

The Role of Emotional State, Sexual Arousal, and Alcohol Intoxication as
Situational Factors Associated with Adults' Online Sexual Contact with
Children and Adolescents.

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Ämne:	Psykologi	
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Arbetets titel:	The Role of Emotional State, Sexual Arousal, and Alcohol Intoxication as Situational Factors Associated with Adults' Online Sexual Contact with Children and Adolescents.	
Handledare:	Emilia Bergen	Patrick Jern
Abstract:	<p>In the present study we explored whether and how the situational factors; emotional states, sexual arousal, and alcohol intoxication influenced the propensity in adults to engage in online sexual contact with children (13 or younger) and adolescents (14 – 17 year olds). The results were compared to a group of adults that had engaged in online sexual contact with adults only (18 or older). We also looked at the variation over time within these situational factors during the online sexual contact with a child, an adolescent, or an adult. The present study was an online self-report survey to the adult populations in Finland, Sweden, and Germany, with a final sample ($N = 776$) of women and men who were active on the Internet. The participants were asked to report whether, how, and with whom they had engaged in online sexual contact. The results showed that more men than women reported online sexual contact with persons of all age groups, and that the situational factors; emotional states and sexual arousal influenced the propensity in both women and men to engage in online sexual contact with children and adolescents. However, the effects of alcohol intoxication were small and significant only for men. These results indicate that higher levels of emotional state and sexual arousal might increase the propensity to go against social norms and contact children and adolescents online for sexual purposes, but it can also imply that those who look for online sexual contact online with children and adolescents, are more emotionally and/or sexually aroused than the group that only seek adult company or that these are post-hoc explanations for such sexual activities.</p>	
Nyckelord:	Online sexual contact, online sexual solicitation, situational factors, emotional states, sexual arousal, alcohol intoxication,	
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Sammanfattning:	<p>Syftet med denna studie var att undersöka huruvida de situationella faktorerna: emotionella tillstånd, sexuell upphetsning samt alkoholpåverkan påverkar vuxnas benägenhet att kontakta barn (13 år och yngre) och ungdomar (14 – 17 år) på nätet i sexuella syften. Resultaten jämfördes med en grupp av vuxna som enbart hade haft sexuell nätkontakt med andra vuxna (18 år och äldre). Dessutom undersöktes variationen inom de olika situationella faktorerna under sexuella nätkontakter med barn, ungdomar och vuxna. Undersökningen genomfördes som ett online frågeformulär till de vuxna populationerna i Finland, Sverige och Tyskland. Det slutliga urvalet bestod av 776 kvinnor och män som var aktiva på nätet. Respondenterna ombads svara om, hur och med vem de hade haft sexuella nätkontakter. Resultaten visade att män hade mera sexuella nätkontakter med såväl barn, ungdomar som med vuxna i jämförelse med kvinnor. Ur resultaten framgick också att de situationella faktorerna, emotionella tillstånd samt sexuell upphetsning påverkade de vuxnas benägenhet att kontakta barn och ungdomar på nätet i sexuella syften. Effekten av alkoholpåverkan var liten och signifikant enbart för män. Dessa resultat tyder på att det krävs högre nivåer av emotionella tillstånd och sexuell upphetsning för att gå emot sociala normer och kontakta barn och ungdomar på nätet i sexuella syften, men det kan också betyda att de som söker sexuella nätkontakter med barn och ungdomar är mer emotionellt och/eller sexuellt upphetsade än de som söker sexuella kontakter enbart med vuxna eller att upphetsningen fungerar som post-hoc förklaringar till sådana sexuella aktiviteter.</p>	
Nyckelord:	Sexuella nätkontakter med barn och ungdomar, situationella faktorer, emotionella tillstånd, sexuell upphetsning, alkoholpåverkan	
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1 Introduction

In the present study we explored whether and how the situational factors; emotional states, sexual arousal and alcohol intoxication influenced the propensity in adults to engage in online sexual contact with children and adolescents. We also looked at the variation within situational factors during the online sexual contact with a child or an adolescent. The results were compared with participants having had online sexual contact with adults only. Participants in Finland, Sweden, and Germany were asked to report whether, how and with whom they had online sexual contact.

1.1 Online sexual contact

Online sexual activity has been defined broadly in the literature, encompassing any Internet activity involving sexuality (e.g. looking for partners, shopping for sexual products, chatting about sex, viewing pornography, seeking information about sex, and engaging in cybersex) (Cooper & Griffin-Shelley, 2002). In the present study, online sexual contact refers to any online sexual activity that is partnered (i.e. any sexual conversations or behaviors that involves online contact with another person). The purpose of online sexual contact can be immediate sexual pleasure, or as a means to meet potential offline sexual partners (Sevcikova & Danebäck, 2011). One problematic use of the Internet in the sexual domain is adult's solicitation of children and adolescents into sexual activities online and/or offline (Finkelhor, Mitchell, & Wolak, 2000; Briggs, Simon, & Simonsen, 2011).

1.2 The online environment and problematic sexual behavior

An increasing number of sexual offenders are using the Internet to meet potential victims (Wolak, Finkelhor, & Mitchell, 2009). The online community also serves as a supportive environment for people with similar interest validating the sexual interest and behavior of each other (Durkin, 1997).

Several studies have investigated problematic online sexual behavior, including adults contacting adolescents or children for sexual purposes (Durkin, 1997; Cooper, Delmonico, & Burg, 2000; Suler, 2004). *The online disinhibition effect*, a term

described by Suler (2004), and further elaborated on by Delmonico and Griffin-Shelley (2011), might serve as an explanation as to why people communicate and behave differently online compared to the offline setting. The Internet provides its users with a sense of anonymity and invisibility that allows people to step out of their comfort zone and to explore and experiment with their sexuality (Suler, 2004; Delmonico & Griffin-Shelley, 2011). Compared to acting offline, acting on the Internet reduces the number of normally available social cues of communicative value, such as to be seen or heard by the other and not to see or hear the other. This is suggested to further amplify the disinhibition effect. Secondly, the communication can be asynchronous, meaning one does not have to cope with the immediate response of the other and the consequences can be avoided simply by logging off (Suler, 2004; Delmonico & Griffin-Shelley, 2011). This theory suggests that the Internet allows for more risk taking, than the offline setting. The online environment also allows more imagination and a feeling of playing a game (Suler, 2004; Delmonico & Griffin-Shelley, 2011). In online communication it is possible to create imaginary characters and fantasize about how the other person looks, feels and acts, blurring the line between reality and fantasy. The final factor, minimization of status and authority, refers to the fact that typical socioeconomic hierarchies such as social status, wealth, race, gender or age are less visible online than offline (Suler, 2004).

1.3 Adults who seek online sexual contact with adolescents and children

The typical adult seeking online sexual contact with adolescents is a male in his twenties or thirties (Finkelhor et al., 2000; Wolak, Finkelhor, & Mitchell, 2004; Walsh & Wolak, 2005; Mitchell, Finkelhor, & Wolak, 2007; Briggs et al., 2011). Other common characteristics are having an education, and being employed, with no criminal background (Mitchell et al., 2005; Walsh & Wolak, 2005; Briggs et al., 2011). However, the number of young adult offenders (aged 18 – 25) who seek online sexual contacts with children and adolescents appears to be increasing (from 23% in year 2000 to 40% in 2006), according to research by Wolak and colleagues (2009). Mental health problems, like depression and substance abuse disorders have also been associated with online sexual offenders (Briggs et al., 2011). Some researchers have suggested that there may be an underestimation of the prevalence of women in this offender type (Pflugradt & Allen, 2010; Elliott & Ashfield, 2011).

Adults who engage in online sexual contact with children or adolescents may be motivated by a hebephilic or pedophilic interest, meaning a sexual interest in adolescents or children (Nunez, 2003; Wolak et al., 2008; Lanning, 2010). Santtila, Antfolk, Backström, Hartwig, Sariola, Sandnabba, and Mokros (submitted) found that 3.3% of an adult male sample reported having had sexual fantasies of below 16-year-olds, during the previous year. Only 0.2% of the men reported having had sexual fantasies of children below age 12 (Santtila et al., (submitted). Displays of primary pedophilic sexual interest (i.e. a continuous interest in prepubescent children) online are also more rare, possibly because young children are less accessible online (Wolak et al., 2004), yet incidents of adults who have located and contacted children, or whom they thought to be children, younger than 13 online for sexual purposes, are not unheard of (Wolak et al., 2004; 2008; Bergen, Antfolk, Jern, Alanko, & Santtila, submitted).

Hence not all adults who engage in online sexual contact with children and adolescents have a preferential sexual interest in children or adolescents. These adults may be motivated by factors in the immediate situation, such as availability, impulse and curiosity to explore a variety of sexual opportunities online (Lanning, 2010). Additional motives for adults who contact children and adolescents online, can be wanting to be admired, desire to exert power or control over someone, or a wish to relive their adolescence (Nunez, 2003). Fear of adult partners because of social- or dating anxiety (Putnam, 2000; Valkenburg & Peter, 2007), or embarrassment over a deviant sexual interest other than pedophilic or hebephilic (Lanning, 2010), have also been mentioned as further motivational factors.

The most common targets for adults seeking online sexual contact are female adolescents between 13 and 17 years of age (Mitchell, Finkelhor, & Wolak, 2001; Wolak et al., 2004; Baumgartner, Valkenburg, & Peter, 2010). Even though force or deception are not present in many of the offenses, relationships between adults and adolescents or children are characterized by unequal power, experience, maturity, and readiness for intimate relationships (Wolak, Finkelhor, Mitchell, & Ybarra, 2008). Therefore, since June 2011 there is a law in Finland against contacting children and adolescents for sexual purposes who are under the legal age of consent (RL, code

2011:540), which is 16 years (RL, code 1998:563). There is a similar law in Sweden (SFS, code 2009:343), where the legal age of consent is 15, and in Germany, where the legal age of consent is 14 (GCC, code 1998:176). Typically Internet-initiated sex crimes involve offenders who are at least 10 years older than their victims (Wolak et al., 2004).

1.4 The association between situational factors and sexual behaviors

In the present study, situational factors refer to the effect of the immediate offline situation that may affect online behavior, such as certain emotional states, being sexually aroused, or being intoxicated by alcohol. These factors are important to study for understanding the etiology of deviant sexual behavior, however they are factors that have been overlooked in most previous research (Imhoff & Schmidt, submitted). Situational factors affect sexual preference, meaning that sexual behavior cannot only be explained by an individual's long-term sexual preference (Ariely & Loewenstein, 2006) or personal characteristics (Abbey, Zawacki, Buck, Clinton, & McAuslan, 2004).

1.4.1 Emotional states

In the present study, emotional states are defined as conscious and brief target-specific affective reactions (Berkowitz, 2000) that motivate, energize, and direct behavior (Russell, 2003; Brehm, Miron, & Miller, 2009). Some studies provide information on the link between emotional states and the propensity of adults to engage in various types of sexual behavior.

According to Howells, Day, and Wright (2004) the relationship between negative emotional states, especially anger, and sexual arousal to sexually deviant stimuli has been well established in previous research. For example, Proulx, McKibbin, and Lusignan (1996) showed that negative emotions were associated with both deviant sexual fantasies and increased masturbation among rapists and heterosexual pedophiles. Negative emotional states affect sexual offending by the situational suppression of empathic responses (Pithers, 1999), and the undermining of the offender's capacity to control their behavior and the situation at hand (Howells et al.,

2004). Negative emotions also increase risk-taking (Quayle & Taylor, 2002) and facilitate acting out against others (Pithers, 1999).

It has been showed in previous studies, that online sexual activities have been used to escape from unpleasant realities and negative emotional states like stress, anxiety, guilt, and depression (Cooper, Putnam, Planchon, & Boies, 1999; Quayle & Taylor, 2002; Quayle, Vaughan, & Taylor, 2006), to an extent that can become addictive (Putnam, 2000). A strong correlation has also been found between sexual compulsivity, feeling distress, as well as sensation seeking, and time spent online for sexual pursuits (Cooper, Scherer, Boies, & Gordon, 1999). A daily Internet use of 5 hours and more, for other than work or study related activities, is commonly regarded as problematic and has been associated with problematic Internet use (Odaci & Kalkan, 2010). According to Gee, Ward, and Eccleston (2003) sexual fantasies can also be used to self-regulate emotional states by suppressing or alleviating dysphoric emotional states. In that way sex is used to resolve non-sexual problems (Quayle et al., 2006) and reinforced because of its effectiveness in reducing states of negative emotional arousal (Howells et al., 2004). It has also been suggested that the inability to regulate emotional states together with sexual desire and problems with sexual control, generate deviant sexual interest by creating deviant sexual fantasies and sexual pre-occupation (Ward & Beech, 2006). These studies could suggest that emotional states have a causal effect on the propensity to engage in various sexual behaviors, so that negative emotional states increase the likelihood of engaging in less socially expected behaviors, for example, through a disinhibition process. However, whether negative emotional states are the actual cause or rather post hoc explanations of sexual offenders remains unclear (Howells et al., 2004). According to Howells and colleagues (2004), it is also uncertain whether the sexual offending behavior is the result of negative emotions per se or whether it is the result of trying to control or regulate a negative emotional state.

Moreover, even though negative emotions have gained most scholarly attention in research on sexual offenders, some offenders have also been characterized with a lack of any emotion, or a presence of positive emotions, such as elation, at the time of the sexual offence (Howells et al., 2004). For example, Proulx and colleagues (1996) found a link between positive emotional states and deviant sexual fantasies for

homosexually oriented pedophiles, which might indicate a direct link between deviant sexual fantasies and sexual desires within this group of offenders. Sexual fantasies can also be used to elevate ambivalent emotional states, like boredom or lack of external stimulation, or to enhance pre-existing positive emotional state (Gee et al., 2003). These forms of emotional regulation have been found to precede sensation-seeking behavior (Gee et al., 2003). Sensation seeking has also been found to motivate the search for casual partners online (Peter & Valkenburg, 2007) and sexually explicit material online (Peter, Valkenburg, & Schouten, 2006).

Thus, although an association between emotional states and the propensity to engage in sexual behavior has been suggested in the literature, the support for a causal role the emotional state is not compelling.

1.4.2 Sexual arousal

According to Ariely and Loewenstein (2006) who studied the effect of sexual arousal on judgment and hypothetical decisions made by male college students, sexual arousal increases predicted enjoyment for a variety of sexual activities. When the participants were sexually aroused, different sexual activities, like having sex with a 50-year-old, anal sex, tying up one's partner and finding a 12-year-old attractive, were perceived to be more sexually appealing than if not aroused (Ariely & Loewenstein, 2006). These results were replicated by Imhoff and Schmidt (submitted), with an important addition, finding similar effects of sexual arousal in women. Ariely and Loewenstein (2006) also showed that subjects were unable to predict the effects of arousal on their own judgment and decision-making and according to Quayle and Taylor (2003), some child sexual offenders have reported that they never thought they would have found child or adolescent pornography sexually arousing. In a qualitative study of Quayle and Taylor (2002) on men who had downloaded child pornography, they found that some thought the pornographic material was distasteful after masturbating. Borg and de Jong (2012) reported similar results. Women perceived sexual stimuli significantly less disgusting when sexually aroused compared to women who were non-aroused or positively aroused emotionally, but not sexually. These findings could indicate, that persons who are sexually aroused would find online sexual contact with children and adolescents more appealing than if they were not aroused.

Previous researchers have also found support for sexual arousal to decrease risk perception, such as Blanton and Gerrard (1997), who found that viewing photographs high in sex appeal reduced risk perception for contracting sexually transmitted diseases. In the study by Ariely and Loewenstein (2006), respondents also reported increased willingness to engage in unsafe sex when sexually aroused. As Carnes found (2001), the danger and excitement of seducing adolescents and children can also be found sexually arousing. Ariely and Loewenstein (2006) also found that sexual arousal decreases the relative importance of other considerations, such as ethical aspects of behavior. According to Barbaree and Marshall (1991), who studied sexual arousal in relation to rape, sexual arousal usually affects either the response control of the perpetrator (i.e. inability to inhibit arousal to stimuli depicting sexual violence), or the way the stimulus that evokes the sexual arousal is perceived (i.e. sexual arousal is increased by stimuli depicting sexual violence). Additional reasons for looking for online sexual contact with adolescents and children can be poor impulse control or having an insatiable sexual appetite (Young, 2001). Sexual arousal combined with the anonymity of the Internet further fosters impulsive behavior and the lack of inhibition of acting on inappropriate sexual urges, like downloading child pornography (Quayle & Taylor, 2003; Cooper, Delmonico, Griffin-Shelley, & Mathy, 2004; Wolak et al., 2008). Based on these previous findings, we expect that sexual arousal increases the possibility of contacting children and adolescents online, by decreasing risk perception, or so that the risk involved in contacting minors actually facilitates sexual arousal, or by decreasing the inhibition of more appropriate responses.

As mentioned before, online sexual activities can be addictive when they are used to regulate emotional states. Some authors have also suggested, that online sexual activities can be addictive, as it is so easy to seek more and more shocking and exciting material online developing a need for increasingly stronger stimuli (Wolak, et al., 2008; Niveau, 2010). Such extreme sexual online behavior can with time become passively accepted and lead to even more extreme acts (Elliott & Ashfield, 2011).

Because online sexual activities often involve masturbation, they are likely to be reinforced by sexual pleasure (Quayle & Taylor, 2002), which is inherently linked to

sexual arousal. Thus, while sexual arousal may precede a sexual behavior and thus have a causal role, the association between arousal and behavior may become more complexly linked during the behavior. Therefore, measuring arousal only before an actual behavior has taken place may be insufficient for understanding the interaction between arousal and behavior over the time the behavior occurs.

1.4.3 Alcohol intoxication

Much like arousal, alcohol too has several implications for sexual behavior and decision-making. What has been referred to as *Alcohol myopia* (Steele & Josephs, 1990), describes an impairment of perception and thought and a state of shortsightedness in information processing where immediate gratification has a disproportionate influence on behaviors and emotions. According to the authors, alcohol reduces the ability to perceive the full range of available cues in a situation and restricts the attention to the most salient cue. Particularly less salient cues that encourage the suppression of potentially undesirable behavior, such as considering possible negative outcomes and more appropriate responses, are easily overlooked when intoxicated. If alcohol is combined with a distracting activity it can also relieve psychological stresses like anxiety and depression by taking one's mind of what causes the stress (Steele & Josephs, 1990).

There is also research supporting the additive effect of arousal and intoxication on decreased capacity to read cues, for example misperceiving negative or neutral cues as sexually encouraging (McFall, 1990; Wilson, Calhoun, & McNair, 2002) as well as on sexual risk taking (MacDonald, MacDonald, Zanna, & Fong, 2000, Conner, Sutherland, Kennedy, Gready, & Berry, 2008). According to the theory by Steele and Josephs (1990), someone who is both alcohol-intoxicated and sexually aroused is likely to focus his attention on positive and encouraging sexual arousal cues over negative ones. Further, alcohol impairs the ability to inhibit arousal (George & Stoner, 2000). Alcohol myopia has implications for pedophilic behavior as well. According to Nunez (2003), sexual behavior towards children has been explained by a lack of inhibition and a lack of concern for conventional social restraints, which is often impacted by alcohol and drugs. Further, Nunez (2003) stated that lack of inhibition in

sexual behavior towards children could be caused by sexual addiction, which is also exacerbated by alcohol.

Alcohol expectancies also affect sexual decision-making (Wilson, et al., 2002), making individuals think that alcohol will increase sexual pleasure (McFall, 1990). Further, alcohol affects socially undesirable behavior by providing a viable excuse for it (Abbey et al., 2004; George & Stoner, 2000). For example, Briddell, Rimm, Caddy, Krawitz, Sholis, and Wunderlin (1978) found that the pharmacological effects of alcohol were smaller than the subject's expectations of the intoxication level when measuring sexual arousal to cues of a subject using force to achieve sexual intercourse against the victim's will in men. Subjects who thought they had consumed alcohol, when in fact they had not, showed greater sexual arousal to such cues than subjects who thought they had not consumed any alcohol. The actual alcohol level did not significantly affect levels of sexual arousal (Briddell et al., 1978).

Following the disinhibition effect theory, that suggest that an increased propensity to engage in otherwise inhibited sexual behaviors is caused by alcohol and the effect of alcohol expectancies, we expect that alcohol intoxication increase the proclivity of adult's to engage in online sexual contact with adolescents and children. As Abbey and colleagues (2004) point out however, it is important to remember that even though there is a lot of research on the association between alcohol and sexual offending, it does not demonstrate the causal relationship between these factors. However, one necessary condition for a causal role is that the onset of the intoxicated state precedes the sexual behavior.

1.5 Limitations of previous studies

As presented above, online sexual contact between adults as well as between adults and minors has over the past decade received increased public, academic, and law enforcement attention. In contrast to sex research in general that has largely focused on men (e.g. MacDonald, et al., 2000; Cooper et al., 2000; Ariely & Loewenstein, 2006; Farris, Viken, & Treat, 2010), in the present study we aimed to investigate both men and women. Compared to previous studies that have mostly used offender samples (e.g. Bates & Metcalf, 2007; Sandler & Freeman, 2007; Briggs, et al., 2011),

we aimed to study an unselected sample that, while not necessarily representative of the population, was not biased by containing detected offenders only. To only use detected offenders is problematic, as experimental research has shown that online sexual offenders that are convicted by proactive law enforcement portraying themselves as adolescents are found to be different on several individual factors compared to those that have been convicted for online sexual contact with an actual adolescent (Mitchell, Wolak, & Finkelhor, 2005). Much of the previous research has also focused on the victims, mainly adolescents, of online sexual solicitation (Finkelhor et al., 2000; Ybarra, Mitchell, Finkelhor, & Wolak, 2007). Further, situational factors associated with online sexual contact with adolescents and children have rarely been the focus of research and especially not the variation in the situational factors over time, rather the focus has been on the adult's stable individual traits (Valkenburg & Peter, 2007) and socio-demographic background features (Wolak, et al., 2004).

1.6 Aims of the present study

The aim of this study was to explore whether and how the situational factors emotional states, sexual arousal and alcohol intoxication influenced the propensity to engage in online sexual contact with children and adolescents. We also looked at the variation in the situational factors before, during, and after the online interaction with a specific child or adolescent. We wanted to investigate, whether adults (both men and women) who reported online sexual contact with children and adolescents, would also report having been more affected by the situational factors, emotional state, sexual arousal, and alcohol intoxication, compared to those reporting online sexual contact with adults only.

2 Method

2.1 Participants

The analyses were based on the responses of 776 participants between 18 and 72 years of age, of whom 323 were women ($M = 27.45$ years, $SD = 8.98$) and 453 men ($M = 29.40$ years, $SD = 10.42$). The age difference between women and men was significant, ($t[774] = 2.72, p < .01$). The inclusion criteria were for the participant to be at least 18 years of age, to have completed the survey items of relevance for the present study, and to have reported online sexual contact with at least one person. Participants who reported an age over 90 were excluded from the sample. Based on these criteria 3604 individuals out of the 4380 who started the survey were excluded from further analyses (completion rate 51.3%).

2.2 Study design and sampling procedure

The first step to design the survey was to conduct a pilot study, for which 10 persons were asked to pilot the survey. In addition, two self-identified pedophiles, who were enrolled in a voluntary treatment program piloted the survey, and gave suggestions for improvement. The survey was revised accordingly.

The online survey program used in the current study was provided free of charge by soscisurvey.de. The survey was translated from English to Swedish and Finnish by professional translators. Back-translations to English were made by a person with no affiliation to the present research project.

The current study was conducted as part of a research project which aims at studying the prevalence and etiology of pedophilic interest, the frequency, background, and prevention possibilities of child sexual abuse and the consequences for victims of sexual abuse (Osterheider et al., 2011). The study was approved by the ethical review boards at Regensburg University and Åbo Akademi University.

The survey was distributed online in Finland, Sweden, and Germany, from July to October 2012. Participants were recruited via e-mailing lists for students of universities and vocational schools and via Facebook. The link to the survey was also

repeatedly posted on several Finnish, Swedish and German online social forums. In Germany, the link was also posted on two online forums providing information and support for persons with a pedophilic sexual interest. Different links were used for the different sampling frames and Table 1 shows the number of participants per country and sampling frame. As an incentive for participating, all participants that had completed the survey had the chance to win a voucher for Amazon.com equaling 20€

Table 1

Sources of Participants (N = 776)

	Finland	Sweden	Germany	Total
Facebook and E-mail ^a	17		115	132
Online social forums and chats ^b	15	24	259	298
Online addiction forums ^c	7	1	-	8
Online pedophile forums ^d	-	-	183	183
Universities and vocational schools	134	3	-	135
Addiction patients and controls ^e	-	-	18	18
Total	173	28	575	6

Notes.

^a Based on a convenience sample through snowballing by researchers. Respondents from Finland and Sweden could not be separated for this method.

^b Includes different types of forums, such as hobbies, life style, medical, and dating.

^c Help forums for persons with addictions such as drug abuse, sexual addictions, and online addictions.

^d Help forum for persons with a pedophilic sexual interest.

^e Includes a German clinical group of out-patients with an alcohol-, drug-, or medicine-addiction diagnosis and a group of non-diagnosed controls.

2.3 Instrument

2.3.1 Groups based on the age of the person(s) that the participants had engaged in online sexual contact with

Three groups were formed based on the age of the person(s) that the participants had engaged in online sexual contact with (children = 13 years or younger, adolescents = 14-17 year olds, and/or adults = 18 years or older).

- 1) *Contact with at least one child*: Participants that reported having engaged in online sexual contact with at least one child. Participants were asked to have in mind the youngest child with whom they had the longest contact. If the participant reported contact with a child independent of whether they had contact with adults or adolescents they automatically belonged exclusively to this group.
- 2) *Contact with at least one adolescent*: Participants that reported having engaged in online sexual contact with at least one adolescent. Participants were asked to have in mind the youngest adolescent with whom they had the longest contact. Some of these participants also had online contact with adults but were not included in that group.
- 3) *Contact with adults only*: Participants that reported having engaged in online sexual contact with one or more adults, but not with children and adolescents. These participants were asked to reply to the questions according to the adult with whom they had had the longest contact.

2.3.2 Situational factors affecting the propensity to look for online sexual contact

The survey contained items asking participants to report whether emotional states, sexual arousal or alcohol intoxication had anteceded online sexual contact. The question was formulated as: *During the last year, have you looked for someone online to have sex with, or someone to talk about sex with when you have been; relaxed, sexually aroused, bored, stressed, curios, looking for excitement, or intoxicated by alcohol.* All items ranged from 1 to 3 (1 = never, 2 = sometimes, 3 = often).

2.3.3 Variation in situational factors during online sexual contact

Participants were asked to what degree the following states usually corresponded to the situation before, during, and after they had engaged in contact with the specific person that participants were asked to have in mind when answering. The specific person referred to was the youngest person, or the person that the participant had engaged in the longest contact with. The states were: sadness, boredom, stress, relaxation, emptiness, shame, being sexually aroused, and being intoxicated by alcohol. The question was formulated as: *Please indicate to what degree the following statements most OFTEN applied to the situation when you were in contact with that*

specific person. All items ranged from 1 to 4 (1 = does not apply at all, 2 = applies somewhat, 3 = applies fairly well, 4 = applies very well).

2.4 Statistical analyses

The statistical analyses were conducted with a 3 x 2 design, the three groups based on the age of the participants' online sexual contacts and the gender of the participant.

First we looked at how the groups differed on the descriptive variables by conducting one-way ANOVAs for each variable separately (see Table 2.) To investigate the motivational situation prior to initiating the online sexual contact we conducted correlational analysis on emotional states, level of sexual arousal and alcohol intoxication (see Table 3.) We also looked at how the motivational situation differed between the three groups by conducting univariate analyses of variance on each of the emotional states, level of sexual arousal and alcohol intoxication, when looking for online sexual contact (see Table 4.) To explore the differences between groups in the variation on emotional states, level of sexual arousal and level of alcohol intoxication, before, during, and after the actual contact, we conducted repeated-measures-ANOVAs for each state separately (see Figures 1 and 2). We looked at the main effect of group belonging and the main effect of time (i.e. before, during, and after) as well as the interaction effect of group and time. SPSS 21.0 for Windows was used for all the statistical analyses.

3 Results

All the results will be presented separately for women and men, and separately for the following groups of participants: Those who had engaged in online sexual contact with) at least one child aged 13 or younger, 2) at least one adolescent aged 14 – 17 years, and 3) adults of age 18 or older only.

3.1 Descriptive statistics

Table 2 presents descriptive statistics for each of three aforementioned groups.

Table 2

Descriptive Statistics for the Groups Based on the Age of the Person(s) that the Participants had engaged in Online Sexual Contact with

Contact with:	Women (<i>n</i> = 323)									F/ χ^2
	at least one child (<i>n</i> = 5)			at least one adolescent (<i>n</i> = 33)			adults only (<i>n</i> = 285)			
	<i>M</i>	<i>SD</i>	%	<i>M</i>	<i>SD</i>	%	<i>M</i>	<i>SD</i>	%	
Age	24.00	6.93		24.76	7.88		27.82	9.08		2.11
Time spent online/day	3.60	1.14		3.97	1.43		3.73	1.51		.37
University exam			25.0			29.6			34.0	1.30
Working/Studying			0/80.0			29.6/63.0			35.6/54.2	3.56
Single			60.0			36.4			42.8	4.37
Sexual interest										4.22
Heterosexual			40.0			53.3			65.9	
Homosexual			20.0			6.7			5.7	
Bisexual			40.0			40.0			28.4	
Contact with:	Men (<i>n</i> = 453)									F/ χ^2
	at least one child (<i>n</i> = 24)			at least one adolescent (<i>n</i> = 74)			adults only (<i>n</i> = 355)			
	<i>M</i>	<i>SD</i>	%	<i>M</i>	<i>SD</i>	%	<i>M</i>	<i>SD</i>	%	
Age	29.38 ^b	10.29		24.49 ^a	6.66		30.43 ^b	10.79		10.37***
Time spent online/day	4.23	1.54		4.56 ^a	1.42		3.83 ^b	1.57		7.16**
University exam			22.2			25.5			36.0	8.79
Working/Studying			33.3/38.9			44.6/42.9			42.7/40.1	2.42
Single			70.8			62.2			60.3	9.22
Sexual interest										5.73
Heterosexual			47.6			70.0			70.9	
Homosexual			33.3			15.0			16.5	
Bisexual			19.0			15.0			12.6	

Note. ^{a,b,c} means with different subscripts differ significantly from each other. Time spent online refers to non-work or -study related time, measured on a scale from 1-6 (1 = < 1h, 2 = 1-2h, 3 = 2-3h, 4 = 3-4h, 5 = 4-5h, 6 = > 5h). University exam includes those who reported university exam or vocational school as highest level of education. Working/Studying: Working includes those who reported being employed with salary and self-employed. Those who are neither working or studying reported being unemployed, at home, retired or incapable of working. * $p < .05$, ** $p < .01$, *** $p < .001$.

3.1.1 Initiating online sexual contact

As Table 3 shows, the majority of respondents in all three groups reported that it was the other person who had initiated the contact, except in the case of men who had engaged in online sexual contact with adults only. Overall, women were not very active in initiating sexual contact online.

Table 3

The Percentage of Respondents who Initiated the Contact with a Specific Person

	Contact with at least one child	Contact with at least one adolescent	Contact with adults only
Women	25.0	14.8	27.7
Men	47.6	41.0	52.0

Note. None of the differences between groups were significant. Pearson Chi-Square χ^2 for women was 2.08(2), $p = .35$ and for men 2.52(2), $p = .28$.

3.2 Correlations between different situational factors affecting the propensity to look for online sexual contact

Correlations between the different situational factors: emotional states, level of sexual arousal and alcohol intoxication, prior to initiating the online sexual contact are presented in Table 4. The correlation analyses were conducted on the total sample, not differentiating between the age groups of the person they had engaged in contact with.

Table 3

Bivariate Correlations between Situational Factors Affecting the Propensity to Look for Online Sexual Contact for Men (above the Diagonal, $n = 453$), and Women (below the Diagonal, $n = 323$)

Variables	1	2	3	4	5	6	7
1. Relaxed	-	.61***	.54***	.41***	.65***	.64***	.29***
2. Sexually aroused	.59***	-	.60***	.42***	.67***	.80***	.37***
3. Bored	.54***	.48***	-	.49***	.66***	.63***	.41***
4. Stressed	.43***	.40***	.48***	-	.49***	.45***	.25***
5. Curious	.65***	.63***	.64***	.38***	-	.71***	.30***
6. Looking for excitement	.52***	.75***	.51***	.33***	.69***	-	.36***
7. Being intoxicated	.32***	.39***	.32***	.29***	.30***	.37***	-

Note. *** $p < .001$

The reported situational factors correlated highly. Highest correlations were found for sexual arousal and looking for excitement for both genders, followed by looking for excitement and curiosity. Being alcohol intoxicated correlated the least with the other situational factors.

3.3 Situational factors affecting the propensity to look for online sexual contact

The results for how often respondents were in a relaxed, sexually aroused, bored, stressed, curious, looking for excitement, and intoxicated by alcohol when looking for online sexual contact are shown in Table 5.

Table 5

Situational Factors Affecting the Propensity to Look for Online Sexual Contact

	Women (<i>n</i> = 323)							
	Contact with at least one child (<i>n</i> = 5)		Contact with at least one adolescent (<i>n</i> = 33)		Contact with adults only (<i>n</i> = 285)		<i>F</i>	partial η^2
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>		
Relaxed	2.00	.71	1.57	.68	1.50	.67	1.49	.01
Sexually aroused	2.60 ^a	.55	1.73 ^b	.94	1.59 ^b	.68	5.39**	.04
Bored	2.60 ^a	.55	1.80 ^b	.81	1.55 ^b	.67	7.36**	.05
Stressed	2.00 ^a	.71	1.30 ^b	.54	1.19 ^b	.44	8.15***	.05
Curious	2.60 ^a	.55	1.80 ^b	.86	1.70 ^b	.73	4.00*	.03
Looked for excitement	2.40 ^a	.55	1.70 ^b	.92	1.56 ^b	.69	3.75*	.03
Intoxicated	1.60 ^a	.55	1.53 ^a	.73	1.22 ^b	.47	6.18**	.04
	Men (<i>n</i> = 453)							
	Contact with at least one child (<i>n</i> = 24)		Contact with at least one adolescent (<i>n</i> = 74)		Contact with adults only (<i>n</i> = 355)		<i>F</i>	partial η^2
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>		
Relaxed	1.95	.70	1.79	.72	1.78	.69	0.54	.00
Sexually aroused	2.24	.83	2.11	.74	2.01	.73	1.33	.01
Bored	2.00	.86	1.78	.70	1.79	.69	0.85	.00
Stressed	1.65 ^a	.81	1.24 ^b	.53	1.34 ^b	.59	3.56*	.02
Curious	2.20	.83	2.00	.65	1.92	.72	1.71	.01
Looked for excitement	2.29 ^a	.90	2.11	.74	1.90 ^b	.74	4.17*	.02
Intoxicated	1.60	.88	1.38	.63	1.42	.65	0.86	.01

Note. All emotional states were measured on a scale from 1 – 3. Higher values indicate higher emotional level (based on response options: 1 = never, 2 = sometimes, 3 = often). Duncan post-hoc tests: ^{a,b} means with different subscripts differ significantly from each other.

* $p < .05$, ** $p < .01$, *** $p < .001$.

3.4 Variation in situational factors during online sexual contact

The results of the repeated-measures-ANOVAs for each of the emotional states, sexual arousal and alcohol intoxication are depicted in Figures 1 through x for men and women separately. The three groups were compared with each other and the main effects of group belonging and time (before, during, and after the contact), as well as the effect of the interaction between group belonging and time are reported.

3.4.1 Variation in level of emotional states during online sexual contact

The results for each of the emotional states, feeling sad, bored, stressed, relaxed, empty and ashamed, are depicted in Figure 1 for women and Figure 2 for men. The figures show the self-reported emotional states before, during, and after the contact.

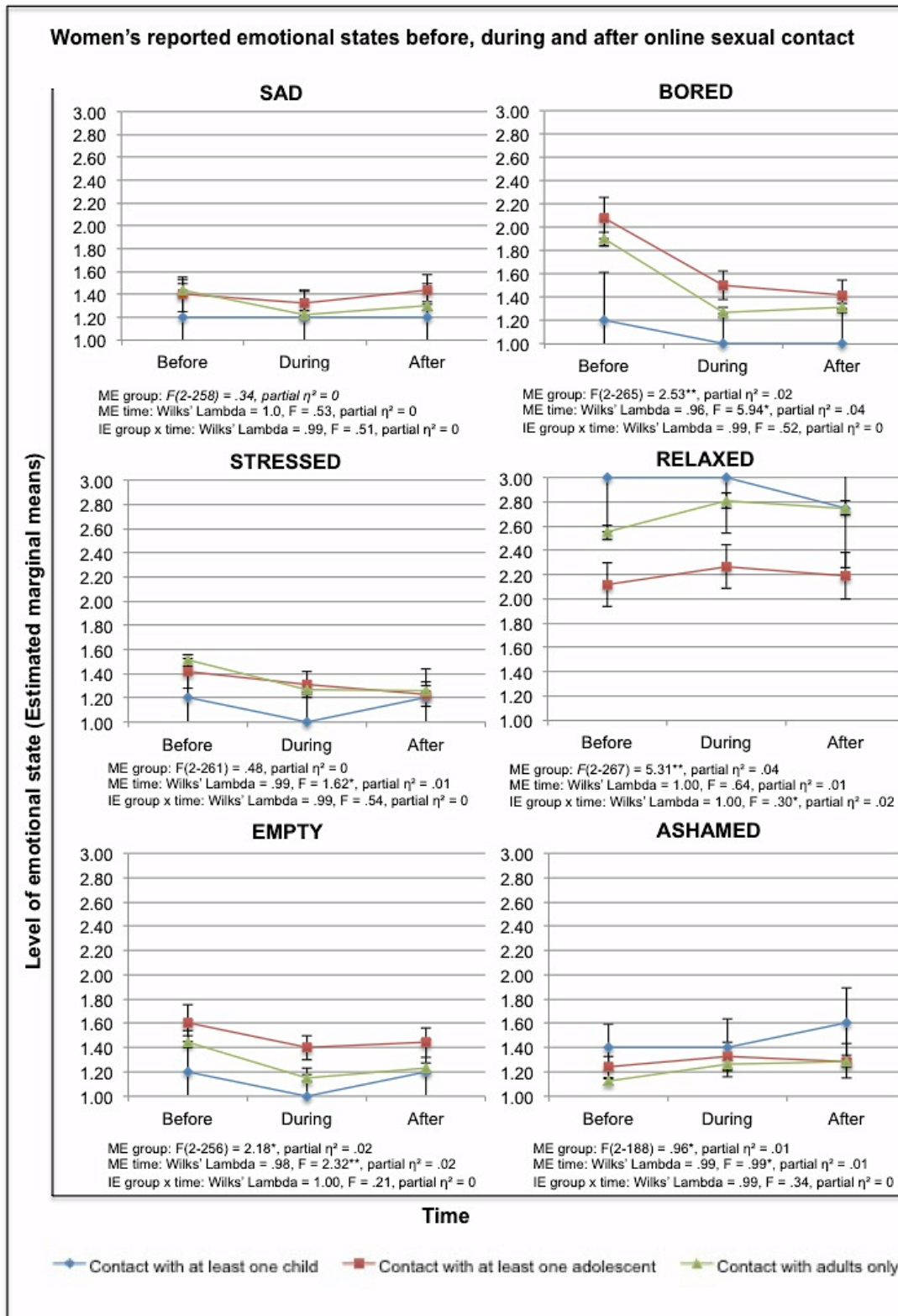


Figure 1. Variation in reported level of emotional states in women before, during, and after online sexual contact. Online contacts are operationalized as referring to the youngest person and the longest duration of online contact.

Notes. The emotional level is measured on a scale from 1 – 4 (1 = does not apply at all, 2 = applies somewhat, 3 = applies fairly well, 4 = applies very well). ME group = main effect of group, ME time = main effect of time, IE group x time = Interaction effect of group and time. * $p < .05$, ** $p < .01$, *** $p < .001$.

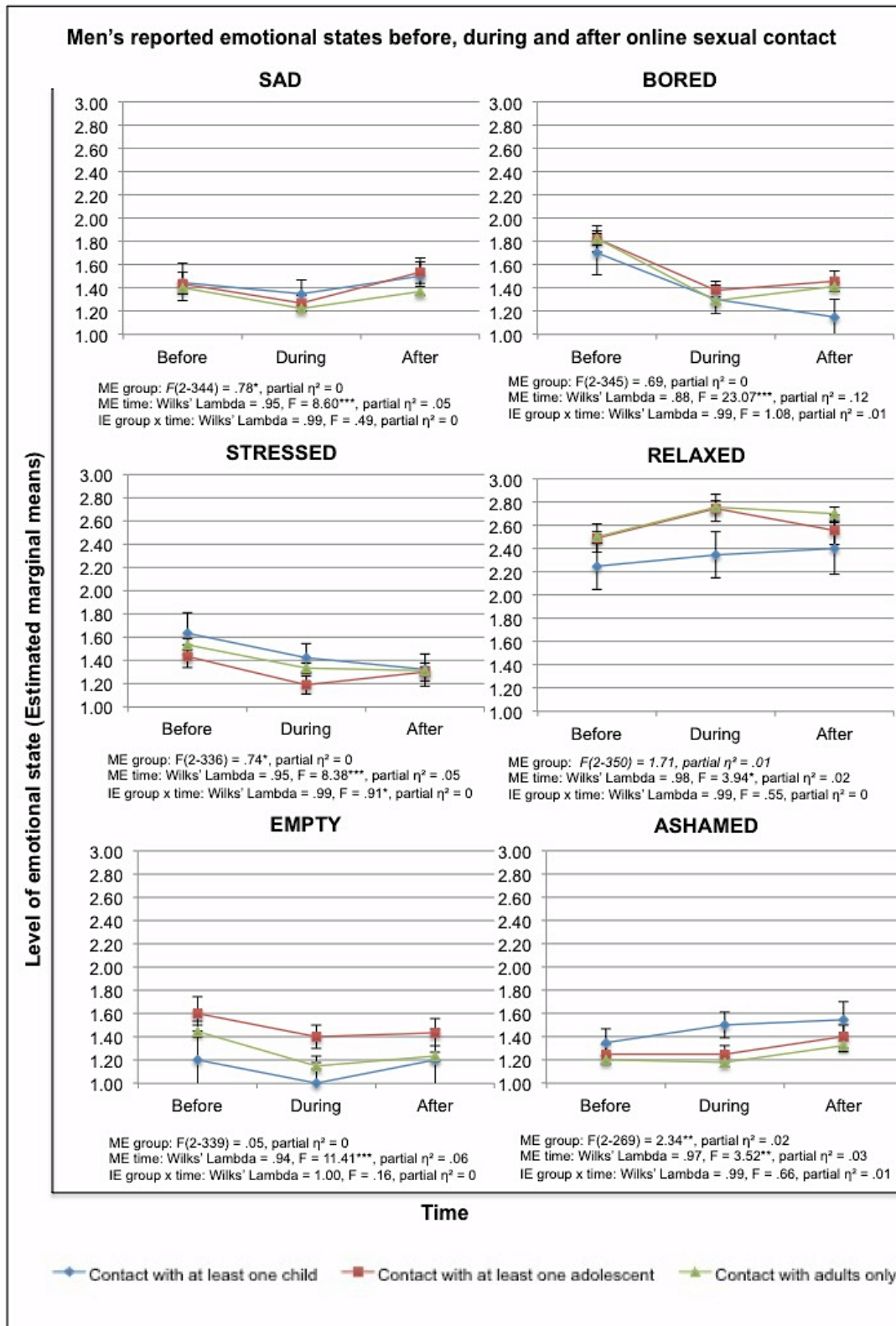


Figure 2. Variation in reported level of emotional states in men before, during, and after online sexual contact. Online contacts are operationalized as referring to the youngest person and the longest duration of online contact.

Notes. The emotional level is measured on a scale from 1 – 4 (1 = does not apply at all, 2 = applies somewhat, 3 = applies fairly well, 4 = applies very well). ME group = main effect of group, ME time = main effect of time, IE group x time = Interaction effect of group and time. * $p < .05$, ** $p < .01$, *** $p < .001$.

3.4.2 Variation in level of sexual arousal during online sexual contact

The variation in the level of self-reported sexual arousal before, during, and after the contact are depicted in Figure 3 for women and Figure 4 for men.

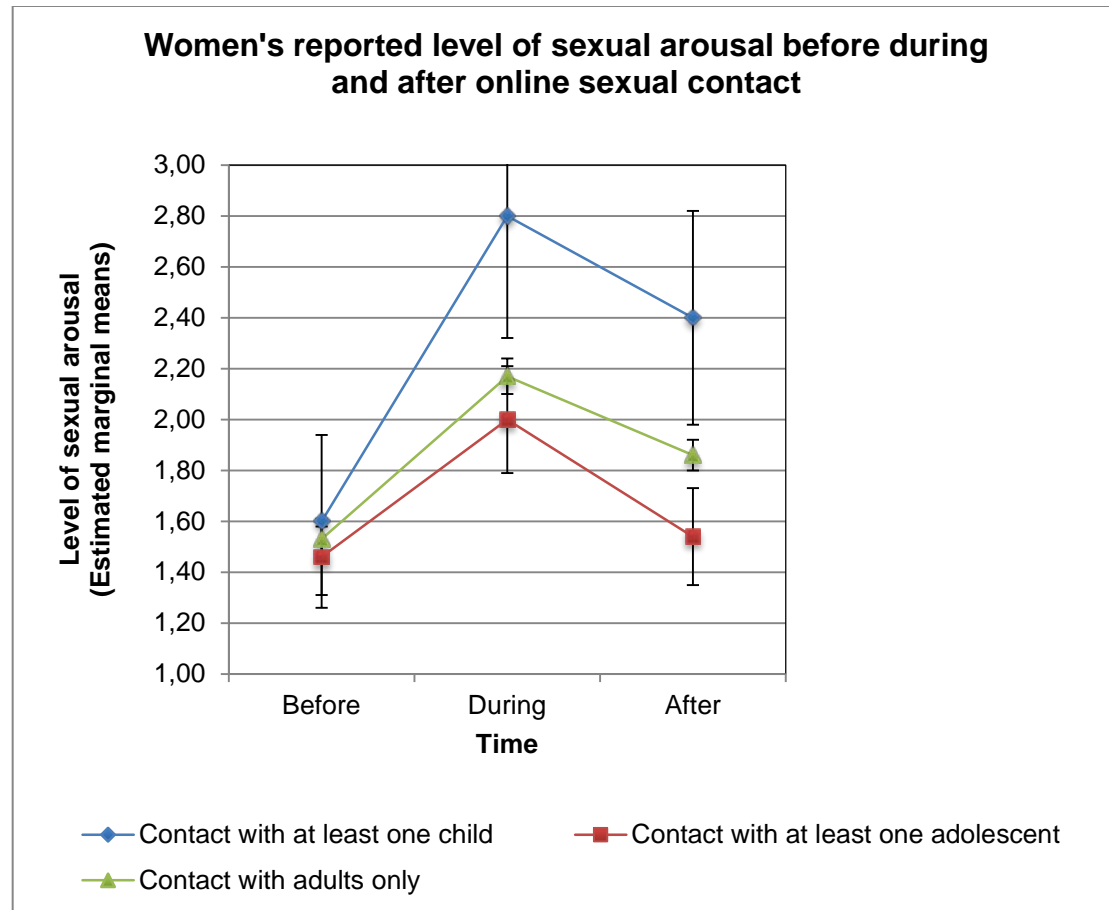


Figure 3. Variation in reported level of sexual arousal in women before, during, and after online sexual contact. Online contacts are operationalized as referring to the youngest person and the longest duration of online contact.

Notes. The level of sexual arousal is measured on a scale from 1 – 4 (1= does not apply at all, 2 = applies somewhat, 3 = applies fairly well, 4 = applies very well).

Main effect of group: $F(2-270) = 1.29$, $partial \eta^2 = .01$

Main effect of time: Wilks' Lambda = .87, $F = 19.59^{***}$, $partial \eta^2 = .13$

Interaction effect of group x time: Wilks' Lambda = .98, $F = 1.35$, $partial \eta^2 = .01$

* $p < .05$, ** $p < .01$, *** $p < .001$.

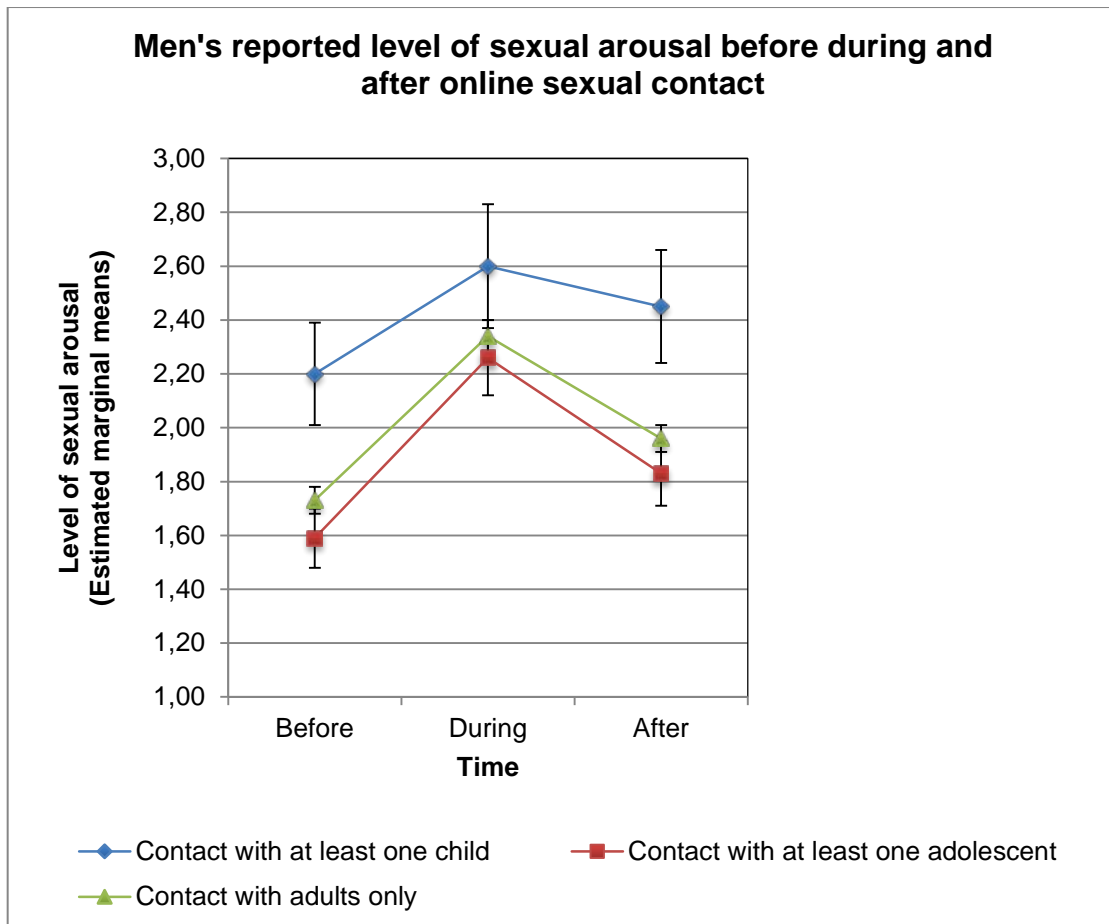


Figure 4. Variation in reported level of sexual arousal in men before, during, and after online sexual contact. Online contacts are operationalized as referring to the youngest person and the longest duration of online contact.

Notes. The level of sexual arousal is measured on a scale from 1 – 4 (1= does not apply at all, 2 = applies somewhat, 3 = applies fairly well, 4 = applies very well).

Main effect of group: $F(2-361) = 3.09^*$, $partial \eta^2 = .02$

Main effect of time: Wilks' Lambda = .84, $F = 34.97^{***}$, $partial \eta^2 = .16$

Interaction effect of group x time: Wilks' Lambda = .99, $F = .68$, $partial \eta^2 = 0$

* $p < .05$, ** $p < .01$, *** $p < .001$.

3.4.2 Variation in level of alcohol intoxication during online sexual contact

The variation in the level of self-reported alcohol intoxication before, during and after the contact for each of the groups are presented in Figures 5 for women and Figure 6 for men.

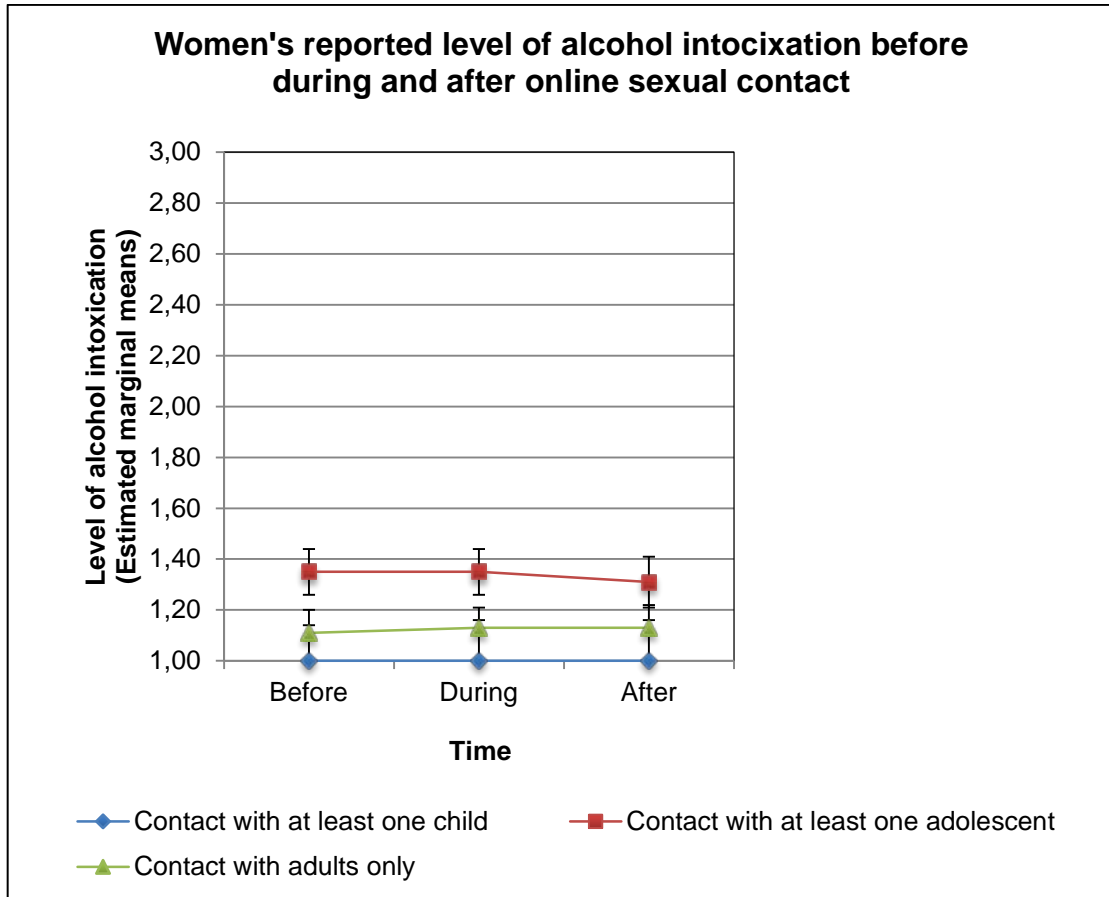


Figure 5. Variation in reported level of alcohol intoxication in women before, during, and after online sexual contact. Online contacts are operationalized as referring to the youngest person and the longest duration of online contact.

Notes. The level of alcohol intoxication is measured on a scale from 1 – 4 (1= does not apply at all, 2 = applies somewhat, 3 = applies fairly well, 4 = applies very well).

Main effect of group: $F(2-267) = 3.00$, $partial \eta^2 = .02$

Main effect of time: Wilks' Lambda = .99, $F = .08$, $partial \eta^2 = 0$

Interaction effect of group x time: Wilks' Lambda = .99, $F = .15$, $partial \eta^2 = 0$

* $p < .05$, ** $p < .01$, *** $p < .001$.

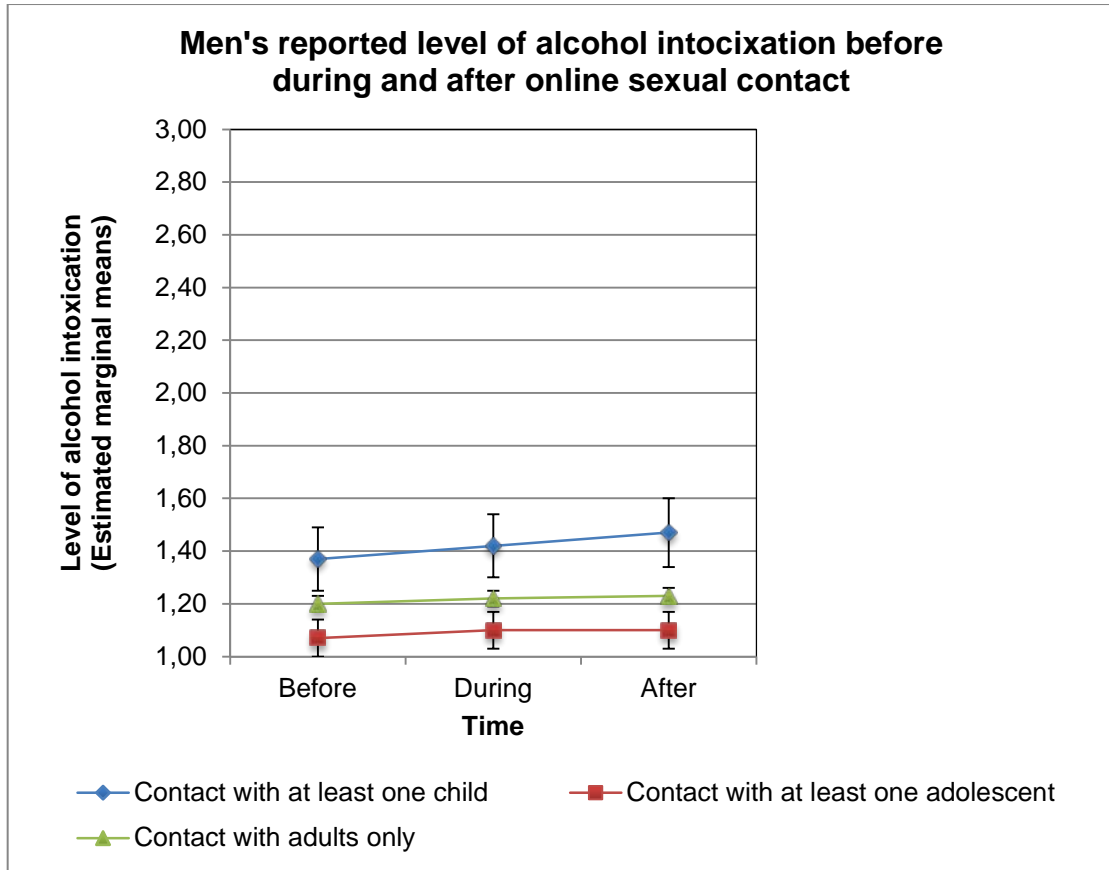


Figure 6. Variation in reported level of alcohol intoxication in men before, during, and after online sexual contact. Online contacts are operationalized as referring to the youngest person and the longest duration of online contact.

Notes. The level of alcohol intoxication is measured on a scale from 1 – 4 (1= does not apply at all, 2 = applies somewhat, 3 = applies fairly well, 4 = applies very well).

Main effect of group: $F(2-353) = 3.24^*$, $partial \eta^2 = .02$

Main effect of time: Wilks' Lambda = .99, $F = .08$, $partial \eta^2 = .01$

Interaction effect of group x time: Wilks' Lambda = .99, $F = .24$, $partial \eta^2 = 0$

* $p < .05$, ** $p < .01$, *** $p < .001$.

4 Discussion

The aim of the present study was to explore whether and how the situational factors; emotional states, sexual arousal, and alcohol intoxication influenced the propensity to engage in online sexual contact with children (13 or younger) and adolescents (14 – 17 year olds). Further, we also investigated the variation in the situational factors before, during, and after online sexual contacts with a child or an adolescent. The results were compared with one group having engaged in online sexual contact with adults only (18 or older). The value of the present study lies in its descriptive and exploratory nature. The method of asking the adult population to self-report experiences of having engaged in online sexual contact with children and adolescents, have not to our knowledge been conducted prior to this. Neither, as we know of, have participants in previous studies been asked to self-report the variation in the situational factors over time (before, during, and after) when having engaged in online sexual contact.

The results from the present study showed that both men and women who had engaged in online sexual contact with children and adolescents reported having been more affected by the situational factors; emotional states and sexual arousal, compared to those having engaged in online sexual contact with adults only. The effect of alcohol intoxication was low and significant only for men.

4.1 Demographics

The results show that the demographic profile of the individuals that had engaged in online sexual contact with children and adolescents was similar to the profiles having been established by previous research (Finkelhor et al., 2000; Walsh & Wolak, 2005; Mitchell et al., 2007; Briggs et al., 2011). More men than women had engaged in online sexual contact with children and adolescents. In total 38 women (11.8%) and 98 men (21.6%) reported having engaged in online sexual contact with either at least one child or at least one adolescent. The group of women that had engaged in online sexual contact with at least one child consisted of only 5 individuals, thus making statistical interpretations challenging.

The majority of participants in all groups were either working or studying. The mean ages for the different groups were between 24 and 30, but the age differences between groups were significant only for men. The group of men that had engaged in online sexual contact with at least one adolescent had the lowest mean age, under 25, which differed significantly from the groups of men that had engaged in online sexual contact with at least one child, and with adults only (see Table 2). As the group of both women and men that had engaged in online sexual contact with at least one adolescent had the lowest mean age of under 25 years, it supports the notion that the amount of young adults who seek online sexual contact with adolescents have increased (Wolak et al., 2009). However, the young mean age can be due to a bias in the sample consisting of a large number of students and other young individuals who are active on the Internet. It also means that for many in this group, the age difference to their adolescent online contact was between 1 and 10 years, making some of these online contacts legitimate.

The majority of men, but not women, reported to be single. Among all groups of men and women the majority reported having a heterosexual interest. However, it is notable that among the group of women having engaged in online sexual contact with at least one adolescent, 40% reported a bisexual interest. It is, however, common for online studies on sexuality (Ross, Tikkanen & Månsson, 2000), to have a proportionally higher number of participants with a sexual interest other than heterosexual. Among men that had engaged in online sexual contact with at least one child, 33% reported their sexual interest as homosexual and 19% as bisexual.

4.1.1 Initiating online sexual contact

An important finding in this study was that in all groups, except the group of men that had engaged in online sexual contact with adults only, the majority of respondents had not initiated the online sexual contact. For example, only 15% of the women that had engaged in online sexual contact with at least one adolescent had initiated the contact. In other words, the children and adolescents are not necessarily passive victims of adults contacting them online, but may take initiative themselves. This does not of course justify any sexual contact between an adult and child or adolescent, as the responsibility still remains by the adult. However, since this is presumably a sensitive issue for many participants, the incentive to lie might be greater.

4.2 Situational factors

The situational factors affecting the propensity to look for online sexual contact were correlated. For both women and men, the highest correlations were found for sexual arousal and looking for excitement, followed by curiosity and looking for excitement. This implies that adults who are sexually aroused and curious, also often start to look for excitement online and these results support previous findings. To look for online contacts (Peter & Valkenburg, 2007) and sexual material online (Peter & Valkenburg, 2006) can be motivated by sensation-seeking behavior, such as looking for excitement. Sexual arousal together with the anonymity that the online environment provides, may further increase risk-taking and impulsive behavior (Wolak et al., 2008). To seduce children and adolescents can also be found both exciting and sexually arousing (Carnes, 2001).

The results also show that the situational factors affected the propensity to look for online sexual contact with a child or an adolescent, more so for women than for men. Having been relaxed, sexually aroused, bored, stressed, curious, looking for excitement, and intoxicated when starting to look for someone online to engage in sexual contact with, were most often reported by the group of women and men that had engaged in online sexual contact with at least one child. The group of women and men having engaged in online contact with adults only, reported the lowest levels of these situational factors. Among women, sexual arousal, boredom, curiosity and looking for excitement, were the most often reported situational factors in all groups and all were significant. The results for men followed similar patterns, but the only significant results were for the emotional states of being stressed, and looking for excitement. These results are also supported by previous research. Online sexual contact can be used to escape from negative emotional states (e.g. stress) (Quayle et al., 2006), to enhance pre-existing positive emotional states (e.g. being relaxed or sexually aroused), or to elevate ambivalent emotional states (e.g. boredom) (Gee et al., 2003). As the levels of these situational factors were reported retrospectively, it is not possible to say whether the situational factors functioned as actual motivators of contacting someone online, or rather as post hoc explanations (Howells et al., 2004).

4.2.1 Variation in level of emotional states during online sexual contact

In general, the reported levels of emotional states before, during, and after having online sexual contact with a specific child, adolescent or adult in mind, were fairly low for all states, except being relaxed and being bored. The group of women who had engaged in online sexual contact with at least one adolescent, reported overall higher levels of emotion compared to the group that had engaged in contact with adults only (see Figure 1). For men, the group that had engaged in online sexual contact with at least one child reported higher levels of sadness, stress and shame compared to the other groups and also felt the least empty and the least relaxed (see Figure 2).

The variation during the contact was also quite small, but for most emotional states, the main effect of time was significant, meaning that there was a significant variation in the level of emotional state during the online sexual contact. For both women and men, sadness, boredom, stress, and emptiness decreased somewhat during the contact, which supports previous research that online sexual contact can function as mood regulation, while keeping one occupied and distracted from negative emotions (Cooper et al., 1999; Howells et al., 2004; Quayle et al., 2006). Feelings of relaxation and shame increased somewhat during the contact to decrease again afterwards. The level of reported shame afterwards was the same for the groups of women that had engaged in online sexual contact with at least one adolescent and with adults only. For men, the ones having had contact with at least one child felt the most shame, followed by those having had contact with at least one adolescent, and the ones who had engaged in contact with adults only.

4.2.2 Variation in level of sexual arousal during online sexual contact

Among both women and men, the highest levels of sexual arousal were reported by the groups that had engaged in online sexual contact with at least one child (see Figure 3 and 4). Those who had engaged in online sexual contact with at least one adolescent reported the lowest levels of sexual arousal. The differences in reported level of sexual arousal were significant between the three groups of men, but not women. These results can be explained by the findings of Ariely and Loewenstein (2006), that adults who are sexually aroused perceive children as more attractive, than

if not aroused. It also supports the assumption that online sexual contact with children are found more appealing by persons who are sexually aroused compared to those who are not. Further explanations, can be that arousal increases risk perception (Blanton & Gerrard, 1997), and inhibits the response control (Barbaree & Marshall, 1991) as well as acting on inappropriate sexual urges (Cooper et al., 2004).

For all groups of women and men, the reported level of arousal was lowest before the contact, highest during the contact, and decreased somewhat after the contact. For both women and men there was a significant variation in the level of sexual arousal during the online sexual contact. These results show that one does not have to be very aroused to engage in online sexual contact, but one may become aroused during the contact. Sexual arousal can either be an expected outcome or perhaps in this case, when many of the contacts were initiated by the other part, an unexpected outcome. As Quayle and Taylor (2003) noted, there are individuals who never thought they would find child or adolescent pornography sexually arousing and perhaps the same can be said for online sexual contact with children and adolescents. However, Ariely and Loewenstein (2006) also showed that subjects were unable to predict the effects of arousal on their own judgment and decision-making. This might also affect the responses of our participants, especially regarding the level of sexual arousal before engaging in online sexual contact, as that would be the time when a person's judgment and decision-making, regarding whether or not to engage in online sexual contact, could be affected. In other words, the reported levels of arousal, or any other situational factor, before the online sexual contact, are the only results that could imply any causality for engaging in online sexual contact. The reported levels of sexual arousal during and after the contact are more complicated to interpret, as the responses could be affected by so many other factors in the situation.

4.2.3 Variation in level of alcohol intoxication during online sexual contact

The reported levels of alcohol intoxication during online sexual contact were in general low and non-significant (see Figure 5 and 6). The only significant effect was the differences in reported level of alcohol intoxication between the three groups of men. Those who had engaged in online sexual contact with at least one child reported highest levels of alcohol intoxication, compared to the other groups of men, but the

levels were still low. The group that had engaged in online sexual contact with at least one adolescent reported the lowest levels of alcohol intoxication. This indicates that people do not drink much alcohol before, during, or after having online sexual contact, regardless if they have online sexual contact with children, adolescents, or adults. This outcome was contradictory to previous findings, and is not in line with the disinhibition theory (Steele & Josephs, 1990). For example, alcohol intoxication has been found to distort the information processing so that immediate gratification increases the influence on behaviors and emotions (Steele & Josephs, 1990), to impact ethical considerations or conventional social restraints (Nunez, 2003), to provide an excuse for socially undesirable behavior (Abbey et al., 2000), and to make people overestimate the sexual pleasure that an activity can provide (McFall, 1990). Alcohol intoxication combined with a distracting activity, such as engaging in online sexual contact may be, has also been found to relieve psychological stresses (Steele & Josephs, 1990).

With the findings of the present study, we offer further support for the association between emotional states, as well as sexual arousal, and the propensity to engage in online sexual contact with children and adolescents. However, this method of study, does not allow for any interpretations on causality regarding these associations. The findings regarding the situational factors during online sexual contact, can imply that higher levels of emotional state and sexual arousal might be required to go against social norms and contact children and adolescents online for sexual purposes, but it can also imply that those who look for online sexual contact online with children and adolescents, are more emotionally and/or sexually aroused than the group that only seek adult company, or that they are post-hoc explanations for such behavior.

4.3 Limitations and further research

One limitation of this study is the small group sizes, especially the groups of women and men that had engaged in online sexual contact with at least one child (n women = 5, n men = 24), and the group of women that had engaged in online sexual contact with at least one adolescent (n = 33), making it more challenging to draw statistical conclusions and the results more difficult to generalize. This is however in concordance with the low prevalence of pedophilic sexual interest in the population

Santtila (et al., submitted) and the fact that children are less accessible online (Wolak et al., 2004).

There are also limitations concerning the method used. Even though the method of using an online self-report survey seems natural when studying online behavior and has proven to be especially useful for the study of sensitive issues (compared to e.g. interviewing) (Mustanski, 2001), there were many factors that the researchers were unable to control for. First of all, there were no ways to control for the actual age of the respondents. Secondly, as online surveys often are, the present study is also biased on self-selected samples, from an unknown sampling frame, compromising with the generalizability of the results (Valkenburg & Peter, 2011). There is also a possible sample bias, as a large proportion of the respondents might be heavier Internet users in general (Cooper, Scherer, Boies & Gordon, 1999). However, the mean reported time spent online did not exceed the limit of 5 hours for any of the groups, which is regarded as a sign of problematic Internet use (Odaci & Kalkan, 2010). The high dropout rate (48.7%) might also have affected the results, as previous research has shown that men drop out earlier and at a higher rate compared to women, and that less educated, and self-identified heterosexually interested men are more likely to exit an online-survey earlier (Ross, Daneback, Månsson, Tikkanen, & Cooper, 2003). This might explain the high percentage of homosexually and bisexually interested men, but it does not explain why the percentage was high also for women. Neither, did the majority of respondents have a university exam, but this can also be because many of them were still studying.

The survey was also long and of the ones finishing the whole survey, a bigger proportion might have had greater interest in sexual aspects of the Internet (Cooper, Scherer, Boies & Gordon, 1999), compared to the ones that dropped out. Further, there is the possibility of a recall bias regarding the situational factors reported, as they were reported retrospectively and the participants were not necessarily emotionally and sexually aroused or alcohol intoxicated when completing the survey.

As the research on the effect of situational factors on online sexual contacts with children and adolescents is still scarce, more research is needed. It is motivated as we,

with the present exploratory study, were able to show that situational factors do affect the propensity to engage in online sexual contact with children and adolescents. Further research could include other methods of study, like a more experimental approach, which would eliminate the effect of recall bias and enable conclusions about causality. Larger sample sizes, especially regarding the groups that had engaged in online sexual contact with at least one child, and especially the women, are also necessary to be able to draw further conclusions.

5 Swedish Summary

Sambandet mellan de situationella faktorerna: emotionella tillstånd, sexuell upphetsning och alkoholfpåverkan, samt vuxnas sexuella kontakter med barn och ungdomar på internet

De situationella faktorerna, emotionella tillstånd samt sexuell upphetsning påverkar vuxnas benägenhet att ingå i sexuella kontakter med barn och ungdomar på internet.

Inledning

Vuxna som använder internet för att kontakta barn och unga i sexuella syften är ett exempel på en problematisk sexuell aktivitet (Finkelhor, Mitchell, & Wolak, 2000; Briggs et al., 2011). Många vuxna beter sig annorlunda på nätet än i det verkliga livet, bl.a. för att det är lätt att vara anonym och att undgå potentiella konsekvenser på internet (Delmonico & Griffin-Shelley, 2011).

En typisk vuxen som söker sexuella nätkontakter med barn och ungdomar är en man i 20 – 30 års ålder (bl.a. Walsh & Wolak, 2005; Mitchell, Finkelhor & Wolak, 2007; Briggs et al., 2011), men andelen yngre män i åldern 18 – 25 verkar ha ökat (Wolak, Finkelhor & Mitchell, 2009). Män som söker sexuella nätkontakter med barn och ungdomar är ofta även utbildade, har ett arbete och saknar kriminell bakgrund (Mitchell et al., 2005; Walsh & Wolak, 2005; Briggs et al., 2011). En del forskare har föreslagit att andelen kvinnor som söker sexuell kontakt med barn och unga på nätet är underestimerad (Pflugradt & Allen, 2010; Elliott & Ashfield, 2011).

Vuxna som söker sexuell kontakt med barn och unga på nätet kan vara motiverade av ett hebefilt eller pedofilt intresse, d.v.s. ett sexuellt intresse för ungdomar och barn (Nunez, 2003; Wolak et al., 2008; Lanning, 2010). De kan också vara motiverade av faktorer i den omedelbara situationen, såsom tillgänglighet, impulsivitet och nyfikenhet (Lanning, 2010) eller en rädsla för vuxna partners (Putnam, 2000; Valkenburg & Peter, 2007).

Flickor i åldern 13 till 17 är de som oftast blir kontaktade på nätet av vuxna (Mitchell et al., 2001; Wolak et al., 2004; Baumgartner & Valkenburg, 2010). Att en vuxen kontakter barn och unga i sexuella syften är olagligt enligt såväl finsk (RL,

code 2011:540), svensk (SFS, code 2009:343) som tysk (GCC, code 1998:176) lagstiftning.

Situationella faktorer påverkar bl.a. sexuella preferenser (Ariely & Loewenstein, 2006) och är viktiga för att få en bättre förståelse för etiologin bakom sexuellt beteende, men har sällan beaktats i tidigare forskning (Imhoff & Schmidt, submitted). Med situationella faktorer avser vi i denna studie faktorer i den omedelbara situationen som kan påverka beteendet på nätet, såsom emotionella tillstånd, sexuell upphetsning och alkoholpåverkan.

Emotionella tillstånd är medvetna affektiva reaktioner (Berkowitz, 2000) som motiverar och styr beteende (Russell, 2003; Brehm, Miron & Miller, 2009). Tidigare forskning har funnit ett samband mellan sexuella aktiviteter och såväl negativa som positiva och neutrala emotionella tillstånd (Howells, Day, & Wright, 2004). Negativa emotionella tillstånd kan t.ex. öka risktagande (Quayle & Taylor, 2002). Forskning har också visat att sexuella aktiviteter på nätet använts för att undvika negativa emotionella tillstånd såsom stress, ångest, skuld, och depression (Cooper, Putnam, Planchon, & Boies, 1999; Quayle, Vaughan, & Taylor, 2006) och eftersom att de ofta innefattar masturbering, kan sådana aktiviteter även förstärka beteendet (Quayle & Taylor, 2002) och t.o.m. vara beroendeframkallande (Putnam, 2000).

Sexuell upphetsning har bl.a. påvisats påverka beslutsfattning. Ariely och Loewenstein (2006) visade t.ex. att män som är sexuellt upphetsade finner barn mer attraktiva, jämfört med de som inte är upphetsade. Imhoff och Schmidt (submitted) fick liknande resultat även för kvinnor. Sexuell upphetsning kan också öka riskfyllt beteende (Blanton & Gerrard, 1997) samt minska beaktandet av etiska aspekter (Ariely & Loewenstein, 2006). Sexuell upphetsning och möjligheten till anonymitet på internet kan ytterligare öka impulsivt beteende och beteende som framkallats av en avvikande sexuell lust, såsom att kontakta barn och ungdomar på nätet (Quayle & Taylor, 2003; Cooper, Delmonico, Griffin-Shelley, & Mathy, 2004; Wolak et al., 2008).

Alkoholpåverkan påverkar också sexuellt beteende och beslutsfattning, genom att försvaga perception och tankeförmåga och att göra informationsbehandlingen mer kortsiktig och styrd av omedelbar belöning (Steele & Josephs, 1990). Resultat från tidigare studier tyder också på att alkoholpåverkan tillsammans med sexuell upphetsning ytterligare försvagar förmågan att läsa signaler, t.ex. så att neutrala eller negativa signaler uppfattas som sexuellt uppmuntrande (McFall, 1990; Wilson,

Calhoun, & McNair, 2002), samt att alkoholpåverkan ökar risktagande (Conner, Sutherland, Kennedy, Grearly, & Berry, 2008).

Eftersom att forskare som forskat om sexuella nätkontakter mellan vuxna och barn och/eller ungdomar främst fokuserat på manliga vuxna (Ariely & Loewenstein, 2006; Farris, Viken, & Treat, 2010), valde vi att studera både män och kvinnor. Till skillnad från en stor del av tidigare studier som fokuserat på dömda förbrytare (Bates & Metcalf, 2007; Briggs, et al., 2011), studerade vi en bredare population av vuxna, som kan bestå av såväl förbrytare som icke-förbrytare. Situationella faktorer har heller sällan varit fokus för studier, däremot har stabila individuella egenskaper (Valkenburg & Peter, 2007) och sociodemografiska bakgrundsfaktorer (Wolak, et al., 2004) studerats i större grad.

Syftet med denna studie var att undersöka huruvida de situationella faktorerna: emotionella tillstånd, sexuell upphetsning samt alkoholpåverkan påverkar vuxnas benägenhet att ingå i sexuella kontakter med barn och ungdomar på nätet. Dessutom undersöktes variationen inom de olika situationella faktorerna under sexuella nätkontakter med barn, ungdomar och vuxna.

Metod

Undersökningen genomfördes som ett online frågeformulär till de vuxna populationerna i Finland, Sverige och Tyskland. Det slutliga urvalet bestod av 776 vuxna i åldern 18 – 72, varav 323 var kvinnor och 453 var män. Medelåldern bland kvinnorna var 27,45 år ($SD = 8,98$) och bland männen 29,40 år ($SD = 10,42$). Skillnaden i medelålder mellan könen var signifikant. Respondenterna ombads svara om, hur och med vem de hade haft sexuella nätkontakter. Respondenter som rapporterade att de haft sexuella kontakter på nätet inkluderades i studien. På basen av åldern på personerna som respondenterna hade haft sexuella nätkontakter med, delades respondenterna in i tre grupper: de som haft sexuell kontakt på nätet med 1) åtminstone ett barn (13 år och yngre), 2) åtminstone en ungdom (14 – 17 år) och 3) enbart vuxna (18 år och äldre).

Respondenterna ombads rapportera om de under det gångna året börjat söka efter någon att ha sex med eller för att tala om sex med, så att de varit: avslappnade, sexuellt upphetsade, uttråkade, stressade, nyfikna, fulla eller för att leta efter spänning. Svartalternativen var 1 = aldrig, 2 = ibland och 3 = ofta. Variationen inom de olika situationella faktorerna under sexuella nätkontakter med barn, ungdomar och

vuxna undersöktes så att respondenterna frågades till vilken grad vissa tillstånd oftast stämde överens med situationen före, under och efter att de hade haft sexuell kontakt med en specifik person. Denna specifika person var den yngsta kontakten och den person respondenterna hade haft kontakt med längst under det gångna året.

Tillstånden var, att ha varit: ledsen, uttråkad, stressad, avslappnad, tom och skamsen. Svartalternativen var 1 = inte alls, 2 = lite, 3 = ganska och 4 = mycket.

För de statistiska analyserna användes ett 3 x 2 upplägg (de tre grupperna som formats på basen av åldern på personen som respondenterna haft sexuell nätkontakt med x kön). SPSS 21.0 användes för att analysera resultaten.

Resultat och diskussion

Denna explorativa studie är, så vitt vi vet, den första i sitt slag, där vuxna ombetts själv-rapportera sina erfarenheter av sexuell nätkontakt med barn och ungdomar. Inte heller har variationen i vissa situationella faktorer före, under och efter kontakten studerats tidigare.

Resultaten från vår studie visade att både kvinnor och män som haft sexuell nätkontakt med barn och ungdomar rapporterade att de varit mer påverkade av de situationella faktorerna: emotionella tillstånd och sexuell upphetsning, jämfört med de som haft kontakt med enbart vuxna. Effekten av alkoholpåverkan var liten och signifikant enbart för män.

Den demografiska profilen motsvarar den profil enligt vilken tidigare forskare beskrivit vuxna som haft sexuell kontaktar med barn och ungdomar på nätet (Wolak et al., 2009). Överlag hade män mera sexuella nätkontakter med såväl barn, ungdomar som med vuxna i jämförelse med kvinnor. Respondenternas medelålder låg mellan 24 och 30 år. Medelåldern var lägst, under 25 år, bland gruppen av kvinnor och män som hade haft sexuell kontakt med åtminstone en ungdom, vilket kan tyda på att andelen unga vuxna som söker sexuella kontakter med ungdomar på nätet har ökat (Wolak et al., 2009). Den unga medelåldern kan dock också bero på att samplet till en stor del bestod av studerande. Dessutom måste man beakta att flera av dem som haft sexuell kontakt med åtminstone en ungdom, själva kan ha varit 18 år och eventuellt haft kontakt med en några år yngre person, vilket inte är olagligt.

Få av respondenterna rapporterade att de själva hade tagit initiativ till kontakten, vilket tyder på att barn och ungdomar inte nödvändigtvis är passiva offer för vuxna, utan också själva aktivt tar kontakt. Detta rättfärdigar naturligtvis inte den

sexuella kontakten mellan en vuxen och en ungdom eller ett barn, eftersom att ansvaret ändå alltid ligger hos den vuxna.

De situationella faktorerna som påverkade de vuxnas benägenhet att kontakta barn och ungdomar på nätet i sexuella syften korrelerade med varandra. Högst var korrelationerna för sexuell upphetsning och att leta efter spänning samt nyfikenhet och att leta efter spänning. Detta kan förklaras av tidigare forskningsresultat som visat att sensationssökande beteende samt sexuell upphetsning kan öka impulsivt beteende (Wolak et al., 2008) samt motivera sökandet av kontakter (Peter & Valkenburg, 2007) och sexuellt material (Peter & Valkenburg, 2006) på nätet. Det har också visat sig att det kan upplevas både upphetsande och spännande att förföra barn och ungdomar (Carnes, 2001).

Resultaten visade också att de vuxna som haft kontakt med åtminstone ett barn oftare än de andra två grupperna uppgav sig ha börjat söka efter någon att ha sex med eller för att tala om sex med, så att de varit påverkade av respektive situationell faktor. Som påvisats i tidigare forskningsresultat kan sexuella nätkontakter användas för att undvika negativa emotionella tillstånd (Quayle et al., 2006), vilket ytterligare kan förstärkas av alkoholanvändning (Steele & Josephs, 1990) eller för att stärka positiva emotionella tillstånd (Gee et al., 2003) och sexuell upphetsning (Wolak et al., 2008).

Variationen över tid för de rapporterade nivåerna av emotionella tillstånd var liten men signifikant. De negativa emotionella tillstånden sjönk något under kontakten, vilket stöder antagandet om att sexuella nätkontakter kan användas för att reglera känslor (Howells et al., 2004).

De rapporterade nivåerna av sexuell upphetsning var högst för både kvinnor och män som haft sexuell nätkontakt med åtminstone ett barn och lägst för dem som haft kontakt med åtminstone en ungdom. Skillnaden mellan grupperna var signifikant enbart bland män. Dessa resultat kan förklaras av Ariely och Loewensteins (2006) studie som visade att de som är sexuellt upphetsade uppfattar barn mer attraktiva, jämfört med de som inte är upphetsade. Precis som emotionella tillstånd (Quayle & Taylor, 2002) kan sexuell upphetsning också öka risktagande (Blanton & Gerrard, 1997) och dessutom minska beaktandet av etiska aspekter (Ariely & Loewenstein, 2006). Fördelen med att kunna vara anonym på nätet tillsammans med sexuell upphetsning kan ytterligare förklara varför vuxna ingår i sexuella kontakter med barn och ungdomar på nätet (Cooper, et al., 2004; Wolak et al., 2008). Eftersom att respondenterna rapporterade att de var minst sexuellt upphetsade före kontakten, tyder

det på att man inte behöver vara så upphetsad för att ingå en sexuell kontakt på nätet. Däremot blev många upphetsade under kontakten.

Effekten av alkoholpåverkan var liten och signifikant enbart för män, vilket motsäger tidigare forskningsresultat, såsom att alkohol påverkar sexuellt beteende och beslutsfattning (Steele & Josephs, 1990).

Resultaten från denna studie ger stöd för att det finns ett samband mellan emotionella tillstånd samt sexuell upphetsning och de vuxnas benägenhet att kontakta barn och ungdomar på nätet i sexuella syften. Eftersom att alla resultat bygger på retrospektiva själv-rapporterade svar, kan vi inte på basen av denna studie dra några slutsatser om kausaliteten gällande dessa samband. Resultaten tyder på att det krävs högre nivåer av emotionella tillstånd och sexuell upphetsning för att gå emot sociala normer och att ingå i sexuella kontakter med barn och ungdomar på nätet, men det kan också betyda att de som ingår i sexuella nätkontakter med barn och ungdomar är mer emotionellt och/eller sexuellt upphetsade än de som har sexuella kontakter enbart med vuxna. Alternativt, kan dessa också vara post-hoc förklaringar till sådana sexuella aktiviteter.

De små gruppstorlekarna, speciellt gruppen av kvinnor som hade haft sexuell kontakt med åtminstone ett barn ($n = 5$), försvårar de statistiska tolkningarna. Å andra sidan stämmer det överens med antagandet om att pedofilt sexuellt intresse är ovanligt bland vuxna (Santtila et al., submitted). Generaliserbarheten av resultaten påverkas också av flera faktorer som vi inte kunnat kontrollera för, bl.a. att urvalet baserar sig på ett självurval och att urvalsramen är okänd. Tidigare forskare har även kunnat påvisa att de som deltar i och slutför studier på nätet skiljer sig demografiskt från de som deltar i andra typer av studier (Ross et al., 2003).

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APPENDIX A

PRESSMEDDELANDE

Emotionella tillstånd och sexuell upphetsning påverkar benägenheten hos vuxna att ingå i sexuella kontakter med barn och ungdomar på internet

Pro gradu-avhandling i psykologi

Institutionen för psykologi och logopedi, Åbo Akademi

Resultaten från en pro gradu-avhandling vid Åbo Akademi visar att emotionella tillstånd samt sexuell upphetsning påverkar benägenheten hos vuxna att ingå i sexuella kontakter med barn och ungdomar på internet. Anna Häkkinen har undersökt hur vissa faktorer i den omedelbara situationen påverkar vuxna människors sexuella kontakter med barn och ungdomar inom ramen för ett tysk-finskt- forskningsprojekt om pedofili. De som hade haft sexuella kontakter med barn och ungdomar uppgav sig vara mera påverkade av sexuell upphetsning och emotionella tillstånd, såsom att vara uttråkade, stressade, nyfikna eller söka efter spänning, jämfört med de som enbart haft sexuell kontakt med andra vuxna på internet.

Detta tyder enligt Häkkinen på att sexuell och emotionell upphetsning kan få vuxna, som inte nödvändigtvis har en sexuell preferens för barn och ungdomar, att ingå i sexuella kontakter med unga på internet.

Det fanns också en variation i de emotionella tillstånden under kontakten, så att känslorna blev starkare under kontakten för att åter sjunka till en lägre nivå efteråt. Detta tyder på att sexuella kontakter på nätet kan användas för att reglera emotionella tillstånd. Effekten av alkoholpåverkan studerades också, men var liten och signifikant enbart för män.

Undersökningen genomfördes som ett online frågeformulär i Finland, Sverige och Tyskland. Det slutliga samplet bestod av 776 vuxna, varav 323 var kvinnor och 453 var män. Respondenterna ombads svara om, hur och med vem de hade haft sexuell kontakt på internet. Totalt 38 kvinnor (11,8 % av alla kvinnor) och 98 män (21,6 % av alla män) hade haft kontakt med barn och/eller ungdomar. Antalet kvinnor som hade haft sexuell kontakt med barn på internet var endast fem stycken, vilket försvårar de statistiska tolkningarna för denna grupp.

Emilia Bergen, doktorand vid Åbo Akademi och Häkkinens handledare, fortsätter att forska inom projektet bl.a. om hurdana taktiker vuxna använder för att ingå i sexuella kontakter med barn och ungdomar.

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