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Young People, Peer-to-Peer Grooming and Sexual Offending: Understanding and Responding to Harmful Sexual Behaviour within a Social Media Society

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Abstract

There is ample evidence that young people are using social media in grooming and bullying to abuse and exploit others sexually with enough frequency to make those behaviours important concerns for both society and care providers. This article provides a critical overview of the conceptual and theoretical foundations for ‘grooming’ among peers and use of social media within harmful sexual behaviour. It introduces a model for intervention based on the literature on memory, bundles, thinking and problem solving and highlights how the suggested model may be applied in practice.

Key Words

Young people, harmful sexual behaviour, grooming, peer-to-peer grooming, sexting, motivation, methods, intervention, professional practice

Introduction

News reports, stories from front line practitioners, a body of research on the topic and statistics on prevalence provide ample evidence that young people engage in sexual abuse and exploitation with enough frequency to make these behaviours a problem that both society and service professions should acknowledge and address (Hackett, 2014). However, before service providers can respond sufficiently they will need to take into account how norms for sexual behaviour of young people and the norms for content in communications about personal and sexual matters are continually changing, and at a very rapid pace. These norms and their behavioural manifestations are also changing the grooming strategies and behaviours used by young people to abuse or exploit other young people sexually. For example, “sexting” is a practice that has emerged and increased quickly with the availability of smart phones and social media tools (Wolak and Finkelhor, 2011; Ringrose et al., 2012).

This paper provides a critical overview of recent research into Harmful Sexual Behaviour (HSB), especially associated with social media applications for exchanging pornographic content in ‘peer-to-peer’ grooming. In so doing it highlights some
motivations and methods used by young people for abusing or exploiting other young people sexually. Applying themes from the literature on memory, bundles, thinking and problem solving, it also introduces a new intervention model for working with youth displaying HSB and draws out implications for professional practice.

**Harmful Sexual Behaviour among Young People**

One early report which highlighted children and young people who sexually harm others as a matter for concern in the UK was *The National Children’s Home Report* (NCH, 1992). Fifteen years later, Vizard et al., (2007) reported that between 30 and 50 percent of sexual abuse was perpetrated by adolescents, mostly boys. These figures broadly match those related to on-line forms of sexual offending against children (Finkelhor et al., 2000). More recently, the Ministry of Justice (2013) appears to raise questions about that claim, reporting that 491 juveniles in England and Wales were convicted of sexual offences, representing only 8.2% of all convictions for sexual crimes. Regarding the latter statistic, however, it is widely accepted that conviction rates under-represent the true number of actual offences due to a range of attrition factors (Choo, 2009: 4). Moreover, the statistics for cases addressed by the criminal justice system do not include those who came to the child protection services or those who were under 10 years of age, the age of criminal responsibility.

A report by Barnardo’s indicated that exploitation among peers within age-appropriate relationships has become more prevalent across the UK accounting for a quarter of their services (Barnardo’s, 2011). Evidence of on-line prevalence more specifically comes from McAlinden (2012), who found from her interviews with criminal justice personnel within the UK, including police officers, that peer-to-peer grooming involving sexting and cyber bullying among the 13-to-17 year old age group accounts for an increasing number of cases involving indecent images of children. This broad claim is further supported by data showing increases in the number of cases of Internet sexual offending brought to the attention of law enforcement agencies (CEOP, 2013) and referrals of youth displaying HSB via social media for treatment with HSB services (Hackett, 2014).

Norms and methods for sexual behaviour among youth are evolving rapidly, reaching the point where some young people now consider sexting to be no more than “flirting” (Phippen, 2012). For this reason some writers set aside terms such as “grooming” and “sexting” as euphemistic and unhelpful in that they tend to mask the complexity of harmful sexual behaviour concerning children and young people (see e.g., Gallagher, 2000; Fernandez, 2006). These contemporary norms and behaviours among youth reflect radical deviations from norms and experiences of young people in earlier times (Horvath, 2013) and raise pertinent questions for adults, especially those providing social and other human services, about the distinction between what is normative or banal and what is potentially harmful or pornographic.

Nevertheless, workers within the field of HSB must be able to distinguish what is “harmful” and “pornographic” from what is not and they must also recognise the range of harmful consequences and factors that determine the degree of harm. While some may begin with an assumption, “I know it when I see it”, what is harmful or pornographic is neither simple nor intuitive; nor is it strictly objective. On one level, the two concepts, “harmful” and “pornographic” can be defined readily using their legal meaning composed of constructs such as “sexually explicit media that are
primarily intended to sexually arouse the audience” (Malamuth, 2001, p. 11817; see also Taylor et al., 2001). However, they cannot be defined sufficiently as check lists of specific behaviours or materials unless those lists are constructed carefully to be illustrative and not intended to be exhaustive: the behaviours and materials that are “pornographic” can and do change almost daily. What may have resulted in sexual arousal in one time or context may be commonplace in another, evoking little if any emotional or physical excitement. Moreover, what is harmful depends upon conditions far more complex than simply the behaviour itself.

Extending that point, findings by Wolak and Finkelhor (2011: 1) indicate that harm from sexually-explicit interchanges through social media or other forms of communication may range from minor embarrassment to death, depending upon a variety of factors beyond merely the interchange or its content. Moreover, the intentions of persons communicating messages may differ across a wide range of motivations from simple attention-seeking or self-seeking to intentional and significant harm; such as by someone who is seeking gang recognition. Their sexual behaviours often rely upon strategies for trying directly to achieve something that is desired or trying to control others as a way to achieve something that is valued or that is symbolic to themselves or others; such as, sexual gratification, revenge, establishing or maintaining relationships or affiliations, or identification as an adult.

While the links between exposure to pornography and acceptance of ‘rape myths’ are far from being clear cut (Allen et al., 2006) there is substantial research evidence to support the harmful effects of pornographic material. Studying the effects of the use of pornographic materials for young men aged 18-28 years, Sun et al. (2014), for example, found that the more pornographic materials men viewed, the more likely they were to use them during sex, request particular sex acts of their partner, deliberately conjure pornographic imagery during sex to maintain arousal and to have concerns over their sexual performance and body image. They concluded that pornographic materials provide heuristic models, which are represented in men’s expectations and behaviours during sexual encounters. They established that men generate “scripts” from their experiences with pornographic materials that became part of their framework for thinking and heavily influence their thinking about sexual matters. Similarly, Horvath et al. (2013) found distorted sexual beliefs among adolescents including unrealistic attitudes about sex, maladaptive attitudes about relationships, more sexually-permissive attitudes, greater acceptance of casual sex, beliefs that women are sex objects, more frequent thoughts about sex, sexual uncertainty and fewer progressive attitudes about gender roles. They also reported that frequent accessing of pornographic material increased engagement in “risky behaviours” such as sexting and greater inclination toward bullying and exploitation.

Comparing boys and girls, both Flood (2007) and Phippen (2012) found that young men and boys are more likely than young women and girls to use pornographic materials. Many young women claimed they accessed pornographic materials only once and then only because they were curious or a boyfriend wanted them to see it. However, boys and young men are encouraged to view pornographic materials by their male friends, and are likely to view more types of images on repeated occasions (Flood and Hamilton, 2003). Adding to that, Epstein and Ward (2008) said boys receive less organised or formal sex education than girls, leading them to rely more on peers or media, especially social media, for learning. From these findings about
reliance upon pornographic materials for sexual learning, it is reasonable to conclude that contemporary sexual norms of many young people, particularly males, are initiated, distorted and scaffolded by social media. Moreover, there has been a recent increase in both the rate of consumption (Carrol et al., 2008) and exposure to pornographic materials by children who are 13 years and under (Sun et al., 2014). Some of the increase may come from easy access to pornographic material through the internet (Johnson, 2010) and to the social acceptance of a “pornified” culture (Paul, 2005).

Studies of case reports of sexting within HSB in the US by Wolak and Finkelhor (2011) documented how the practices and purposes differed among the cases they reviewed. They defined youthful sexting broadly as “using Internet applications to communicate youth-produced sexual images that depict minors in ways that could be classified as child pornography under applicable criminal statutes” (2011: 1). They organised cases into two main types: “aggravation”, which comes from deliberate intentions to harm or from reckless misuse of the imagery; and “experimentation”, which may be intended for romantic, sexual attention-seeking or other purposes. Many of the HSB cases they reviewed arose from interpersonal conflict involving malicious or criminal behaviour, such as extortion or deception, sometimes with a high degree of malice. The aggravating circumstances included bullying, sexual exploitation or the taking or sending of indecent images without the knowledge or willing participation of the young person. They concluded that many young people see sexting as risqué, but a form of sexual sharing that is safer than face-to-face sexual intimacy. Indeed, some scholars tend to agree, arguing that sexting can be regarded as a form of self-expression by adolescents; a right which should be protected under human-rights law rather than circumscribed (Gillespie, 2013). Such arguments speak to the difficulties for parents and professionals who have responsibility for engaging young people and inducing them to control behaviour which they do not regard as particularly unwelcome or harmful (McAlinden, 2012: 295).

Understanding sexting as a part of HSB is complicated further by the fact that many young people (13-14 years) say that it is not shocking or surprising to them (Phippen, 2012). While not all said they had sent or received “sexts”, all knew peers who had. They reported that sext content is commonly distributed around the school and to wider peer groups. As a result, the person who had initially sent the content frequently received criticisms and abuse for a short time. However, the level of abuse depended upon the popularity of the person who originated the message: the higher the popularity of the initiator, the less likely the abuse would be severe or prolonged.

Sexting occurs within relationships, but Phippen found that it also occurs prior to forming relationships and may determine whether or not relationships ensue. Young males seldom receive requests from females to send nude images, but the males self-generated images and sent them to their female peers. While boys did not consider their behaviour to be predatory or malicious, Ringrose et al. (2012) found clear signs of coercion and blackmail among sexting communications by young males. Therefore, there is a clear gendered dimension to sexting: the abusers are more often males, and the victims most often female (Ringrose and Eriksson Barajas, 2011).
Peer-to-Peer Grooming

Motivations for engaging in HSB, and the harm that comes from it, may differ markedly among cases. However, much of what is considered harmful can be characterised by the motivations, methods and materials that are used for engaging another sexually: a process known as “grooming”. McAlinden (2012: 11) defined grooming as: (1) the use of a variety of manipulative and controlling techniques (2) with a vulnerable subject (3) in a range of inter-personal and social settings (4) in order to establish trust or normalise sexually-harmful behaviour (5) with the overall aim of facilitating exploitation and prohibiting exposure. This definition does not prescribe particular methods that are used, which may vary dramatically and be limited only by the inventiveness or maliciousness of people who are using them. Indeed, grooming can occur in a variety of contexts including within intra-familial and extra-familial settings and may be on-line or face-to-face. The grooming of one young person by another young person, peer-to-peer grooming, is a recent phenomenon of significant attention. Thus, the empirical foundation for understanding it is limited (McAlinden, 2012). Nevertheless, records from front-line practitioners and service agencies indicate that it is not uncommon (Hackett, 2014). Some of the most recent manifestations of grooming have occurred in “sexting” and in “street” or “localised grooming” in which young girls “groom” others into exploitative or abusive networks (Montgomery-Devlin, 2008; Ost and Mooney, 2013).

Strategies used by young people for peer-to-peer offending may depend heavily upon situational factors (Leclerc et al., 2008; Wortley and Smallbone, 2006). According to these studies, the most likely setting for offenders to use manipulative or grooming strategies was within their own home while they were alone with another young person. There were differences in methods used for grooming children within and outside the family. Within, the offenders were more likely to give gifts to achieve trust (Kaufman et al., 1996). However, outside the family, young offenders commonly used drugs or alcohol to gain cooperation (Kaufman et al., 1998). Young people who engaged in HSB towards both boys and girls adopted a wider array of grooming strategies than those who abused only boys or girls (Kaufman et al., 1996). These findings were extended by Leclerc et al. (2008: 58) who concluded that peer abusers “adopt specific sets of strategies for grooming and then commit their crimes once they assess the costs and benefits involved”.

It should be noted that some of these studies were completed well before the introduction of smart phones and social media tools, now ubiquitous in the hands of young people. Therefore, they do not make clear how sexting and other contemporary modes of communication for grooming and offending purposes may fit within these findings. Future research may need to determine how contemporary grooming methods relate to these earlier findings. Nevertheless, the finding by Leclerc et al. (2008), that offenders wait until the costs and benefits have been assessed before committing the crime, may support an hypothesis that sexting and other communications using social media either has or will become the means of choice for grooming since it is perceived by many young people to be safer than face-to-face interactions (Wolak and Finklehor, 2011). Thus, grooming among peers is thought to be amplified by smart phone, tablet and computer technology and a more expeditious process using on-line social media methods (Livingstone and Helsper, 2009).
At its most basic level, grooming includes manipulation and control along with exploitation and ensuring protection of the groomer. Applying this definition reveals that grooming is not only an entry point into harmful sexual behaviour, but also a way that young people may both cause harm and maintain their harmful behaviour and effects. Practitioners should not be duped into thinking that merely because social media tools are being used by young people to groom others that grooming is a new phenomenon. It is not; the exploitative purpose remains the same and the overarching strategies remain the same; only some of the methods, and probably their frequency, intensity and duration, have changed. At present, as noted above, harassment from sexting tends to be directed more from young men towards young women (Ringrose et al., 2012). Anticipating this finding, Rivers and Noret (2010) suggested that girls are more at risk of “cyberbullying” than boys. Thus, sexting, can best be judged in light of its overall purpose in grooming or facilitating abusive behaviour to determine whether or how it contributes to exploitation or harm.

**Changing Harmful Sexual Behaviour Through Intervention**

In his reviews of intervention models, Hackett (2014) recommended ones that are developmentally sensitive, individual, and holistic, based on strengths and attend to both risks and needs. However, wide differences amongst models have lead to eclectic designs being adopted by service providers and practitioners (McCrary, and Walker-Rhymes, 2011). Within these adopted models, the responsibility to meet design principles often falls on the practitioner who must determine before and during their work how to accomplish each particular task under the conditions that have been presented. It may go without saying that those practitioners must have both the competence and the commitment that are necessary and sufficient for implementing their model.

To help with their implementation, one finding from the literature presented above provides an entry point for: (a) analysis of each case before them; (b) planning for interventions and (c) providing services. That point was the finding by Sun et al. (2014) that persons experiencing pornographic materials generate “mental scripts” from the content and their experiences with it. Adding to that, Horvath et al. (2013) found that these scripts may include significant distortions that also influence views and behaviours. Knowing that pornographic materials and experiences with them, whether through sexting or some other form of communication, result in mental scripts, allows practitioners to link effects from pornographic experiences, including sexting, directly to a large body of research on thinking, learning and decision-making and provides an important approach for intervening.

Based on findings reported above about effects of sexting, grooming and use of pornographic content, young people who display HSB are likely to have much memory “baggage” composing these scripts that is associated with prior life experiences, harmful behaviours, relations with family and peers, experiences with those who were harmed and with relations with people in criminal justice and human services. Within the mind, this “baggage” is encoded into memory as “scripts” that may be linked to other scripts and information all of which can be triggered automatically into mind whenever there is any internal or external stimulus.
These “scripts” that are formed in the minds are referred to as bundles in the literature on thinking and learning (Ashurst 2012). For HSB offenders, the memory bundles and others to which they may be linked will include powerful images, words, emotions, attitudes and information linked to the sexual content and their experiences. As noted, this content may be highly distorted from reality in a wide range of ways determined by several factors, including perceptions by the person who has the memory bundle and any deliberate distortions that may have occurred through embellishment, denial or lying while telling or retelling the event or experience. Such distortions can be associated with imagery and beliefs that are symptomatic of harmful behaviour and may, indeed, be linked to harmful actions they may take. These bundles may be either barriers or assets to professional services or learning since they are triggered automatically into memory.

To practitioners working with youth displaying HSB, this automatic recognition and recall of bundles should be a major consideration, whether during routine instruction to teach concepts or in language used within interventions. The young people will already have bundles associated with words that can be triggered readily in normal communication or professional work. For example, the word “police”, or an image of a police officer, may trigger recall of many experiences with police, favourable or unfavourable. The associations may include information, imagery or emotions linked to events leading up to their involvement with police; such as, sexually harmful activity or attempting to hide or otherwise avoid police contact. All of these associations with the word “police” compose a memory bundle that becomes active in memory automatically upon experiencing the word in any way.

As an hypothetical example of mental imagery and distortion coming from pornographic materials, a boy, age 15 years, self reported that he was compulsive in his viewing of hardcore pornographic videos, which all included scenes of violent stranger rape. These rapes were similar in circumstances to the stranger rape for which he had been charged. He described how the female whom he later raped reminded him of a girl in one of the videos he had watched on more than six occasions. He said that as she walked past him she looked away in the same way the girl in the video had done. Since the girl in the video had been teasing the male and was trying to induce him to follow and “rape” her, this boy assumed that his victim wanted him to follow and rape her. He could not explain how he knew this apart from saying that he “read the signals” like those portrayed in the video.

This boy appears to have generated a bundle linking the image of the “teasing” behaviour of looking away coyly with the subsequent events he saw in the videos. The memory bundle formed in his mind, including any sexual, behavioural, moral or social distortions, was triggered when he saw his victim and misread her non-verbal behaviour. To this boy, “teasing” of the sort in his memory bundle was an invitation to have sexual intercourse and, therefore, he thought the forced behaviour that he had seen in the videos was an appropriate approach.

Through his research on the biology of memory cells, Kandel (2006: 264) found that longer-term memory can occur through repetition (as in the example above) or through events or imagery with sufficient emotional impact to affect the memory structures that are also illustrated in the example. If young people see sexually-explicit images through sexting of a person whom they know, whether sent by that person or by others, those images and any conversations, thoughts or behaviours they
had with others about the images will be formed in memory into bundles associated with that person. Thereafter, when the person is experienced directly or by name, the associated bundles will be brought active into memory and may dominate thinking and behaviour, and will probably affect any communications or relationships with that person. Both the contents of the bundle and its strength in memory can be enhanced or distorted by reviewing or by telling or retelling the story of the experience to others.

Memory bundles can be linked with others. Thus, once bundles are encoded in memory, they and any bundles linked to them are readily accessible and can be brought to the fore whenever triggered by external or internal stimuli (Kandel, 2006; Kahneman, 2011; Ashurst, 2012). Unless controlled by conscious thinking the automatic thinking can dominate social and sexual conceptualisations and behaviours, whether they are consistent with social and age-related norms or not. Kahneman (2011) describes this recall of bundles without engaging conscious thought as “fast thinking” and said that once the automatic thinking has occurred, most people do not continue their process by engaging in conscious thinking. To describe this practice he constructed a principle, “What you see is all there is”.

Kahneman (2011) also described another principle for construction and recall of bundles and their decision-making consequences. He found that the power of bundles in thinking about experiences tended to be associated with the “peak and end”. This means that what is likely to be remembered first from an experience and be influential in their overall judgment and automatic thinking is the peak experience during the events and the ending experience. For example, if a young person presented for HSB in which he experienced a high level of sexual gratification and sense of control over others that is followed by strong social approval by peers, then the positive strength of both the peak and the end are more likely to be recalled when anything triggers thinking about the HSB. On the other hand, if a boy presented for a similar HSB in which he experienced a physical struggle with the girl that was disturbing to him at the time and for which he had significant remorse following the attack, then the peak memory would be about the physical struggle, which was dissatisfying, as was the remorse at the end of the experience. Either the peak or the end experience may be high or low, positive or negative, in various combinations. To illustrate, a sexual assault with a strong positive peak may have ended with a chase by police (strong negative end). The ending may overshadow the strong peak in the ensuing memory bundle. Applying the “peak-end” principle to the two examples above suggests that the boy in the former case is more likely to engage in similar HSB in the future than the latter due to his strong positive peak and end experience. Understandings about how bundles are formed and how automatic thinking occurs and tends to govern decisions and behaviours of youth displaying HSB, can give practitioners an understanding of their client’s mental structures and thinking and offers inroads into intervention.

**Competence for Healthy Living**

To begin thinking about intervening for a case, it is important to keep in mind that some cases brought for action require immediate attention to prevent or limit harm to self or others. Methods appropriate for short-term behavioural control may be required and are beyond the scope of this article. However, many other interventions can focus on developing competence, usually by developing cognitive skills and...
memory and thinking structures that are necessary for making healthy choices, or at least ones that are not harmful (Ashurst, 2011a).

The centerpiece of competence in decision-making formulated by Kahneman (2011) is described as reducing reliance upon automatic thinking and increasing reliance on conscious thinking. Much of this shift will require the young person to learn strategies for thinking and processes for decision-making in which the triggering of bundles and automatic thinking leads to conscious thought. For example, if a young person who is not prone to HSB receives a sext message from a friend, rather than it triggering bundles about sexual behaviour and engagement in pornographic activity or some form of HSB, it triggers a conceptual framework about factors that should be given consideration when such content is experienced. The young person then either ignores the message or initiates the process of considering those factors. For practitioners and their clients, building that level of competence and the confidence to use it requires a solid grounding in the concepts and conceptual frameworks (the bundles and all their linkages) that can be used for guiding thinking and behaviour.

Changing patterns of HSB requires changing the thinking frameworks of the offenders. With this in mind Ashurst (2012) designed, and developed an HSB intervention model to include methods that manage triggering bundles for fast-thinking and produces new learning that triggers conscious thought that leads the person to consider consequences of their behaviours and consider other possibilities for solving their problems. The following case exemplar includes definitions and findings from the literature review above and is used to illustrate areas of intervention using the principles stated herein.

A 15-year-old boy is being teased and bullied by his male peers because he does not have indecent images of peer-aged females on his phone to share with them. In an attempt to stop their bullying and save face he accesses the Facebook page for a 13-year-old female friend of his sister. He knows that the girl “has a crush on him” so he befriends her and leads her to trust him and believe they are in a boyfriend-girlfriend relationship. Within a week of establishing the relationship he suggested to the girl that she could show how much she liked him by sending indecent images of herself to his phone. She did. Despite promising her they were for his eyes only, he sent the images to his male peers. Soon afterwards, his peers sexually harassed the girl. After learning what his peers were doing he felt guilty and found his behaviour and that of his friends to be disturbing. He had acted automatically without thinking of the consequences of his actions.

This boy’s HSB reflects the 5-part definition of grooming laid out by McAlinden (2012) above. He uses (1) manipulative and controlling methods to elicit indecent images of a (2) vulnerable subject in a (3) social-media setting (4) to establish and normalise HSB (5) with the intention of exploitation. The images that he sent to his peers illustrate the potentially pornographic nature of sexting. Furthermore, this case shows how “baggage” from his peer relations affects his decision-making and shows his HSB having moderately-positive peak experiences but a negative ending that may be important to his future thinking.

The boy was following old habits of conforming to the inducements to meet social demands by peers. In doing so this time, he adopted a method to get the images he wanted that was similar to what his peers were using to induce his compliance.
Intervention, therefore, is needed enabling him to stop automatic problem-solving and adopt effective problem-solving strategies.

By way of further illustration, some of the symbols, word notations and shorthand used in text messages and communications of imagery may trigger concepts that are different from what was intended: the triggered bundle may be much more or much less than the intended meaning. Imagine the bundles that automatically come into the minds of youth displaying HSB for the words: Wet, Hard, Bike, Tart, Guilty or Head. As noted earlier, planning instruction to teach concepts requires careful attention to the bundles that the young people may have in memory and to the bundles that are intended to be constructed through interventions. Effective instruction avoids triggering meanings of words that are different from the ones intended. One approach can be to use the word in communications very carefully and only within a meaningful context.

Finally, we want to emphasise that we are not being critical of automatic thinking and reliance on bundles. Indeed, bundles are all we have for providing meaning. Every word, symbol, emotion, attitude or image we know has a memory bundle associated with it. Those bundles are the meaning we have: no bundle, no meaning. Bundles allow the mind to function quickly and with meaning. The point we want to make about bundles is that their reason for being—their efficiency and effectiveness for automatic introduction of bundled meaning into thinking—is also how and why they can be problematic in HSB. As Kandel (2006) noted, bundles can be formed effectively and efficiently while thinking about and engaging in HSB and when pornographic materials are experienced. Those bundles can become a primary factor in thinking and behaving in sexual matters. It is for that reason that we have presented a case for careful consideration of bundles, along with any distortions they may have, while planning and implementing interventions with young people displaying HSB.

**Conclusion**

We suggest a suitable note of caution when interpreting the findings from HSB research, including some of the studies cited above. Since some of the findings about sexual behaviour reported here depended upon interviews or questionnaires for their data, specific statistics about accessing or using pornographic materials by males and females require careful scrutiny. Some of the statistics and differences among them for boys and girls and changes in frequencies or patterns over time may be attributed to social desirability in responding (Edwards, 1957). Many societal norms are different for boys and girls (Ringrose et al., 2013). Thus, differences between males and females in their responses to questions about sexual views and behaviours should be expected and interpreted critically unless they are validated by appropriate methods. Moreover, methods used and variables studied in much of this research provides only correlations or associations among the variables compared. Most of the studies were not using models that would support claims of causation. Nevertheless, taken as a whole, we are of the view that the evidence is sufficiently consistent among studies to assume validity of the patterns that were reported.

Access to and use of pornographic materials has increased over the past few decades, as sexting has become almost a way of life among young people using smart phones and social media applications. These social media applications appear now to be the method-of-choice for grooming and sexual engagement. Moreover, sext materials are
not benign in their effects since the content usually meets the definition of pornography. Those experiencing the pornographic materials generate memory bundles that include the images, concepts, information, events, emotions, and effects that surround the sexual content and interchanges. These memory bundles reflect any distortions that may have been represented in the pornographic materials or experiences, yet they may compose much of the sexual learning of youth, especially among boys. Once these bundles are composed in memory, they determine much of thinking and learning about sexual matters and sexuality because they are automatically triggered into active memory in response to internal or external stimuli. While bundles are powerful influences over thinking and behaviour, both Kahneman (2011) and Kandel (2006) found that they can be modified or replaced through other experiences, including intervention programmes that are designed and implemented to manage bundles during implementation and teach the client to engage conscious thinking whenever it is appropriate.

An important purpose of HSB intervention is to develop competence, rather than merely stopping or preventing problematic behaviour of the type presented or development of skills in a narrow set. After the skills needed for competency are identified, practitioners can use the research about automatic and conscious thinking cited above to decide how to address them. We have introduced very briefly a model for intervention that meets those standards. By integrating recent findings in thinking, learning, decision-making and problem-solving into the standards for design and implementation of interventions, automatic thinking can be managed within and modified through the services. In professional intervention, automatic or conscious thinking should be a primary consideration of practitioners, recognising the importance of both language used and the intervention context.

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