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## Internet sexual solicitation of children: a proposed typology of offenders based on their chats, e-mails, and social network posts

Dana DeHart<sup>a</sup>, Gregg Dwyer<sup>b</sup>, Michael C. Seto<sup>c</sup>, Robert Moran<sup>d</sup>, Elizabeth Letourneau<sup>e</sup> and Donna Schwarz-Watts<sup>f</sup>

<sup>a</sup>College of Social Work, University of South Carolina, USA; <sup>b</sup>Psychiatry and Behavioral Sciences, Medical University of South Carolina, USA; <sup>c</sup>Department of Psychiatry, University of Toronto, Canada; <sup>d</sup>Arnold School of Public Health, University of South Carolina, USA; <sup>e</sup>Bloomberg School of Public Health, Johns Hopkins University, USA; <sup>f</sup>School of Medicine, University of South Carolina, USA

### ABSTRACT

Although researchers have examined sexual solicitation of minors online, there is limited research on the content and patterns of victim-offender chats. These chats have potential use in investigations for triaging and prioritising cases, enhancing understanding of offenders, developing treatments, and crafting education and policy to prevent sexual solicitation of minors online. As part of a broader effort on Internet crimes against children (ICAC), we examine offender chat logs, email threads, and social network posts from state and local task forces on ICAC for a sample of 200 offenders in communications with undercover officers. We use mixed-methods analyses to identify key elements in these cases and propose a typology of online solicitation offenders: cybersex-only offenders, schedulers, cybersex/schedulers, and buyers. These findings provide support and expansion of existing research on offender types using a larger and more geographically diverse sample. Implications for research, practice, and policy are discussed.

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Abuse; cybercrime; offenders; violence; victimisation

## Introduction

The National Child Exploitation Threat Assessment (United States Department of Justice, 2010) revealed a dramatic increase in cases of child sexual exploitation in the US, including a 230% increase in the number of documented complaints of online solicitation of children from 2004 to 2008. While some of this increase may be attributable to changes in the way complaints are processed by police, it is notable that 20,562 such complaints were documented in that four-year period. More recently, Mitchell, Jones, Finkelhor, and Wolak (2014) found that about 1 in 11 youth experienced an unwanted sexual solicitation in the past year, and about 1 in 25 experienced an aggressive sexual solicitation, defined as a sexual solicitation involving offline contact or requests for offline contact.

Although some researchers have begun to examine sexual solicitation of minors via the Internet, there is limited research regarding the content and patterns of victim-offender chats. These chats are potentially informative for prioritising investigations (e.g. identifying earlier indicators of meeting offline), for enhancing our understanding of offenders, for developing treatments, and for crafting education and policy to prevent sexual solicitation of minors online. As part of a broader effort on Internet crimes against children (ICAC), we examine offender chat logs, email threads, and social network posts from state and local task forces on ICAC. We identify key elements in these cases,

propose a typology of online solicitation offenders, and discuss implications of this typology for research, practice, and policy.

### *Existing research on sexual solicitation of minors*

Despite its many productive and healthy uses, the Internet can also facilitate destructive and unhealthy ones, such as the sexual solicitation of children by adults. Based on the second National Juvenile Online Victimization (N-JOV2) study, all the ICAC task forces and their past satellites/affiliates, as well as two federal agencies ( $n = 97$ ) reported 1981 arrests; a random sampling ( $n = 794$ ) of other agencies trained to conduct ICAC cases reported 1001 arrests; a random sampling ( $n = 1425$ ) of other US agencies reported 340 arrests (Mitchell & Jones, 2013).

The Youth Internet Safety Survey (YISS-2) collected data for 2005 and revealed that one in seven (13%) of the youths surveyed had been sexually solicited, defined as being asked to “engage in sexual activities or sexual talk or give personal sexual information” and 27% of the solicited youths were asked for sexual photographs of themselves (Wolak, Mitchell, & Finkelhor, 2006). Of those solicitations, 39% were identified as being requested by adults defined as persons 18 years of age or older. Adults accounted for nearly half (49%) of aggressive sexual solicitations, defined as including requests for offline contact via the mail, telephone, or in person.

A commonly cited model of solicitation of minors describes a linear progression from introduction to grooming and then approach (Olson, Daggs, Ellevold, & Rogers, 2007). During the introduction phase, the offender manoeuvres into position to interact with the child. For online communication, this includes entrance into the online environment and initial greeting exchanges (Leatherman, 2009). Examples include saying hello, asking about age/sex/location, or discussing hobbies or non-sexual interests. Grooming involves communication to desensitise the victim to sexual language or reframe sexual acts in child-like terms such as play. In this stage, offenders may also isolate victims from family and friends before the approach. In an online environment, this might consist of assuring that parental supervision is limited. Communication desensitisation includes use of slang, abbreviations, net speak, and emoticons in online communications (Leatherman, 2009). Here, perpetrators often adopt youthful expressions (e.g. kewl) that render the sexual banter less threatening. Thus, we see the offenders assessing vulnerability, flattering the victim, beginning to discuss sexual interests, and sometimes playing sending mixed signals or teasing “I’m too old for you,” etc. The approach phase includes online sexual interactions and potentially attempts to meet so that sexual contacts occur. This might include exchange of sexually explicit pictures or video (i.e. webcams), occurrence of real-time sex (e.g. exhibitionism or coached masturbation), anticipatory remarks about the sexual acts they will perform, requests for meetings, and scheduling a meeting.

Olson et al.’s (2007) model of linear progression (i.e. introduction to grooming to approach) described some of the interactions observed by O’Connell (2003) in her playing the role of a young girl in youth-oriented chat venues. However, O’Connell also noted that some interactions were more overtly coercive, including sexually aggressive comments and the use of threats. Also, recent research suggest that online solicitations do not necessarily progress from introduction to approach in a linear way, or if they were linear, the progression took place very quickly (Grosskopf, 2010; Krone, 2004).

### *Existing research on typologies of online solicitation offenders*

Research on typologies of offenders who sexually solicit minors online builds on the broader literature on typologies of sex offenders in general. Lanning (2010), for instance, described a continuum of sex offenders including those who are “situational” offenders (i.e. more indiscriminant regarding victims) versus those who are “preferential” (specifically fantasising and seeking out specific types of victims such as children). Regarding Internet sexual offenders, Elliott and Beech (2009) and Krone (2004) focused on those offenders for whom pornography is a component of the offence (e.g. Krone’s “browsers,” “collectors,” “groomers,” and so on).

Alexy, Burgess, and Baker (2005) also focused specifically on Internet sexual offenders, again noting the role of pornography for some, but broadening the focus to include offenders who do not utilise pornography in their offence. These researchers used media reports of 214 men and 11 women to describe three categories of Internet sexual offending against children: traders (59%, traded and/or collected child pornography), travellers (22%, solicited children online to meet in-person for sexual contact) and those who were a combination of both types of behaviour (19%). The authors cautioned that people identified as traders may also have had detected contact offences that did not involve the Internet and cautioned that travellers may have possessed child pornography from sources other than the Internet.

Berlin (in an interview with Hanson, 2006) has noted that Internet offenders may fall into several types: those who have sought children before the Internet and now use the Internet as another way to access children, those who use the Internet for access to visual content only including child pornography, and those with no prior attempts to access children, but the Internet has led to such behaviour. Malesky's (2007) study of a Federal Bureau of Prisons Sex Offender Treatment Program revealed that, among the 29 male offenders ranging in age from 23 to 52 years, chat rooms were the most common method to contact potential victims, with online profiles and bulletin boards coming in second and third. More than 80% of study subjects went to chat rooms for children to meet youths, and 71% had at least one sexual contact with a child victim.

Wolak, Finkelhor, Mitchell, and Ybarra's study (2008) found that Internet chat room solicitors of children for sexual contact are typically adult men, who generally do not conceal their real age or sexual intent. They use instant messages, emails, and chat rooms with victims more frequently being underage adolescents than pre-adolescents. Those offenders caught by undercover officers differ from those who contact real minor victims in that they are older, more middle class, and are less likely to have criminal histories, violent histories, or sexually deviant histories (Wolak et al., 2008).

Briggs, Simon, and Simonsen (2011) conducted a study of 51 men aged 19–54 years convicted of online sexual solicitation offences via Internet chat rooms. They suggested that online offenders are distinct from offline offenders, with two types: the first composed of offenders who seek to meet adolescents in-person for sexual contacts; the second want to engage in cybersex (e.g. sexual chat, exchange of sexually explicit images, and masturbating while online) with adolescents rather than meet offline. Both groups spent more time online for social and sexual interaction, avoiding in-person relationships, and had less criminal histories than typical offline sexual offenders (Briggs et al., 2011). Specifically, they were less likely to exhibit deviant sexual arousal on penile plethysmography examination. Although it is possible their legal status negatively impacted their mental health, these offenders tended to have mental health diagnoses more often than not (75%), with depression, adjustment disorder, and substance use disorders being the most common (Briggs et al., 2011).

Babchishin, Hanson, and Hermann (2011) conducted a meta-analysis to examine whether online offenders were a distinct group of offenders or typical sex offenders utilising a new method for committing crimes. Their study included offenders from both institutional and community samples, with a collective sample size of 4844 offenders. Their findings indicate significant differences between online and offline offenders, including online offenders' greater likelihood of being White, younger, and with lower rates of physical abuse than offline offenders. Online offenders also had greater victim empathy, lower impression management, and fewer cognitive distortions than offline offenders. These researchers conclude that, relative to offline offenders, online offenders may be those with more self-control as well as more psychological protective factors which deter acting on their deviant interests.

### *The current study*

The current study contributes to existing literature by elucidating key characteristics in cases involving online solicitation of children. We used case files to examine offender chat logs, email threads, and social network posts from state and local task forces on ICAC for a sample of 200 offenders. The study is intended to: (1) identify key elements of cases in which offenders solicit children

online and (2) utilise key elements to differentiate and describe specific types of offenders in these cases.

## Method

### *Qualitative coding*

A principal investigator of the study developed agreements with numerous state and local task forces on ICAC to obtain closed (completed) case files of offenders prosecuted for Internet sexual solicitation of minors. Case files were transferred to the PI from seven task forces (Alaska, California, Florida, Maryland, South Carolina, Texas, and Washington) from 2012 to 2013. From an overall sample of 1323 cases, approximately 251 cases (19%) had chat, email, or social network texts. As cases were received from state Attorneys General, corresponding files were scanned to PDF and uploaded to a secure file server for analysis. By summer of 2013 (the timeline allocated for qualitative analysis), 200 PDF files (80% of all PDFs) were received for qualitative analysis.

These PDFs were coded and analysed using MaxQDA software (VERBI GmbH Berlin, Germany). MaxQDA allows the researcher to mark text passages, tag these with commentary or codes, and then sort passages, codes, and commentaries sorted into hierarchies and categories. First-cycle coding was performed on a subset of 20 randomly selected cases by the first author using provisional codes derived from the research literature on sexual offenders (e.g. "grooming," "sexual interests," "request to meet;" Kontostathis, Edwards, & Leatherman, 2009; Olson et al., 2007), with additional open coding to further break down the data and provide analytic leads for exploration (Saldana, 2009). These 20 cases were then provisionally grouped into "families" representing possible typologies based on chat content (e.g. "child fetishists," "meeting for sex," and "cyber-sex-only"). This was an iterative process, allowing us to hone in on a subset of key codes that might serve to differentiate various types of offenders. For instance, those offenders specifically seeking children (as opposed to those who sought a sexual interaction regardless of age) frequently mentioned child-specific characteristics such as absence of pubic hair. Conversely, opportunistic offenders who sought anyone available for an in-person meeting often had brief chats and tried to schedule the meeting right away. Finally, those seeking an "online-only" experience often focused on engaging in or encouraging masturbation in real-time during the chat.

To further explore these leads, a second coder applied selected codes (e.g. "exposes self," "attempts to schedule," and "real-time sex") to the full qualitative sample of 200 chat logs. The lead analyst then performed second-cycle axial coding to differentiate and organise codes (Saldana, 2009). Throughout all aspects of this process, debriefing between both analysts was used to address discrepancies, clarify concepts, and refine codes based on consensus (Hill et al., 2005; Sandelowski & Barroso, 2003). For example, for the construct of "real-time sex," one coder had initially had coded hypothetical (fantasy-type) scenarios as real-time sex (e.g. "I could slide my hand up and tease your clit") because the intent of the statement appeared to be to arouse; after discussing this decision, the two coders decided that real-time sex was more accurately represented only by those quotes in which either the offender or the victim/victim persona was explicitly engaged/encouraged in actual masturbation (e.g. "rub that pussy and cum," "I'm rubbing my cock"), as actual engagement in sex may have greater importance in differentiating between those in which online activity is a prelude to sexual contact versus an end in itself. As Forman and Damschroder (2008) explain, in the constructivist approach, a negotiated agreement process among coders is preferable to quantitative measures of reliability, in that the latter may oversimplify constructs, compromise validity, and counteract the crucial role of reflexivity and reason-giving in qualitative interpretation of data.

### *Case classification*

Data from coded files were quantified by exporting into SPSS, using dummy codes to indicate presence or absence of particular types of events (e.g. engaging in real-time cybersex and requesting a

meeting) as well as timing of key events (e.g. time-to-onset for bringing up sexuality). As described above, we used qualitative analyses to identify a subset of key codes for differentiating types of offenders. We used exploratory cluster analyses as an informal tool to identify which of these codes might be used to develop cohesive groupings of offenders. Thus, these cluster analyses were conducted using the six key binary codes that had been applied to cases: whether the offender exposed himself sexually via photos or video, whether the offender sought sexually themed photos of the victim, whether the offender showed the victim third-party pornography, whether the offender engaged in or encouraged real-time masturbation, whether the offender attempted to schedule a meeting (i.e. specific times and places), and whether the offender mentioned child-specific or incest themes in the chat.

A variety of clustering methods (e.g. two-step, hierarchical, *k*-means) were utilised to explore consistent groupings across analyses. Although specific groupings varied depending on the clustering method used, the most consistent findings across analyses revealed that real-time masturbation and scheduling were the two variables that appeared to exert the most influence on grouping. After qualitatively examining clusters from each exploratory analysis, we chose to classify cases into three types: those that engaged in or encouraged real-time masturbation and who did not attempt to schedule (*cybersex*), those who attempted to schedule but who did not engage in real-time masturbation (*schedulers*), and those who both masturbated while online and scheduled (*cybersex/schedulers*). This grouping is somewhat reflective of the Briggs et al. (2011) distinction between fantasy-driven and contact-driven solicitation offenders and adds a mixed group.

Based on more in-depth qualitative examination of thumbnail descriptions of each case, the analyst was able to easily sort cases into one of the three categories. Through this qualitative sorting procedure, we also chose to further break out a fourth emergent group of cases, predominantly from the “schedulers” group, comprising those cases that involved chats with a third party (e.g. pimp and family member) for purposes of child sex trafficking. We use the term “buyers” to refer to this group, in accord with terminology sometimes utilised in the commercial sex industry. This group had not been quite as cohesive in exploratory cluster analyses, varying a bit across clustering methods, but seemed very distinct in the qualitative data. Finally, 21 cases were eliminated from analyses as outliers, based on both cluster analyses and qualitative sorting of cases, as these displayed extreme variation in groupings across clustering methods; these included all 19 cases involving real victims rather than undercover agents (as these usually involved a pre-existing relationship between perpetrator and minor that was not well documented in the case files, for example, the minor was a friend of the perpetrator’s child), as well as 2 cases in which the offender neither masturbated nor scheduled. Thus, based on this iterative mixed-methods process, our final sample included cybersex-only offenders ( $n = 48$ ), schedulers ( $n = 44$ ), cybersex/schedulers ( $n = 64$ ), and buyers ( $n = 23$ ).

## Findings

Given our mixed-methods design, we have elected to combine results with qualitative findings and discussion in a single section, followed by more integrative discussion.

## Participants

All offenders were men (the one female offender had already been excluded as part of the “real victims” group described above). Our sample represented cases filed in 7 states with offenders residing in 14 states. The bulk of participants were from South Carolina (68%), followed by Florida (17%), Georgia (3%), North Carolina (3%), Texas (2%), and Alaska (2%). The remaining states (California, Colorado, Illinois, Maryland, New York, Oklahoma, Virginia, and Washington) contributed less than 1% of cases. We should note that this does not reflect the prevalence of cases across states, but instead differences across task forces in providing sufficient text for analysis.



Offenders were mostly White (84%), followed by African-American (6%), Hispanic (6%), Asian (2%), and other ethnicities (3%). The average age of offenders at the time of the offence was 34.75 years, with an age range of 18–74 years. Specific charges varied widely, although representative offences included criminal solicitation of a minor, assault or sexual battery, attempted criminal sexual conduct, lewd acts, and travel to meet a minor.

In terms of victim personas used by undercover agents in these cases (using the first victim only for offenders with multiple victims), the mean age of “victims” was 13 years, with ages ranging from 9 to 14. Most (97%) were females, although there were a few male personas (2%) as well as those with unspecified gender (1%). Most cases began with online chats (87%), followed by online classified ads (12%), and social media posts (1%).

### *Duration of interactions*

Based on chat logs, email threads, or social network posts, we computed a total time period from the onset of the offender’s interaction with the victim persona to the end of that interaction (again, using first victim only for offenders with multiple victims). These times ranged from 10 minutes to nearly 4 years. The median duration of interactions was just over four days. We also computed time-to-onset for particular types of behaviours, including the offender asking for pictures of the victim (Median = 10 minutes), the offender mentioning sex (Median = 12 minutes), the offender asking to meet (Median = 50 minutes), the offender suggesting to switch contact modalities (e.g. from a chat log to a phone; Median = 1 hour, 6 minutes), and the offender engaging in or encouraging real-time sex acts (Median = 1 hour, 11 minutes).

### *Comparison of offender types*

To reiterate, offenders were classified into four types (cybersex, cybersex/schedulers, schedulers, and buyers) based on a mixed-methods process that included exploratory quantitative cluster analyses as well as qualitative sorting of cases. To provide greater insight into the characteristics of the four types of offenders, we compared the groups using analysis of variance (ANOVA) for continuous variables (e.g. age) and chi-square analyses for categorical variables (e.g. asking for pictures, exposing self, and scheduling). It should be noted that, based on our iterative mixed-methods classification process, we might expect significant differences across groups for some but not necessarily for all variables (e.g. scheduling was part of the group classification).

ANOVA demonstrated no significant differences in mean age at the time of the offence between any of the offender types,  $F(3, 175) = .830, p = .479, ns$ . A Pearson chi-square statistic indicated an association between offender type and race,  $\chi^2(3, N = 179) = 27.175, p < .001$ . The value of Cramer’s  $V$  (.390, interpreted similarly to a correlation coefficient) indicates that this is a moderate-to-strong association (Cohen, 1988). There were fewer non-White cybersex (2%) and cybersex/schedulers (8%) when compared to schedulers (32%) or buyers (39%).

Chi-square tests indicated some significant relationships between offender type and various offending behaviours. We first examined whether the offender exposed himself sexually via photos or video. A Pearson chi-square statistic indicated an association between offender type and the offender exposing himself,  $\chi^2(3, N = 179) = 42.454, p < .001$ . Based on the value of Cramer’s  $V$  (.487), this is a strong association (Cohen, 1988). While 75% of cybersex offenders exposed themselves, this behaviour was less common among cybersex/schedulers (48%), followed by buyers (17%), and schedulers (14%). Similarly, there was an association between offender type and whether the offender sought sexually themed photos of the victim  $\chi^2(3, N = 179) = 8.149, p < .05$ . Cramer’s  $V$  (.213) indicates a small-to-moderate association (Cohen, 1988). Nearly half (48%) of cybersex/schedulers sought such photos, followed by cybersex offenders (42%), buyers (30%), and schedulers (23%). No association was found between offender type and whether the offender showed the victim third-party pornography, a relatively rare behaviour within our sample,  $\chi^2(3, N = 179) = 4.405, p = .221, ns$ .

There was, however, an association between offender type and whether the offender mentioned child-specific or incest themes in the chat,  $\chi^2(3, N = 179) = 9.493, p < .05$ . Cramer's  $V(.230)$  indicates a small-to-moderate association (Cohen, 1988). A majority (56%) of cybersex/schedulers mentioned such themes, followed by cybersex offenders (35%) and buyers (35%), and finally schedulers (30%).

With regard to the overall length of interactions from start to finish (using first victim only if more than one victim was included in the case file), we dichotomised interaction length, differentiating those that were relatively brief (less than 24 hours in duration) from more protracted interactions. We chose this dichotomous conceptualisation because we believed the former more accurately reflected apparent qualitative differences among offenders, while the latter introduced extreme range and variance because about one-quarter of offenders had interactions that lasted months or years. Offender type was associated with whether total interaction time was less than 24 hours,  $\chi^2(3, N = 179) = 13.365, p < .01$ . Cramer's  $V(.273)$  indicates a moderate association (Cohen, 1988). Nearly half of schedulers (43%) interacted for less than a day, followed by buyers (35%), cybersex offenders (29%), and cybersex/schedulers (13%).

Finally, we noticed that, among those who scheduled meetings, many repeatedly cancelled or did not show up to these meetings. To examine whether cancellations/no-shows differed by offender type, we selected those cases for which some attempt to schedule had been made. The Pearson chi-square indicated a significant association between offender type and cancellation/no-show,  $\chi^2(3, N = 179) = 8.830, p < .01$ . Cramer's  $V(.260)$  indicates that this is a moderate association (Cohen, 1988). Specifically, cancellations/no-shows were overrepresented among cybersex/schedulers (34% of these offenders), while schedulers (21%) and buyers (4%) were underrepresented. Table 1 summarises dimensions for which there was a significant association with offender type.

### Quantitative summary with qualitative examples

We identified four types of offenders that we labelled cybersex offenders, schedulers, cybersex/scheduler offenders, and buyers. In this section, we provide more description about each of these types.

#### Cybersex offenders

Cybersex offenders tended to be White, exposed themselves sexually to the victim, and nearly half sought sexually explicit photos of the victim. Around one-third expressed interest in child-specific or incest themes, and most had more protracted interactions with victims, often for months. While over half of these offenders (54%) mentioned meeting, they did not specifically schedule a place or time. Often, these mentions of meeting were more hypothetical or talk of "someday," as in the following chat between an offender (O #111016, White male, age 28) and undercover officer's victim persona (U/C). As we provide such examples, please note that these chats are often graphic in content; also, we have retained original phrasing, including spelling and syntax errors.

O: just thinking about what it would be like if i was hanging out with you right now  
 U/C: that wld b kewl  
 O: yeah, we could have some fun  
 U/C: u cld com swimming w me  
 O: you have a pool?  
 U/C: at my apts  
 O: that would be fun  
 U/C: yea  
 U/C: i wish  
 O: plus i bet you look hot in your swimsuit

A few minutes later, after ascertaining that the victim's mother is not home, the offender continues.

O: i think we would get in trouble if i were there then  
 U/C: y u say that



**Table 1.** Type of offender type by case characteristics.

TYPE	Quantitative data (proportion of cases with each characteristic)						Qualitative data
	Race White***	Exposes self***	Seeks explicit photos*	Child- specific or incest themes*	Interaction less than 24h**	Cancel/ no- show**	
<b>Cybersex-Only</b> (n = 48) <i>Masturb w/out scheduling</i>	98%	75%	42%	35%	29%	na	<ul style="list-style-type: none"> <li>• Often chat for months</li> <li>• Ask about sexual features (e.g. breasts and pubic hair)</li> <li>• Coach victim's masturbation</li> <li>• May mention meeting w/out scheduling (e.g. "someday")</li> </ul>
<b>Cybersex / Schedulers</b> (n = 64) <i>Masturb w/ scheduling</i>	92%	48%	48%	56%	13%	34%	<ul style="list-style-type: none"> <li>• Often chat for months</li> <li>• Ask about sexual features, esp. w/child theme (e.g. tight)</li> </ul>
<b>Schedulers</b> (n = 44) <i>Scheduling w/ out masturb</i>	68%	14%	23%	30%	43%	21%	<ul style="list-style-type: none"> <li>• Often seeking relatively quick sexual "hook-up"</li> <li>• Often wait about a week before specific scheduling</li> </ul>
<b>Buyers</b> (n = 23) <i>Chats include 3rd party</i>	61%	17%	30%	35%	35%	4%	<ul style="list-style-type: none"> <li>• Focus on scheduling</li> <li>• Negotiate terms (e.g. cost and sex acts) w/ pimp or family</li> <li>• Usually begins in classified ad</li> <li>• Request photos to prove 'real'</li> </ul>

Chi-Square significance of association across types: \* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$ .

O: cause i probably wouldn't stop kissing your and rubbing your body

Examination of qualitative data indicates that these cybersex offenders sometimes expose themselves on camera, often ask the victim about sexual features (e.g. breast size, and pubic hair), and often attempt to coach the victim in masturbation. The same offender continues his chat (less than an hour later) in a representative fashion.

O: wanna play?

U/C: sure

O: cyber?

U/C: k kewl

O: pull your shorts off

...

O: they off?

U/C: yea

O: getting excited?

U/C: yea

O: is it fun

U/C: yea

O: start rubbing the crotch of your panties

The chat becomes more graphic, with the offender asking "is your pussy bald?" and then coaching the victim to "slide a finger inside." He warns that "its gonna hurt the first time ... a guy goes inside you."

### Cybersex/schedulers

Similar to cybersex offenders, cybersex/schedulers tended to be White. About half exposed themselves through camera or video, and about half sought sexually explicit photos of the victim. Of the four types, these offenders were the most likely to express child-specific or incest interests; as may be evinced in the following example, some mentions (e.g. about being “tight” and “shaved”) may occur in the context of extensive sexual chatting, as these offenders tend to have protracted interactions with victims, often lasting for months. Examination of qualitative data demonstrates that these offenders, like cybersex offenders, often asked about sexual characteristics of the victim, as in the following chat (O#111358, White male, age 21).

O: have breasts yet  
 U/C: yeh but they little  
 O: do you wear a bra?  
 U/C: yeh 34a  
 O: nice  
 O: do you shave your legs?  
 U/C: yeh  
 U/C: don't like stuble legs  
 O: shave your vagina?

In many ways, these offenders were similar to cybersex offenders, aside from making specific meeting plans with their victims. It may be important to note that, among all offenders who scheduled meetings with their victims, the cybersex/schedulers were the most likely to cancel or not show up. There are multiple reasons why this may occur. First, it may be that these offenders were not sincere about scheduling in the first place, but rather were simply pretending to be interested in meeting in an attempt to keep the victim engaged in protracted online interactions. Second, it may be that the attempts to meet were sincere, but these offenders were more reluctant or feared the meeting was a trap. In the following chat, the offender discusses hesitancy to meet (O#111303, White male, age 24).

O: where would we meet  
 U/C: we could meet at the mall –then go somewhere frm there  
 O: ok, how long would you have?  
 U/C: probably 2 or 3 hrs  
 O: cool  
 O: what mall  
 ...  
 O: I want to see u so bad  
 O: I can't get the thought out of my mind that you're a cop ☹  
 O: I don't think u are but i don't know for a fact

A third reason for the higher number of cancellations among cybersex/schedulers could be that discussion of the meeting itself might be part of the online fantasy for these perpetrators, and that talking through the details of where they would meet and what they would do is sexually gratifying in itself. In the following chat, the offender (O#111249, White male, age 36) begins hypothetically and then moves to details of scheduling before the undercover officer terminates the chat.

O: well ok then beautiful, what about this if i was too come there and be knocking on your door?  
 ... (about an hour of chat elapses)  
 O: i pray too god that your mom doesn't come home until 5:30 or 6 that day  
 ... (five minutes of chat elapse, discussing whether to come in back or front door, etc.)  
 O: where would i park my car cuz i am sure your neighbors are nosey

The offender then begins to discuss planning out the day, how they would play it safe, where in the house “it can happen ... the living room on the couch, the living room floor, the kitchen, your shower, your bedroom, which ever you want or choose.” The undercover officer then disengages

("sory i lokd around the house and freaked out ... im gona go 4 now"), but returns briefly to plan to talk more tomorrow.

### *Schedulers*

Schedulers, while still predominantly White, included more non-White offenders. However, many of these offenders (38%) derived from cases in Florida, possibly contributing to some of the ethnic diversity (as a more diverse state than those in the Midwest, as an example). These schedulers rarely exposed themselves, and less than a quarter sought sexually explicit photos of victims. About one-third expressed child-specific or incest interests, and nearly half had interactions lasting less than one day. Examination of qualitative data indicates that these persons are often seeking a relatively quick "hook-up." For example, an offender (O #111006, White male, age 25), after saying that the 13-year-old "victim" was "too young," then goes on to ask, "U ever fooled around with a guy?" He then asks "well are you interested in a one time thing where U help get a guy off?" Other offenders in this group sometimes begin chatting more about school, then moved to discussing the victim's sexual experiences and whether she has a boyfriend before a few more chats to schedule a meeting. While they may discuss meeting generally during the chat, they often do not specifically schedule a meeting for about a week. The chats are usually such that the emotional immaturity of the victim is implicit in the conversation, thereby illustrating the opportunistic nature of the interaction. For example, one offender (O #111255, "Other" male, age 24) asks about boyfriends about a half hour into the chat, then with the following exchange.

O: so u looking for men?  
 U/C: yea  
 O: for?  
 U/C: idk  
 O: sex?  
 U/C: mayb  
 U/C: idk  
 O: ok  
 U/C: u?  
 O: r u ok to hangout?  
 U/C: yea  
 O: then shall we meet?

### *Buyers*

Buyers, like schedulers, are more ethnically diverse, and again, many (49%) came from cases charged in Florida. These offenders less frequently exposed themselves, but about one-third sought sexually explicit photos of victims. Over one-third expressed child-specific or incest interests, and over one-third had interactions lasting less than one day. Scheduling was usually the main focus of the conversation, as well as some negotiation of terms (e.g. what sex acts would be allowed, what it would cost). Only a few of these cases began as chats, in which case the "minor" typically initiated discussion of money. For instance, one offender (O #111379, African-American male, age 29) asks, "why do you want to know about my money," to which the undercover officer replies, "i want some. plz. we r poor." The chat became more explicit, until the officer asked for \$5000, to which the offender replied, "i can give u that much until u come live with me." More often, offenders in this group responded to classified ads for "casual encounters," some of which featured minors or implied sexually deviant activity. Sometimes the ad was presumably placed by the minor ("Girl looking-w4m"), sometimes by a pimp ("girls girls girls 4 u"), and sometimes by a family member, as in the following thread entitled "New in town" (O#261424, White male, age 27).

U/C: Here on vacation. Send pics and let's figure it out!  
 O: [sends photo]

- U/C: hey we are in the attractions area ☺ def something different here so if not for you i understand. Mom with two cute girls ☺ both 13 yrs old. Been hit with hard times lookin for some help. tell me how they may help you baby. Pics here but i need to know what you are askin for first.
- O: Very interested. I'm looking to do whatever you are willing to let them do. Please send pics. Know this is awkward. Lets figure it out.

Periodically, as in the above case, the officer would engage in chat with the offender, "hey sorry it's [minor]. my mom ran to the store real quick n wanted me to hit u up." For these offenders, requests for sexually explicit photos were sometimes used to assure that the minor is "for real." As the offender above mentioned, "I haven't even gotten a good pic. I don't wanna go to jail." Another offender (O #261620, White male, age 39) states, "I want full nude with face so i can tell age please." Yet another (O #261439, White male, age 27), to "make sure you are who you say you are," specifies, "a pic of you sitting on the floor, legs open with that piece of paper with my name below your pussy."

## Discussion

This study has important implications in a number of areas. Foremost, the proposed typology of offenders provides support for existing research on types of Internet solicitation offenders, notably the fantasy- versus contact-driven distinction made by Briggs et al. (2011). We found a similar distinction using a larger and more geographically diverse sample, and extended this by finding a difference between contact-driven (scheduler) offenders who masturbated online from those who were more focused on cybersexual interactions (cybersex and cybersex/schedulers). We also identified a group of commercial sex buyers. We intentionally selected out terms for the four types of offenders to most accurately depict the online communication and behaviour of these offenders (e.g. engaging in cybersex, scheduling, and negotiating a purchase), as our data did not establish underlying motivations.

Our study further built on the work by Briggs et al. (2011) by examining a number of additional dimensions: preferred online modality (e.g. chats, classified ads, email, and social networks), duration of their online interaction, affinity for exchanging sexually explicit material, their child-specific interests, likelihood of engaging the victim for real-time sexual activity, and likelihood of scheduling an in-person meeting with the victim. This information could be useful for prioritising cases based on potential risk to minors, developing investigative techniques, and allocating criminal justice resources. This information may also assist in forensic assessment of risk and policy development for classification and correctional management, treatment, and monitoring of offenders in communities. For instance, increased understanding regarding the nature and contexts of potential risk (e.g. whether the individual is specifically seeking minors; whether the goal is strictly online interaction or an in-person meeting) can assist clinicians and program developers in focusing risk reduction in the online or physical environment, identifying treatment targets, and assessing short-term and long-term changes in risk.

The findings of this study indicate that online interactions with sexual offenders may escalate rapidly. The fact that many offenders have exchanged sexual images or discussed meeting in less than 10 minutes may be sobering news for parents. Unmonitored online activity may expose some vulnerable children to risk. Raising awareness of such risks, especially for the subset of children who are more vulnerable to these kinds of online solicitations (e.g. Marcum, Higgins, & Ricketts, 2010; Mitchell, Finkelhor, & Wolak, 2007), developing risk-reduction technology (e.g. software that flags troubling communications; Kontostathis et al., 2009), and implementing prevention policies (e.g. social media platforms prohibiting abusive communications) are all crucial to protecting children online. These findings also shed light on the Briggs et al. (2011) question of whether Internet stings may net offenders who would never abuse a child; on the contrary, a majority of offenders in our sample (73%) attempted to schedule meetings. Those offenders who do not seek in-person contact for sex are likely to expose themselves sexually, seek sexually explicit photos, or engage in or encourage real-time masturbation.

## Limitations

Our analyses focused on a subset of chats, emails, and social network threads (the first 80% received during the course of the full study). It is possible that those state agencies that sent files earlier in the study differed from those that were delayed in sending their files. Further, only 19% of all cases prosecuted by these agencies had corresponding chats, emails, or social network texts for analysis, and it may be that those that were retained in case files were different in some way from those where texts were not seized or were discarded. A related limitation is that our sample of cases was not nationally representative. Some of the findings (e.g. the ethnic diversity of buyers and schedulers), may reflect the fact that Florida provided many of the trafficking cases. Ethnicity would be expected to be more homogeneous if cases came from other Northern or Midwestern states.

It is notable that classification of offenders covaries with the investigative techniques used by law enforcement, which in turn covaries with sampling site. For instance, 65% of trafficking cases were netted via an ad posted by an undercover officer (often from Florida, where this technique may be used to identify “sex tourists”). 100% of cybersex offenders and 97% of cybersex/schedulers were netted via chats. Thus, for both research and practical (e.g. investigative) purposes, we should remain vigilant that strategies for detecting offenders will likely capture different types. Correspondingly, the typologies derived from this and other studies will be influenced by the nature of data available for analysis (e.g. chat logs versus emails that follow ads). Future studies might expand the range of constructs examined, including psychological variables and criminal histories.

It is also important to note that our final sample focused only on those cases involving undercover officers rather than real children (or real guardians, in the buyer cases); thus, investigative techniques used by these officers may actively influence offender behaviour such as engaging in masturbation or attempting to schedule. Bergen, Antfolk, Jern, Alanko, and Santtila (2013), for instance, in a study of 257 chats during which researchers impersonated children and adolescents, found that chat respondents were more likely to suggest face-to-face meetings if the “youth” indicated that he/she was of legal age to consent – illustrating that offenders respond differently depending on what is disclosed/discussed. In our review of qualitative data, we found that some investigators discouraged attempts to meet as well as attempts at real-time sex acts while others encouraged attempts. An important topic for future study may be to examine how investigator behaviours differ from child/guardian behaviours, as well as how such behaviours influence offending and which investigative techniques are most effective for detecting the most serious offenders.

In sum, the challenges in our study underscore the need for strong, full case data to be retained for purposes of research. This includes assuring that online interactions are captured from start to finish, that exchanges include time stamps, and that switches in modality (e.g. from chat to email or phone) are well documented. Researcher-practitioner partnerships can greatly facilitate improved understanding of online sexual offenders, enhanced investigative techniques, and more evidence-based strategies for risk reduction and prevention.

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