2001) identified that the internet can have a disinhibiting effect on individuals, concluding that it may be an environment that is encouraging of risk-taking behavior; increasing likely exposure to or expression of sexually deviant attitudes and behaviors. With alleviated external inhibitions (Joinson, 1998) and the fantasy aspect of the internet, offenders of TA-HSB are more likely to minimize their actions and be desensitized to the experiences of their potential victims. In addition to this, victims are also acting with perceived anonymity and as a result, may respond with decreased resistance and increased naivety (Neto et al., 2013).

4. Treatment needs associated with TA-HSB

Based on research of online and offline adult sexual offending, children and young people engaging in harmful sexual behaviors and children and young people's online behaviors, key potential treatment needs for intervention of TA-HSB are gradually being identified and defined for further investigation (Elliott & Beech, 2009; Elliott, Beech, Mandeville-Norden, & Hayes, 2009; Merdian et al., 2013; Middleton, Elliott, Mandeville-Norden, & Beech, 2006; Moultrie, 2006; Neto et al., 2013; Seto & Hanson, 2011; Webb, Craisatti, & Keen, 2007).

In a study based on adult offenders in possession of IIOC, Merdian et al. (2013) concluded that in comparison to offline offenders, these online offenders demonstrated more sexual deviancy. Sexual deviance refers to an attraction or arousal for sexual acts that are illegal or highly unusual such as rape, sex with children, and autoerotic asphyxia (Hanson & Morton-Bourgon, 2005). Similar to this, Webb et al. (2007) found that adult possessors of IIOC demonstrated more sexual deviant interests, sexual pre-occupation and a need for sex to cope, indicating that online offenders had more problems with sexual self-regulation than that of contact offenders.

In a discussion of dynamic risk factors for online offenders, Elliott and Beech (2009) outline that online offenders have difficulties with intimacy, emotional dysregulation, and distorted attitudes around sex and victim empathy (Elliott et al., 2009; Middleton et al., 2006). Converse to this, studies have found that online offenders score higher in victim empathy and lower in impression management in comparison to contact offenders, which researchers concluded may indicate that online offenders are better able than contact offenders not to act on their deviant interests (Merdian et al., 2013; Seto & Hanson, 2011). Other factors associated with TA-HSB included loneliness, low self-control, impulsivity, compulsive internet use, problematic life events, and gratification reinforcement (Neto et al., 2013). However, this research was based on adult offenders with a predominant focus on possession of IIOC.

In a meta-analysis to differentiate differences between adolescents that engage in sexual offences and non-sexual offences, Seto and Lalumière (2010) found that the largest treatment need difference between the two groups was atypical sexual interests. This was followed by sexual abuse history, criminal history, antisocial associations and then substance abuse. Whilst this finding is beneficial in understanding adolescents (12 to 18 years old) that may act on an atypical sexual interest, further research needs to be conducted to understand the atypical interests, abuse histories and overall needs of children and young people (five to 21 years old) that engage in TA-HSB.

Moultrie (2006) conducted one of the few studies on young people and internet offending, again with a focus on IIOC possession. Whilst the sample was small, she found treatment needs and risk factors similar to the above where the young people had experienced social difficulties and isolation. She commented that they were limited in confidence and valued their online relationships due to lacking in

offline relationships. She discussed how four of the seven in the sample were questioning their sexuality. Furthermore, whilst their familial backgrounds had little evidence of abuse or trauma, the majority of their internet offences were instigated through abuse where an older adult initially shared the abusive images with them or engaged them in discussions of sexual abuse towards children. Due to this, whilst theories of TA-HSB are useful in informing intervention with children and young people, it is important to be mindful of potential incidents of their own victimization that is not often accounted for when applying adult-based theories. Moreover, there is limited research outlining distinguishable treatment needs and risk factors of alternative TA-HSB, as opposed to specifically IIOC offences.

4.1. Children and young people compared with adults

Prior to discussing management of children and young people who engage in TA-HSB, it is important to identify the differences between this population and online offending adults. As previously mentioned, some children and young people may engage in TA-HSB following an initial exposure by an abusive adult (Moultrie, 2006), due to a sexual abuse history (Seto & Lalumière, 2010), following a sexual coercion experience (Seto et al., 2015), or it may be that their initial exposure was unintentional (Hollis & Belton, 2017).

Children and young people are developmentally different to adults and as such, their TA-HSB requires assessment within a developmental context rather than inferring sexual motivation (Hackett, Holmes, & Branigan, 2016). For example, a young person is unlikely to have the developmental understanding of enacting the grooming process with coercive intentions for sexual gratification. They are more likely to demonstrate harassing-behaviors through modeling their own potential experiences of being groomed or perhaps due to limited social skills, they have learnt through experience that a harassing approach better meets their immediate needs. Similarly, a prepubescent child is less likely to be driven to engage in TA-HSB by sexual gratification as they are less developed in sexual arousal; as such they may be expressing and exploring their own trauma experiences through their behaviors (Hackett, 2010).

This is not to say that children and young people cannot be motivated by sexual gratification or be coercive, but their TA-HSB needs to be considered in line with the functioning of their age group and within a wider context of their own development and experiences, rather than in isolation as a sexual offence (Chaffin, Letourneau, & Silovsky, 2002; Gil & Shaw, 2014). As such, evidence-based research continues to highlight that a child-centered approach to intervention with children and young people is the most effective in future risk management (Cameron, Gawthrop, Warwick, & Webster, 2001).

5. Discussion

Quayle (2007) identified that an area of contention for practitioners working with young people that demonstrate HSB is establishing the balance of not over-estimating the risk of the young person to their detriment, whilst also protecting other, more vulnerable children. In general, internet-only sexual offenders have a low rate of reconviction for sexual offences. Of those that do commit a further sexual offence, it is usually a further internet offence (Seto, Hanson, & Babchishin, 2011; Wakeling, Howard, & Barnett, 2011).

With regard to young people that demonstrate HSB, Hackett et al. (2016) identified that with the right preventative interventions, most do not go on to commit sexual offences as adults, with research highlighting that if they were to commit another offence it would be more likely non-sexual. Moreover, likelihood of crossover from sexual internet offending to sexual contact offences is also low (Merdian et al., 2013). However, if a child or young person has perceived reward for TA-HSB and values this over their sanctions, or perhaps lacks understanding for the consequences of their behavior altogether, there exists risk for recidivism. Furthermore, as detailed above, this may be TA-HSB recidivism, a sexual contact offence or the misdirection of needs to other offence-behaviors. As such, Hackett (2004, pp.51) suggested that "good assessments can help ensure that young people are treated equitably, that the nature and meaning of their sexual behaviors are understood, that their specific needs are highlighted and that risks are quantified and strategies to manage such risks are identified".

5.1. Risk assessment tools

Currently, there are no assessment tools to determine a young person's risk of TA-HSB recidivism. The iAIM (2009) is a specially designed case formulation tool that can help contextualize potential risks, however it is based solely on IIOC offences and was created at a time that literature in the area of TA-HSB was limited. Therefore, it has already been identified as outdated with a more up-to-date TA-HSB (2017) risk assessment tool currently in development to replace the iAIM. There are assessment tools that predict the risk of HSB recidivism in children and young people (i.e. ERASOR, Worling & Curwen, 2001; and J-SOAP-II, Prentkey & Righthand, 2003), however these were not designed with consideration of TA-HSB and as such, the scoring is unrepresentative in addressing this area and best considered as advisory.

The Screening Scale for Pedophilic Interests (SSPI; Seto & Lalumière, 2001; Seto, Murphy, Page, & Ennis, 2003) is a screening tool that has been suggested as a useful measure of potential pedophilic interests amongst adolescents and adults, which again could advise on the likelihood of engaging in harmful behaviors. Further to this, in a meta-analysis by Schmidt, Babchishin, and Lehmann (2017), they found that Viewing Time paradigms as an indirect-latency based measure are valid indicators of sexual interest in children for adults and juveniles. The benefit of the Viewing Time paradigms being that this assessment approach of sexual interest in children overcomes some of the drawbacks of a self-report measure. However, both the SSPI and Viewing Time paradigm have not directly been designed or assessed to determine the risk of a child or young person engaging in TA-HSB and its full range of possible behaviors. Furthermore, from a practice perspective they overlook the multi-level causal variables outlined in theories such as the ITSO (Ward & Beech, 2006, 2016), which helps us to better understand a child or young person demonstrating these behaviors within the context of their development. Therefore, when working with children and young people, a screening tool such as this may be beneficial in identifying potential risks for further exploration, but should not be considered in its isolation as an indication of risk level posed by the child or young person.

There has recently been the development of an adult risk assessment tool to predict recidivism amongst adult male IIOC offenders (Seto & Eke, 2015). The Child Pornography Offender Risk Tool (CPORT) has been shown in its initial assessment to successfully predict likelihood that IIOC offenders would reoffend by committing a further IIOC offence and a contact offence. However, it was not predictive for further IIOC only offences, and given that the limited studies so far have indicated that recidivism in internet offenders is most likely to be a further internet offence, an assessment tool that can help successfully predict this is still lacking in this area of practice. Therefore, in the meantime, functional assessment and formulation of the young person's TA-HSB is imperative in designing an appropriate child-centered intervention and strategy for managing external risk factors.

5.2. Approaches to intervention

Based on research into what works and matters when working with children that demonstrate HSB, Hackett et al. (2016) concluded that interventions must be: evidence-based, holistic, multi-modal, strengths-based, supportive, proportionate, tiered, resilience-focused, and with a multi-agency approach. In addressing the discussed needs and potential functions of TA-HSB for young people, practitioners may want to

consider based on research, the following components within their technology and internet-specific intervention plan: education of safe internet use, dispelling the myth of anonymity, consequential awareness of TA-HSB, motivation to change, restriction of high risk websites, emotional management, sexual development, identification of triggers to HSB, understanding power and consent, challenging unhelpful beliefs and attitudes, development of protective factors, self-compassion, social and relationship skills, cyber-victim empathy and relapse prevention (Hackett, 2006a; Hackett, 2006b; Neto et al., 2013).

From a practice-based perspective, helping children and young people to understand and manage their sexual interests in the context of their sexual development offline and online is beneficial in intervening with potential causes of the behavior. Furthermore, it also helps the young person to not feel unhelpfully ashamed in addressing their behavior and more able to develop a successful therapeutic relationship with their practitioner based on understanding and non-judgment, which many studies have identified to be the best predictor of treatment outcome (Horvath & Symonds, 1991; Martin, Garske, & Davis, 2000; Safran, Muran, & Proskurov, 2009).

A multi-agency approach is also fundamental during a time of intervention. Young people rely on the supervision and support of others to help them recognize consistent messages and learning from intervention sessions in alternative environments. They also require a strength-based approach to have their mistakes appropriately challenged and they will look to those in supportive positions to reinforce alternative appropriate behaviors by reward. Hackett, Telford, and Slack (2002) identified that parents/carers specifically are crucial to the outcomes for children with HSB and identified that successful work is more likely when parents/carers support intervention engagement of the child/young person. Furthermore, by demonstrating TA-HSB, these children and young people are likely to be more sexualized than other young people their age. It is also likely that they were vulnerable for having committed HSB and are further vulnerable in how they now feel about themselves based on the response, consequences and sanctions of their HSB (Erooga & Masson, 2006). Therefore, a multi-agency approach is also important during intervention in order to protect these children and young people from being harmed themselves at this vulnerable time.

Children and young people, like adults, are not always ready or motivated to engage in intervention and this could be due to a number of reasons. It is at this stage, that it is most important that external factors such as, supervision of internet access, and rules around technology are managed. This is to ensure that they remain safe until they are ready to develop their understanding in managing general risks and promoting protective factors (Grant, 2006). In developing a child's readiness for this, it may be helpful to devise a formulation around why they are unwilling to engage in intervention at this time and to then support to develop the needs that are currently presenting as barriers (Ward, Day, Howells, & Birgden, 2004). For example, if the child or young person does not want to engage as they are distressed by their behavior given the consequences, then it will be important to prioritize their self-compassion and positive self-identity at this time. Similarly with denial, it would be helpful to formulate the purpose of their denial as this is not always a risk to future reoffending. Reasons children and young people may deny their TA-HSB include: innate tendency not to accept responsibility as a child/adolescent, embarrassment, fear of rejection, self-esteem management, to avoid punishment or to enable continuation of the behavior (O'Callaghan, Quayle, & Print, 2006). In managing this in intervention, it is suggested that play and creative communication methods are used to overcome this barrier (Alvarez & Phillips, 1998).

It is also important to note that more recent research and literature is finding that to try treat low risk offenders, we are at risk of producing negative effects that may exacerbate treatment needs and subsequently increase reoffending rates (Bonta & Andrews, 2017). Further to this, there is limited empirical research and evaluations on the treatment effects for individual's that have engaged in TA-HSB, as such any suggested intervention should be devised and planned with caution in regards to a lower risk consideration. However, it could also be argued that children and young people that engage low level TA-HSB may be lacking fundamental needs as opposed to not managing emerging treatment needs. As such, a strengths-based common sense approach is recommended in these instances; all children are entitled to feel warmth and nurture from a supportive caregiver, to feel safe, to have an education around sex and use of technology, and to have positive social experiences so that they may develop healthily in line with their peers. As such, whilst exploring a low risk child's sexual interests may be unhelpful, helping them to feel more fulfilled from their fundamental needs may be the place to start, until we learn more about the impact of treatment for this group.

5.3. Impact of TA-HSB

Despite generally low projected recidivism rates of TA-HSB, it is important to discuss the need for intervention in this area, by reviewing the impact of these behaviors. Leonard (2010) conducted a small-scale qualitative study that begins to examine the impact of being a victim of TA-HSB and challenges the assumption that non-contact victims experience less significant harm than contact victims. She discussed additional complexities that impact on the victim's ability to comprehend and process what has happened to them, such as being directed to essentially abuse themselves by the offender, and what this means to them as now potentially being a perpetrator of their own abuse. The victims reported repeat-victimization due to their photos being shared online, and due to the influence of technology they now feel further unsafe in multiple environments with no clear end of the abuse for closure. They also described impact effects similar to victims of contact HSB, identifying how their daily lives have been significantly impacted as a result, including their withdrawal from society, difficulties socializing, reluctance to go outside, and distressing feelings of guilt, shame, and blame.

In a larger scale study (Wolak, Finkelhor, Walsh, & Treitman, in press) it was found that almost one third of 1385 sextortion victims were threatened with physical assaults and were harassed for > 6 months, with over half of these experiencing the threats being fulfilled. Sextortion is where victims that have shared sexual images of themselves are coerced to provide further images, to engage in sexual activity or follow through with other demands due to the threat of their initial sexual image being exposed. Within this study it was found that all victims were threatened to have their images exposed to family, friends or the online public, which resulted in nearly half losing these relationships. Moreover, three in 10 sought mental health or medical services, and some experienced school-related problems or moved home as a result of the sextortion experience. It was also found that the victims that were minors (< 17 years old) at the time of the sextortion experience, were more likely to have been pressured into producing the initial sexual images, to be demanded to provide further sexual images, to be threatened for a long duration of time and to be encouraged to harm themselves. Therefore, based on this and other studies it has been concluded that “there is no evidence … to suggest that those who were also abused offline experienced greater negative impact of abuse than those who were abused online only” (Whittle, Hamilton-Giachritsis, & Beech, 2013, p. 67).

As such, as long as there is a need for assessment and intervention for contact HSB, research would indicate that the same level of support for victims and management of circumstances is needed for TA-HSB going forward. However, given the impact of this behavior, when it comes to children and young people demonstrating TA-HSB literature and research indicates that punitive approaches are more likely to increase risk and recidivism (Comartin, Kernsmith, & Miles, 2010). Therefore, a rehabilitative, strength-based, treatment response is the most appropriate to account for the developmental changes for children

and young people, and to prevent the likelihood of adult recidivism.

6. Conclusions

From the existing literature, it is evident that children and young people are more likely to be sexually harmful through the accessibility, affordability and anonymity of technology and the internet. Whilst there is a variance of TA-HSB, research of children and young people in this area appears to be predominantly focused on IIOC behaviors, self-produced and otherwise. However, this is not to suggest that other TA-HSB are not occurring or are not equally as harmful. Victim impact research in this area is developing and has so far concluded that online sexual offences are no less harmful than offline. As such, further research is needed into the varying ways in which a child or young person can be criminalized and victimized through TA-HSB.

Typologies and theories of sexual offending give some explanation to the occurrence and potential motives of sexual behaviors online, although applying these theories to children and young people presents further limitations to our understanding of this population. Adult research does not take into consideration the developmental complexities for children and young people at the time of offending, or the potential ongoing victim experiences that they may be enduring also. Further to this, theory around the range of behaviors within TA-HSB is again limited.

Recent research into the influence of technology has begun to provide insight on how sexual behaviors have become more online and how intent to engage in TA-HSB has become more blurred, with children and young people engaging in these behaviors accidentally and purposefully. However, literature on children and young people's motives of intent is still in its infancy and leads to continued criminalization of them as a problem, rather than rehabilitation as a priority. Moreover, an assessment tool to predict the likelihood of children and young people re-engaging in TA-HSB is much needed within practice to inform a comprehensive functional assessment of behavior and formulation of intervention needs. Within this, consideration for sexual development offline and online needs to be a priority within intervention as this will provide the practitioner with context to the treatment needs that the child or young person is demonstrating. Furthermore, whilst abuse histories may not be overtly evident within the children and young people presenting with TA-HSB, research indicates it is more likely that they have engaged in the behaviors following their own inappropriate introduction, be it neglect and lack of supervision or exposure to illegal sexual content by an abusive adult. As such, processing trauma experiences and exploring unhelpful learning needs to be a priority in intervention also.

A rehabilitative, supportive, strength-based and multi-agency approach in assessing, treating and managing this group is recommended. Whilst recidivism rates are generally low, the hidden statistics and potential degree of harm are enough incentive to learn from the limited research available and to develop practice to contribute to further understanding going forward. Otherwise, without ongoing learning in this area, practitioners and professionals are inappropriately informed in their assessment and management of this subgroup (Hamilton-Giachritsis, Hanson, Whittle, & Beech, 2016).

References

Aebi, M., Plattner, B., Ernest, M., Kaszynski, K., & Bessler, C. (2014). Criminal history and future offending of juveniles convicted of the possession of child pornography. *Sexual Abuse, 26*(4), 375–390.

Alvarez, A., & Phillips, A. (1998). The importance of play: A child psychotherapist's view. *Child Psychology & Psychiatry Review, 3*(3), 99–103.

Barak, A. (2005). Sexual harassment on the internet. *Social Science Computer Review, 23*(1), 77–92.

Blakemore, S. J. (2014 October 3). Teenage risk taking and the social influence of friends may reflect maturing of the adolescent brain. Retrieved April 09, 2017 from https://childandfamilyblog.com/teenage-risk-taking-and-the-social-influence-of-friends-may-reflect-maturing-of-the-adolescent-brain/.

Bonta, J., & Andrews, D. (2017). *The psychology of criminal conduct.* New York, NY: Routledge.

Briggs, P., Simon, W. T., & Simonson, S. (2011). An exploratory study of internet-initiated sexual offenses and the chat room sex offender: Has the internet enabled a new typology of sex offender? *Sexual Abuse, 23*, 72–91.

Brook (2012). Sexual behaviours traffic light tool. A guide to identifying sexual behaviours. Retrieved from https://www.brook.org.uk/our-work/the-sexual-behaviours-traffic-light-tool.

Bryce, J. (2011). Online sexual exploitation of children and young people. In Y. Jewkes, & M. Yar (Eds.). *Handbook of internet crime* (pp. 320–342). New York, NY: Routledge.

Cameron, H., Gawthrop, D., Warwick, K., & Webster, L. (2001). Children with sexually problematic behavior: Suggestions for child centered practice. *Youth Justice Matters* (pp. 9–12). (March).

Carr, A. (2004). *Internet traders of child pornography and other censorship offenders in New Zealand.* Wellington, New Zealand: Department of Internal Affairs Te Tari Taiwhenua.

CEOP (2013, June). Threat assessment of child sexual exploitation and abuse. Retrieved April 09, 2017 from https://ceop.police.uk/Documents/ceopdocs/CEOP_TACSEA2013_240613%20FINAL.pdf.

Chaffin, M., Letourneau, E., & Silovsky, J. F. (2002). Adults, adolescents, and children who sexually abuse children: A developmental perspective. In J. E. B. Myers, L. Berliner, J. Briere, C. T. Hendrix, C. Jenny, & T. A. Reid (Eds.). *The APSAC handbook on child maltreatment* (pp. 205–232). Thousand Oaks, CA: Sage.

Comartin, E. B., Kernsmith, P. D., & Miles, B. W. (2010). Family experiences of young adult sex offender registration. *Journal of Child Sexual Abuse, 19*(2), 204–225.

Cooper, A. (1998). Sexually compulsive behavior. *Contemporary Sexuality, 32*, 1–3.

De Graaf, H., & Vanwesenbeeck, I. (2006). *Seks is Een Game: Gewenst En Ongewenst Seksueel Gedrag Van Jongeren Op Internet [Sex is a game: Desired and undesired sexual behavior of youngsters on the internet].* Utrecht: Rutgers Nisso Groep.

De Santisteban, P., & Gámez-Guadix, M. (2017). Prevalence and risk factors among minors for online sexual solicitations and interactions with adults. *Journal of Sex Research,* 1–12.

Durkan, K. F., & Bryant, C. D. (1995). Log on to sex: Some notes on the carnal computer and erotic cyberspace as an emerging research frontier. *Deviant Behavior: An Interdisciplinary Journal, 16*, 179–200.

Easton, S. (2011). Criminalising the possession of extreme pornography: Sword or shield? *The Journal of Criminal Law and Criminology, 75*(5), 391–413.

Elliott, I. A., & Beech, A. R. (2009). Understanding online child pornography use: Applying sexual offense theory to internet offenders. *Aggression and Violent Behavior, 14*, 180–193.

Elliott, I. A., Beech, A. R., Mandeville-Norden, R., & Hayes, E. (2009). Psychological profiles of internet sexual offenders: Comparisons with contact sexual offenders. *Sexual Abuse, 21*, 76–92.

Erooga, M., & Masson, H. (2006). Children and young people with sexually harmful or abusive behaviors: Underpinning knowledge, principles, approaches and service provision. In M. Erooga, & H. Masson (Eds.). *Children and young people who sexually abuse others: Current developments and practice responses* (pp. 3–17). (2nd ed.). Oxon: Routledge.

Finkelhor, D., Mitchell, K. J., & Wolack, J. (2000). *Online victimisation: A report of the Nation's youth.* Washington: National Center for Missing and Exploited Children.

Gifford, A. (2002). Emotion and self-control. *Journal of Economic Behavior and Organization, 49*, 113–130.

Gil, E., & Shaw, J. A. (2014). *Working with children with sexual behavior problems.* New York; London: Guilford Press.

Grant, H. (2006). Assessment issues in relation to young people who have sexually abusive behavior. In M. Erooga, & H. Masson (Eds.). *Children and young people who sexually abuse others: Current developments and practice responses* (pp. 67–76). (2nd ed.). Oxon: Routledge.

Greenfield, P. M. (2004). Inadvertent exposure to pornography on the internet: Implications of peer-to-peer file-sharing networks for child development and families. *Journal of Applied Developmental Psychology, 25*, 741–750.

Gross, E. F. (2004). Adolescent internet use: What we expect, what teens report. *Journal of Applied Developmental Psychology, 25*, 633–649.

Hackett, S. (2004). *What works for children and young people with harmful sexual behaviors?* Nottingham: Barnardo's.

Hackett, S. (2006a). The personal and professional context to work with children and young people who have sexually abused. In M. Erooga, & H. Masson (Eds.). *Children and young people who sexually abuse others: Current developments and practice responses* (pp. 237–248). (2nd ed.). Oxon: Routledge.

Hackett, S. (2006b). Towards a resilience-based intervention model for young people with harmful sexual behaviors. In M. Erooga, & H. Masson (Eds.). *Children and young people who sexually abuse others: Current developments and practice responses* (pp. 103–114). (2nd ed.). Oxon: Routledge.

Hackett, S. (2010). Children, young people and sexual violence. In C. Barter, & D. Berridge (Eds.). *Children behaving badly? Exploring peer violence between children and young people.* London: Blackwell Wiley.

Hackett, S., Holmes, D., & Branigan, P. (2016). *Operational framework for children and young people displaying harmful sexual behaviors.* London: NSPCC. Retrieved April 09, 2017 from https://www.nspcc.org.uk/globalassets/documents/publications/harmful-sexual-behaviour-framework.pdf.

Hackett, S., Telford, P., & Slack, K. (2002). Groupwork with parents of children who have been sexually harmed by others. In M. C. Calder (Ed.). *Young people who sexually abuse: Building the evidence base for your practice.* Lyme Regis: Russell House Publishing.

Hamilton-Giachritsis, C., Hanson, E., Whittle, H., & Beech, A. (2016). *The impact of online sexual abuse on young people.* (In press).

Hanson, K. R., & Morton-Bourgon, K. E. (2005). The characteristics of persistent sexual

offenders: A meta-analysis of recidivism studies. *Journal of Consulting and Clinical Psychology, 73*(6), 1154–1163.
Holland, G. (2005). Identifying victims of child abuse images: An analysis of successful identifications. In E. Quayle, & M. Taylor (Eds.). *Viewing child pornography on the Internet: Understanding the offense, managing the offender, helping the victims* (pp. 75–90). Lyme Regis, U.K: Russell House.
Hollis, V., & Belton, E. (2017). Children and young people that engage in technology-assisted harmful sexual behaviour: A study of their behaviours, backgrounds and characteristics. Retrieved from https://www.nspcc.org.uk/globalassets/documents/research-reports/exploring-technology-assisted-harmful-sexual-behaviour.pdf.
Horvath, A. O., & Symonds, B. D. (1991). Relation between working alliance and outcome in psychotherapy: A meta-analysis. *Journal of Counseling Psychology, 38*(2), 139–149.
Horvath, M. A. H., Alys, L., Massey, K., Pina, A., Scally, M., & Adler, J. R. (2013). "Basically… porn is everywhere" A rapid evidence assessment on the effect that access and exposure to pornography has on children and young people. Retrieved April 09, 2017 from http://www.childrenscommissioner.gov.uk/sites/default/files/publications/Basically_porn_is_everywhere.pdf.
iAIM (2009). Internet assessment, intervention and moving on. Retrieved June 26, 2017 from http://aimproject.org.uk/?page_id=83.
Imhoff, R., & Schmidt, A. F. (2014). Sexual disinhibition under sexual arousal: Evidence for domain specificity in men and women. *Archives of Sexual Behavior, 43*, 1123–1136.
Interpol annual review.
Joinson, A. (1998). Causes and implications of disinhibited behavior on the internet. In J. Gackenback (Ed.). *Psychology and the internet: Intrapersonal, interpersonal, and transpersonal implications* (pp. 43–60). New York: Academic Press.
Kennedy-Souza, B. L. (1998). Internet addiction disorder. *Interpersonal computing and technology: An Electronic journal for the 21st century. 6. Interpersonal computing and technology: An Electronic journal for the 21st century* (pp. 1–2).
Kerstens, J. W. M., & De Graaf, H. (2012). *Jongerenen online seksuele activiteiten [Juveniles and online sexual activities]. Jeugd En Cybersafety: Online Slachtoffer- En Daderschap Onder Nederlandse Jongeren.* Den Haag: Boom Lemma.
Lanning, K. V. (2001). Child molesters and cyber pedophiles - A behavioral perspective. In R. R. Hazelwood, & A. Wolbert Burgess (Eds.). *Practical aspects of rape allegations* (pp. 199–220). New York: CRC Press.
Lanning, K. V. (2010). *Child molesters: A behavioral analysis for professional investigating the sexual exploitation of children* (5th ed.). Maryland, United States: National Center for Missing and Exploited Children.
Lenhart, A. (2009). *Teens and sexting: How and why minor teens are sending sexually suggestive nude or nearly nude images via text messaging.* Washington, DC: Pew Internet and American Life Project.
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, 16*, 249–256.
Leukfeldt, E. R., Jansen, J., & Stol, W. P. (2014). Child pornography, the internet and juvenile suspects. *Journal of Social Welfare and Family Law, 36*(1), 3–13.
Livingstone, S., Haddon, L., Görzig, A., & Ólafsson, K. (2011). Risks and safety on the internet: The perspective of European children: Summary. Retrieved April 01, 2017 from http://eprints.lse.ac.uk/33731/8/EU_Kids_Online_Summary_Risks_safety_internet(lsero).pdf.
Martin, D., Garske, J., & Davis, M. (2000). Relation of the therapeutic alliance with other outcome and other variables: A meta-analytic review. *Journal of Consulting and Clinical Psychology, 68*, 438–450.
Merdian, H. L., Curtis, C., Thakker, J., Wilson, N., & Boer, D. P. (2013). Developmental and offence-related characteristics of different types of adolescent sex offender: A community sample. *Journal of Sexual Aggression, 19*(2), 138–157.
Middleton, D., Elliott, I. A., Mandeville-Norden, R., & Beech, A. R. (2006). An investigation into the application of the Ward and Siegert Pathways Model of child sexual abuse with internet offenders. *Psychology Crime and Law, 12*, 589–603.
Morahan-Martin, J., & Schuhmacher, P. (2000). Incidence and correlates of pathological internet use among college students. *Computers in Human Behavior, 16*, 13–29.
Moultrie, D. (2006). Adolescents convicted of possession of abuse images of children: A new type of adolescent sex offender? *Journal of Sexual Aggression, 12*(2), 165–174.
Murphy, W. D., & Page, I. J. (2008). Exhibitionism: Psychopathology and treatment. In D. R. Laws, & W. T. O'Donohue (Eds.). *Sexual deviance: Theory, assessment and treatment* (2nd ed.). New York, NY: Guilford Press.
Neto, A. C. A., Eyland, S., Ware, J., Galouzis, J., & Kevin, M. (2013). Internet sexual offending: Overview of potential contributing factors and intervention strategies. *Psychiatry, Psychology and Law, 20*, 168–181.
NSPCC (2016, October). A review of the research on children and young people who display harmful sexual behavior online. Retrieved April 09, 2017 from https://www.nspcc.org.uk/globalassets/documents/research-reports/review-children-young-people-harmful-sexual-behaviour-online.pdf.
O'Callaghan, D., Quayle, J., & Print, B. (2006). Working in groups with young men who have sexually abused others. In M. Erooga, & H. Masson (Eds.). *Children and young people who sexually abuse others: Current developments and practice responses* (pp. 145–173). (2nd ed.). Oxon: Routledge.
Ofcom (2016, November). Children and parents: media use and attitudes report. Retrieved March 26, 2017 from https://www.ofcom.org.uk/_data/assets/pdf_file/0034/93976/Children-Parents-Media-Use-Attitudes-Report-2016.pdf.
Office for National Statistics (2016, August 4). Internet access – Households and individuals: 2016. Retrieved March 26, 2017 from https://www.ons.gov.uk/peoplepopulationandcommunity/householdcharacteristics/homeinternetandsocialmediausage/bulletins/internetaccesshouseholdsandindividuals/2016.
Perkins, D. E., & Merdian, H. L. (2017). Introduction to the special issue. *Journal of Sexual Aggression, 23*(1), 1–2.
Prentkey, R., & Righthand, S. (2003). Juvenile sex offender assessment protocol-II (J-SOAP-II). Retrieved May 08, 2017 from https://www.ncjrs.gov/pdffiles1/ojjdp/202316.pdf.
Quayle, E. (2007). Chapter 16: Assessment issues with young people who engage in sexually abusive behaviors through new technologies. In M. C. Calder (Ed.). *Working with children and young people who sexually abuse: Taking the field forward* (pp. 217–229). Dorset: Russel House Publishing Limited.
Quayle, E., Vaughan, M., & Taylor, M. (2006). Sex offenders, internet child abuse images and emotional avoidance: The importance of values. *Aggression and Violent Behavior, 11*, 1–11.
Ringrose, J., Gill, R., Livingstone, S., & Harvey, L. (2012). A qualitative study of children and young people 'sexting': A report prepared for the NSPCC. Retrieved April 17, 2017 from https://www.nspcc.org.uk/globalassets/documents/research-reports/qualitative-study-children-young-people-sexting-report.pdf.
Ropelato, J. (2007). Internet pornography statistics. Retrieved April 01, 2017 from http://www.ministryoftruth.me.uk/wp-content/uploads/2014/03/IFR2013.pdf.
Rothman, E. F., Kaczmarsky, C., Burke, N., Jansen, E., & Baughman, A. (2015). "Without porn … I wouldn't know half the things I know now": A qualitative study of pornography use among a sample of urban, low-income, Black and Hispanic youth. *Journal of Sex Research, 52*(7), 736–746.
Safran, J. D., Muran, J. C., & Proskurov, B. (2009). Alliance, negotiation, and rupture resolution. In R. Levy, & S. J. Ablon (Eds.). *Handbook of evidence based psychodynamic psychotherapy* (pp. 201–205). New York, NY: Humana Press.
Schmidt, A. F., Babchishin, K. M., & Lehmann, R. J. B. (2017). A meta-analysis of viewing time measures of sexual interest in children. *Archives of Sexual Behavior, 46*, 287–300.
Seto, M. C. (2017). The motivation-facilitation model of sexual offending. *Sexual Abuse,* 1–22 (doi: 1079063217720919).
Seto, M. C., Cantor, J. M., & Blanchard, R. (2006). Child pornography offenses are a valid diagnostic indicator of pedophilia. *Journal of Abnormal Psychology, 115*, 610–615.
Seto, M. C., & 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, 39*(4), 416–429.
Seto, M. C., & Hanson, R. K. (2011). Introduction to special issue on internet-facilitated sexual offending. *Sexual Abuse, 23*(1), 3–6.
Seto, M. C., Hanson, R. K., & Babchishin, K. (2011). Contact sexual offending by men with online sexual offenses. *Sexual Abuse, 23*, 124–145.
Seto, M. C., Hermann, C. A., Kjellgren, C., Priebe, G., Svedin, C. G., & Langström, N. (2015). Viewing child pornography: Prevalence and correlates in a representative community sample of young Swedish men. *Archives of Sexual Behavior, 44*, 67–79.
Seto, M. C., Kjellgren, C., Priebe, G., Mossige, S., Svedin, C. G., & Långström, N. (2010). Sexual coercion experience and sexually coercive behavior: A population study of Swedish and Norwegian male youth. *Child Maltreatment, 15*, 219–228.
Seto, M. C., & Lalumière, M. L. (2001). A brief screening scale to identify pedophilic interests among child molesters. *Sexual Abuse, 13*(1), 15–25.
Seto, M. C., & Lalumière, M. L. (2010). What is so special about male adolescent sexual offending? A review and test of explanations through meta-analysis. *Psychological Bulletin, 136*(4), 526–575.
Seto, M. C., Murphy, W. D., Page, J., & Ennis, L. (2003). Detecting anomalous sexual interests in juvenile sex offenders. *Annals of the New York Academy of Sciences, 989*, 118–130.
Seto, M. C., Reeves, L., & Jung, S. (2010). Explanations given by child pornography offenders for their crimes. *Journal of Sexual Aggression, 16*, 169–180.
Sheldon, K., & Howitt, D. (2007). *Sex offenders and the internet.* Chichester, UK: West Sussex.
Sheldon, K., & Howitt, D. (2008). Sexual fantasy in pedophile offenders: Can any model explain satisfactorily new findings from a study of internet and contact sexual offenders? *Legal and Criminological Psychology, 13*, 137–158.
Stevens, P., Hutchin, K., French, L., & Craissati, J. (2013). Developmental and offence-related characteristics of different types of adolescent sex offender: A community sample. *Journal of Sexual Aggression, 19*(2), 138–157.
TA-HSB (2017). Retrieved November 26, 2017 from http://aimproject.org.uk/?page_id=83.
Taylor, M., Holland, G., & Quayle, E. (2001). Typology of pedophile picture collections. *The Police Journal, 74*, 97–107.
The crown prosecution service: Extreme pornography. (n.d.). Retrieved April 01, 2017 from http://www.cps.gov.uk/legal/d_to_g/extreme_pornography/
Wakeling, H., Howard, P., & Barnett, G. (2011). Comparing the validity of the RM2000 scales and OGRS3 for predicting recidivism by internet sexual offenders. *Sexual Abuse, 23*, 146–168.
Ward, T., & Beech, A. (2006). An integrated theory of sexual offending. *Aggression and Violent Behavior, 11*, 44–63.
Ward, T., & Beech, A. (2016). The integrated theory of sexual offending – Revised: A multifield perspective. In D. P. Boer (Vol. Ed.), *The Wiley handbook on the theories, assessment, and treatment of sexual offending. Vol. 1. The Wiley handbook on the theories, assessment, and treatment of sexual offending* (pp. 123–138). New York, NY: Wiley.
Ward, T., & Beech, A. R. (2008). An integrated theory of sexual offending. In D. R. Laws, & W. T. O'Donohue (Eds.). *Sexual deviance: Theory, assessment, and treatment* (pp. 21–36). (2nd ed.). New York, NY: The Guilford Press.
Ward, T., Day, A., Howells, K., & Birgden, A. (2004). The multifactor offender readiness model. *Aggression and Violent Behavior, 9*(6), 645–673.
Ward, T., & Siegert, R. J. (2002). Toward a comprehensive theory of child sexual abuse: A theory knitting perspective. *Psychology Crime and Law, 9*, 319–351.
Webb, L., Craisatti, J., & Keen, S. (2007). Characteristics of internet child pornography offenders: A comparison with child molesters. *Sexual Abuse, 19*, 449–465.
Whittle, H. C., Hamilton-Giachritsis, C., & Beech, A. R. (2013). Victims' voices: The

impact of online grooming and sexual abuse. *Universal Journal of Psychology, 1*(2), 59–71.
Winder, B., Gough, B., & Seymour-Smith, S. (2015). Stumbling into sexual crime: the passive perpetrator in accounts by male imtermet sex offenders. *Archives of Sexual Behavior, 44*(1), 167–180.
Wolak, J., Finkelhor, D., & Mitchell, K. (2011). Child pornography possessors: Trends in offender and case characteristics. *Sexual Abuse, 23*, 22–42.
Wolak, J., Finkelhor, D., Walsh, W., & Treitman, L. (2018). Sextortion of minors: Characteristics and dynamics. *Journal of Adolescent Health*. http://dx.doi.org/10.1016/j.jadohealth.2017.08.014 (in press).
Worling, J. R., & Curwen, T. (2001). The ERASOR: Estimate of risk of adolescent sexual offense recidivism version 2.0. Retrieved May 08, 2017 from http://djj.ky.gov/800%20Policy%20Manual/ERASOR%202.0.pdf.
Youth justice statistics 2015/2016 by England and Wales Youth Justice Board/Ministry of Justice: Statistics bulletin. Retrieved April 01, 2017 from https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/585897/youth-justice-statistics-2015-2016.pdf.