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Early Life Emotional Neglect and HIV Risk Taking among Men Using the Internet to Find Other Men for Unprotected Sex

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Abstract

Purpose: Using a Syndemics Theory conceptual model, this study examines the relationship between emotional neglect experiences during childhood and/or adolescence and involvement in HIV risk taking in a sample of adult men who actively seek partners for unprotected sex via the Internet.

Methods: The study was based on a national random sample of 332 MSM who use the Internet to seek men with whom they can engage in unprotected sex. Data collection was conducted via telephone interviews between January 2008 and May 2009. Structural equation analysis was undertaken to examine the specific nature of the relationships involved in understanding HIV risk practices.

Results: Emotional neglect was highly prevalent among the men participating in this study. Emotional neglect experiences were not found to be related directly to involvement in HIV risk taking in adulthood. Emotional neglect, was found to be an important variable in the overall structural equation. Its effect on HIV risk taking was indirect, operating principally by having a negative impact upon self-esteem, which in turn had a negative effect on attitudes toward condom use, which in turn were related strongly and directly to risk taking.

Conclusions: Childhood experiences with emotional neglect are relevant to understanding HIV risk practices among MSM in adulthood, but the relationship is not as simple as usually conceptualized. Rather, emotional neglect appears to impact risk taking indirectly, through its effects on mental health functioning, which in turn affects risk-related attitudes.

Keywords

emotional neglect; gay/bisexual men; men who have sex with men (MSM); Internet; HIV risk practices

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INTRODUCTION

Research on childhood maltreatment experiences often differentiates amongst five subtypes of maltreatment that people may experience during their childhood and/or adolescent years: physical abuse, sexual abuse, emotional abuse, physical neglect, and emotional neglect. The large majority of the published work on these topics has focused on physical abuse and/or sexual abuse, almost always finding these experiences are associated with substantial problems and shortcomings that often last well into adulthood. Physical abuse and sexual abuse have been linked with a variety of negative psychological outcomes, such as reduced self-esteem (Stanley, Bartholomew, & Oram, 2004), greater depression (Arreola *et al.*, 2008; Balsam *et al.*, 2010; Mimiaga *et al.*, 2009), and greater anxiety (Semple *et al.*, 2011), as well as with a variety of adverse behavioral outcomes, including such diverse problems as eating disorders (Brennan *et al.*, 2011; Feldman & Meyer, 2007), substance use/abuse and drug-related problems (Arreola *et al.*, 2008; Brennan *et al.*, 2007; Mimiaga *et al.*, 2009), intimate relationship and partnership problems (Welles *et al.*, 2011), and sexual risk taking (Kalichman *et al.*, 2004; Mimiaga *et al.*, 2009) among many others.

Usually characterized by such experiences as being called names, being yelled at, having one's physical well-being threatened, being insulted, using various types of intimidation tactics, and/or being threatened with abandonment, emotional abuse has been studied much less often than physical abuse and sexual abuse. What little research that has been done on this topic has yielded similar results to those described above for physical and/or sexual abuse (Balsam *et al.*, 2010; Walton *et al.*, 2011; Wright, Crawford, & Del Castillo, 2009). Interestingly, most of the published studies on the long-term effects of emotional abuse have been conducted with female research samples, oftentimes focusing on emotional abuse in current (i.e., adulthood) relationships rather than on early-life emotional abuse experiences and their long-term effects. This has led to gaps in our scientific knowledge regarding the prevalence of emotional abuse experiences among women during their formative years, and to even greater gaps in our knowledge regarding the prevalence of emotional abuse among men and how, exactly, emotional abuse experiences early in life affect men later in life.

Even less well-studied than emotional abuse are the topics of physical neglect and emotional neglect (the latter of which is the focus of the present research). Physical neglect typically entails situations in which parents/guardians fail to provide their children with such things as (1) adequate or properly-nutritious food, (2) necessary protection to keep them safe from physical harm or potentially-harmful encounters with other persons, (3) proper medical and/or dental care when needed, and (4) clean clothing and/or proper clothing for the prevailing weather conditions. It may also entail providing children and adolescents with inadequate parenting and supervision due to being drunk or high, or simply due to indifference, which forces the young persons to fend for themselves. In contrast, emotional neglect involves deficiencies in providing children and adolescents with love and emotional support as they are growing up, and the development of nurturing family relationships that engender bonding and trust during the formative years. When people are emotionally neglected, they grow up feeling unloved, unsupported, and abandoned by the adults who, our society says, should "be there for them" and help them to develop healthy senses of self (Cori, 2010; DePanfilis, 2006; Ford, 2011).

Adverse psychological outcomes have been associated with both emotional neglect and physical neglect experiences during the formative years (Faust, Chapman, & Stewart, 2008; Kim & Cicchetti, 2006; Matthews, Kaur, & Stein, 2008; Walton *et al.*, 2011; Wright, Crawford, & Del Castillo, 2009). Indeed, examining the long-term psychological effects of neglect has been the emphasis of most of the neglect-focused studies appearing in the scientific literature. Only occasionally have researchers examined behavioral outcomes resulting from neglect experiences. Research on physical neglect has shown it to be linked with such adverse outcomes as an increased likelihood of contracting sexually-transmitted infections (Haydon, Hussey, & Halpern, 2011), a greater risk of disordered eating (Allison *et al.*, 2007), a greater severity of gambling (Petry & Steinberg, 2005), and more prostitution behavior (at least among African American women; Medrano *et al.*, 2003). Similarly, research on emotional neglect has shown it to be associated with a greater risk of disordered eating (Allison *et al.*, 2007), a greater likelihood of attempting suicide (Roy, 2009), a greater tendency toward experiencing sexual compulsivity (Parsons *et al.*, 2008), and more involvement in substance use and abuse (Kirisici *et al.*, 2001).

Intriguingly, research on the relationship between emotional neglect and physical neglect and involvement in HIV-related risk behaviors has been sparse. Considering the well-documented links between sexual abuse and HIV risk practices, and physical abuse and HIV risk practices (cited earlier), it is surprising that scholars have devoted so little attention to examining childhood neglect experiences as they pertain to HIV risk practices in adulthood. This is all the more surprising in light of the few published findings that there are, which have suggested that emotional and/or physical neglect during people's formative years appear to heighten their risk for acquiring HIV later in life (Haydon, Hussey, & Halpern, 2011; Klein, Elifson, & Sterk, 2007; Parsons *et al.*, 2008). This paucity of research leaves us with an inadequate understanding of the extent to which physical and/or emotional neglect experiences during people's formative years affect their sexual health decisions in adulthood, as well as to the general nature of the association between childhood neglect experiences and subsequent HIV risk behavior involvement.

To help bridge this knowledge gap, the present study focuses on the relationship between emotional neglect experiences as they pertain to HIV risk practices in one specific population of men who are at great risk for acquiring and/or transmitting HIV—namely, men who use the Internet specifically to find other men for unprotected sex. Three research questions are examined: (1) How prevalent is emotional neglect in this population? (2) How, if at all, is emotional neglect related to involvement in HIV risk taking among members of this population? (3) How do men's early-life emotional neglect experiences interact with other factors that influence HIV risk practices among these men?

Conceptual Model Guiding This Research

In the present paper, a structural approach is used to develop a better understanding of how childhood maltreatment experiences (focusing specifically on emotional neglect in this paper) affect HIV risk involvement in adulthood. Based on previously published studies (see, for example, Mustanski *et al.*, 2007; Senn, Carey, & Venable, 2010; Stall *et al.*, 2003), the conceptual model depicted in Figure 1 was developed by the present author and

examined analytically in the research reported herein. In this exploratory model, childhood emotional neglect experiences are hypothesized to have both direct and indirect effects on men's involvement in risky practices. The indirect effects are hypothesized to operate both through the impact of emotional neglect on men's psychological/psychosocial functioning, its effects on substance use/abuse, and its impact on their attitudes toward condom use. As the conceptual model shows, emotional neglect experiences are one of six types of influences hypothesized to affect men's HIV risk practices, with the others being demographic variables (e.g., race/ethnicity, age, HIV serostatus), sex-related behavioral preferences (e.g., self-identification as a sexual "top" versus a "bottom," preferring to have sex that is "wild" or "uninhibited"), substance use/abuse, attitudes toward condom use, and psychological/psychosocial functioning (e.g., depression, self-esteem, impulsivity). To a great extent, this conceptual model owes its intellectual origins to the notion of syndemic and to Syndemics Theory. Readers who are interested in learning more about this conceptual/theoretical approach and its applicability to the present study are urged to consult Klein (2011) for further information.

METHODS

Procedures

The data reported in this paper come from *The Bareback Project*, a National Institute on Drug Abuse-funded study of men who use the Internet specifically to find other men with whom they can engage in unprotected sex. The data were collected between January 2008 and May 2009. A total of 332 men were recruited from 16 different websites. Some of the sites catered exclusively to unprotected sex (e.g., [Bareback.com](#), [RawLoads.com](#)) and some of them did not but made it possible for site users to identify which persons were looking for unprotected sex (e.g., [Men4SexNow.com](#), [Squirt.org](#)). A nationwide random sampling approach was used, with random selection being based on a combination of the first letter of the person's online username, his race/ethnicity (as listed in his profile), and the day of recruitment. Recruitment efforts were undertaken seven days a week, during all hours of the day and nighttime, variable from week to week throughout the duration of the project. This was done to maximize the representativeness of the final research sample, in recognition of the fact that different people use the Internet at different times.

Depending upon the website involved, men were approached initially either via instant message or email (much more commonly via email). A brief overview of the study was provided as part of the initial approach and informed consent-related procedures, and all men were given the opportunity to ask questions about the study before deciding whether or not to participate.¹ A website link to the project's online home page was also made available, to provide men with additional information about the project and to help them feel

¹Due to differences from website to website in terms of the information made available to users about whether or not their emails were received and read, or whether they were removed by the web host's system prior to being read by the intended recipient, it is impossible to compute an accurate participation rate for *The Bareback Project*. Based on websites where enough information was available to users to allow for the participation rate to be calculated, the response rate was slightly greater than 10%. This could raise concern of selection bias and, therefore, the representativeness of the sample. Although it is difficult to be certain that the men who participated represent the men who did not, there is compelling evidence to suggest that differences between the two groups are minimal. Before *The Bareback Project* was started, the principal investigator conducted a large-scale content analysis with a random national sample of one of the main websites used by men to meet other men seeking unprotected sex partners (for additional

secure in the legitimacy of the research endeavor. Men who were interested in participating were scheduled for an interview, which was conducted as soon after they expressed an interest in taking part in the study as possible, typically within a few days. Interviews were conducted during all hours of the day and nighttime, seven days a week, based on interviewer availability and participants' preferences, to maximize convenience to the participants.

Participation in the study entailed the completion of a one-time, confidential telephone interview covering a wide array of topics. Telephone interviews were conducted instead of online interviews or Internet-based surveys because the verbal communication between researcher and participant allowed for the establishment of greater trust and rapport with study participants, and it also gave them the opportunity to ask any questions that they had regarding the purpose of the study, the nature of the questions, and so forth. Additionally, telephone interviews were chosen so as to facilitate the collection of data for the study's qualitative research component.

The questionnaire was developed specifically for use in *The Bareback Project*, with many parts of the interview derived from standardized scales previously used and validated by other researchers. The interview covered such subjects as: degree of "outness," perceived discrimination based on sexual orientation, general health practices, HIV testing history and serostatus, sexual practices (protected and unprotected) with partners met online and offline, risk-related preferences, risk-related hypotheticals, substance use, drug-related problems, Internet usage, psychological and psychosocial functioning, childhood maltreatment experiences, HIV/AIDS knowledge, and some basic demographic information. Interviews lasted an average of 69 minutes (median = 63, *s.d.* = 20.1, range = 30–210). Men who completed the interview were compensated \$35 for their time. Two payment options were offered, one of which allowed men to maintain complete anonymity (PayPal) and one of which required them to provide a name and mailing address to receive payment (check). Prior to implementation in the field, the research protocol was approved by the institutional review boards at Morgan State University, where the principal investigator and one of the research assistants were affiliated, and George Mason University, where the other research assistant was located.

Measures Used

The *Childhood Trauma Questionnaire* (Bernstein & Fink, 1998) was used to examine men's experiences with emotional abuse prior to the age of 18. Five items were used to develop an overall scale measure assessing level of emotional abuse experienced during one's formative years: (1) People in your family felt close to each other, (2) You felt loved, (3) Someone in

information, see Klein, 2008a, 2008b 2009, 2010). The demographic composition of that sample and the one obtained in *The Bareback Project* closely match one another in terms of age representation, racial group composition, sexual orientation, and rural/suburban/urban location of residence. The two samples also resemble one another closely in terms of the types of sexual practices that men sought. The similarity of the two samples suggests that men who chose to participate in the present study represent those who did not, in terms of identifiable characteristics that are likely to be the best indicators of selection bias. Also, the demographic composition of men in *The Bareback Project* and in the male adult population-at-large are a fair approximation of one another in terms of their age breakdown (U.S. Census Bureau, 2001) and rural/suburban/urban location of residence (U.S. Census Bureau, 2000). The present sample is better educated than men in the general population (U.S. Census Bureau, 2001) and more likely to be HIV-positive (which is to be expected when one considers the population targeted in the present research).

your family helped you feel important or special, (4) People in your family looked out for each other, and (5) Your family was a source of strength and support. Responses to these items used a five-point ordinal range, including “never,” “rarely,” “sometimes,” “often,” or “very often.” The scale was found to be highly reliable (Cronbach’s alpha = 0.93). Items were reverse-coded so that higher scores indicated more frequent/consequential problems with emotional neglect.

The main **outcome measure** (i.e., dependent variable) used in this paper (particularly for the analyses associated with Research Questions #2 and #3) indicates the percentage of sex acts that involved the use of protection. It is a continuous measure based on participants’ self-reported sexual practices during the 30 days prior to interview. Other HIV risk behavior outcome measures were also examined. All of these were continuous measures and all but one (noted below) used a past-30-days time frame of reference; they included: the percentage of anal sex acts that involved the use of protection, the percentage of sex acts that involved internal ejaculation, the percentage of anal sex acts that involved internal ejaculation, the number of sex partners, the number of sex partners during the person’s lifetime, the number of times engaging in anonymous sex, and the number of times engaging in multiple-partner sex.

Numerous measures examining **demographic characteristics** were examined. These included: age (dichotomous, comparing men aged 18–49 years to those aged 50+), race / ethnicity (categorical), relationship status (involved in a marital-type relationship versus not involved), educational attainment (continuous), sexual role identity (top, versatile top, versatile, versatile bottom, bottom), HIV serostatus (positive, negative, unknown), and knowing anyone currently living with AIDS (yes / no).

Four items measuring men’s **sex-related preferences** were examined. These were: how rough they preferred their sex to be (continuous), how long they most liked their sexual sessions to last (continuous), how much they liked having sex in public venues (continuous), and how much they liked having sex that was “wild” or “uninhibited” (continuous).

The **substance use / abuse** domain was assessed with three measures: currently a user of illegal drugs (yes / no), number of drug problems experienced (continuous scale measure, Cronbach’s alpha = 0.87), and total amount of illegal drug use reported during the preceding 30 days (continuous measure of quantity × frequency of recent use, summed across nine drug types).

Attitudes toward condom use were assessed via a 17-item scale that was found to be highly reliable (Cronbach’s alpha = 0.91). Individual items were scored on a five-point Likert scale, and higher scores on the scale corresponded with attitudes that were more conducive of condom use. The scale was derived from the work of Brown (1984). Only items that were relevant to MSM and their sexual practices were used, so that the scale would be applicable to the study population.

Finally, **psychological and psychosocial functioning** were examined. Measures examined were: self-esteem (using the Rosenberg [1965] self-esteem scale; Cronbach’s alpha = 0.89), depression (using the *CES-D* [Radloff, 1977]; Cronbach’s alpha = 0.93), concern about

potential sex partners' HIV serostatus (yes / no), and perceived accuracy of HIV serostatus information provided verbally by sex partners (ordinal).

Analysis

Research Question #1 (prevalence of emotional neglect) was examined via descriptive statistics. The analyses for Research Question #2 (relationship between emotional neglect and HIV risk taking) were done via a series of simple regression analyses because, in all cases, both the dependent and the independent variables were continuous in nature. The Statistical Analysis System (SAS) software version 9.2 was used for all analyses reported in this paper.

The analysis for Research Question #3 (how emotional neglect interacts with other factors to influence HIV risk taking) was undertaken in several steps. Initially, bivariate analyses were conducted to examine which of the independent measures were related one-on-one to the dependent measure in question. Whenever the independent variable was dichotomous (e.g., race, sexual orientation), Student's *t* tests were used. Whenever the independent variable was ordinal with five or more response options or continuous in nature (e.g., extent of sexual abuse, level of self-esteem), simple regression was used to test the bivariate relationships.

Items that were found to be related either significantly ($p < .05$) or marginally ($.15 > p > .05$) to the dependent measure in these bivariate analyses were entered into a multivariate (i.e., multiple regression) equation, and then removed in stepwise fashion until a best fit model containing only statistically-significant measures remained. This approach was used for the main outcome measure (i.e., percentage of protected sex) and for each of the relevant endogenous measures (e.g., condom-related attitudes, level of self-esteem).

As a final analytical step, the relationships depicted in Figure 2 (which portrays the results of the analyses just described) were subjected to a structural equation analysis to determine whether the way the relationships depicted there is an appropriate and effective representation of the study data. SAS's PROC CALIS procedure was used to assess the overall fit of the model to the data. When conducting a structural equation analysis, several specific characteristics are examined and sought: (1) a goodness-of-fit index as close to 1.00 as possible, but no less than 0.90, (2) a Bentler-Bonett normed fit index value as close to 1.00 as possible, but no less than 0.90, (3) an overall chi-square value for the model that is statistically *non*significant, preferably as far from attaining statistical significance as possible, and (4) a root mean square error approximation value as close to 0.00 as possible, but no greater than 0.05. If these conditions are met, then the structural relationships depicted are considered to indicate a good fit with the data.

Throughout all of the analyses, results are reported as statistically significant whenever $p < .05$.

RESULTS

Sample

In total, 332 men participated in the study. They ranged in age from 18 to 72 (mean = 43.7, *s.d.* = 11.2, median = 43.2). Racially, the sample is a fairly close approximation of the American population, with 74.1% being Caucasian, 9.0% each being African American and Latino, 5.1% self-identifying as biracial or multiracial, 2.4% being Asian, and 0.3% being Native American. The large majority of the men (89.5%) considered themselves to be gay; 10.2% said they were bisexual; and 0.3% self-identified as “curious.” On balance, men participating in *The Bareback Project* were fairly well-educated. About 1 man in 7 (14.5%) had completed no more than high school; 34.3% had some college experience without earning a college degree; 28.9% had a bachelor’s degree; and 22.3% were educated beyond the bachelor’s level. Slightly more than half of the men (59.0%) reported being HIV-positive; most of the rest (38.6%) were HIV-negative; and some men (2.4%) did not know about their current HIV serostatus.

Prevalence of Emotional Neglect

As Table 1 shows, emotional neglect was commonplace among the men in this study. More than one-third of the study participants (34.3%) said that, while they were growing up, people in their family never felt close to one another. Slightly more (39.5%) indicated that nobody in their family ever helped them feel important or special while they were growing up. A sizable proportion of the men (40.7%) said that their family was never a source of strength and support during their childhood and adolescent years. Even more (42.9%) said that people in their family never looked out for one another. Nearly one-half of the men (49.2%) said that they never felt loved while growing up. At the same time, few of the men who took part in *The Bareback Project* said that they “often” or “very often” felt close to their family members, felt loved, believed that someone in their family made them feel important or special, believed that people in their family looked out for one another, or felt that their family was a source of strength and support while they were growing up. These types of positive feelings of familial love and support were reported by approximately 1 person in 6 who took part in the study.

Emotional Neglect and HIV Risk Practices

In terms of direct effects, emotional neglect was not found to be related to any of the eight HIV risk behavior outcomes examined. This was true for unprotected sex ($p=.43$), unprotected anal sex ($p=.31$), sex involving internal ejaculation ($p=.12$), anal sex involving internal ejaculation ($p=.24$), number of recent sex partners ($p=.99$), number of lifetime sex partners ($p=.84$), number of times having anonymous sex ($p=.95$), and number of times having multiple-partner sex ($p=.53$) alike. But as the next section of the paper shows, this is not to say that emotional neglect plays no role in determining men’s involvement in HIV risk.

Emotional Neglect and Other Factors Influencing HIV Risk Practices

In the following analysis, one outcome measure—namely, the proportion of all sex acts involving the use of protection—was selected as the focus, for illustrative purposes. Similar results with respect to the role that emotional neglect plays in the maltreatment-and-HIV-risk nexus were obtained for other outcome measures that were examined but which are not described in detail herein. Readers who are interested in learning more about the bivariate relationships that led to the development of the model depicted in Figure 2 are encouraged to contact the author. These details have been omitted from the present article due to space considerations.

Factors Associated with Condom Use—As mentioned above, among men participating in *The Bareback Project*, emotional neglect was not found to be related to the percentage of sex acts involving the use of condoms. Six other factors, however, were identified as being related to men's condom use during sex (see Figure 2): First, men who knew at least one person who was living with AIDS reported more condom use than those who did not know anyone currently living with AIDS ($p=.034$). Second, men who knew someone who had died from AIDS reported higher levels of sexual protection than men who did not know anyone who had died from AIDS ($p=.032$). Third, HIV-positive men reported lower rates of condom use than their HIV-negative and serostatus-unaware counterparts ($p=.002$). Fourth, the more truthful men perceived other men whom they had met online to be when it came to honest disclosure of their HIV serostatus, the less likely they were to use condoms ($p=.006$). Fifth, the more favorable men's attitudes toward using condoms were, the more they tended to engage in protected sex ($p<.001$). Sixth, Caucasian men reported less condom use than their racial minority group counterparts did ($p=.002$).

Emotional Neglect and Attitudes Toward Condom Use—The bivariate analysis revealed that the more emotional neglect men experienced during their formative years, the worse their attitudes toward using condoms tended to be in adulthood ($F(1,327)df=8.85$, $p=.003$). When this measure was added to the multivariate equation to determine the factors associated with men's attitudes toward using condoms, however, it was not retained as a statistically-significant contributor once the effects of other measures were taken into account. As Figure 2 demonstrates, the effects of emotional neglect on attitudes toward condom use were secondary to those of seven other measures. More-favorable condom-related attitudes were reported by men who: were African American ($p=.008$), had a lower amount of education ($p=.009$), cared about their sex partners' HIV serostatus ($p=.004$), had a lesser preference for engaging in "wild or uninhibited" sex ($p<.001$), had fewer problems resulting from substance abuse ($p=.009$), perceived their sex partners to be less truthful about their HIV serostatus when discussing the subject with them ($p=.004$), and those who had a higher self-esteem ($p=.002$).

Emotional Neglect and Self-Esteem—In the bivariate analysis, the data revealed that emotional neglect was predictive of men's levels of self-esteem. The more emotional neglect men had experienced during their childhood and/or adolescent years, the lower their self-esteem tended to be in adulthood ($F(1,327)df=36.34$, $p<.001$). As Figure 2 depicts, when this measure was entered into the multivariate equation, it was found to contribute uniquely and

significantly to the overall prediction of men's levels of self-esteem ($p < .001$). Also predictive of lower levels of self-esteem were race (specifically, not being African American, $p = .008$), lower educational attainment ($p = .009$), being under the age of 50 ($p = .047$), and being overweight ($p = .027$).

Structural Equation Model—As a final analytical step, the results of the multivariate analyses were subjected to a structural equation analysis, to examine the totality of the relationships portrayed in Figure 2. This analysis provides strong confirmatory support for the way that the relationships are depicted there. For this structural equation analysis, the goodness-of-fit coefficient was 0.987—well above the minimally-acceptable threshold of 0.900. In this analysis, the Bentler-Bonett normed fit index coefficient was 0.946—well above the 0.900 minimum value considered to be desirable for such analyses. In this type of analysis, we strive for an overall chi-square value for the model that is statistically *nonsignificant*, preferably as far from attaining statistical significance as possible. Here, it was $p = .213$. Finally, using structural equation modeling, we strive for a root mean square error approximation value as close to 0.00 as possible, but no greater than 0.050. Here, it was 0.028.

DISCUSSION

Potential Limitations

As with any research study, the present study has a few potential limitations that should be acknowledged. First, as with most research data on sexual behaviors, the data in this study are based on uncorroborated self-reports. Therefore, it is unknown whether participants underreported or overreported their involvement in risky behaviors. The study's reliance upon self-reported data is acceptable, however, as other authors of previous studies conducted with similar populations have reported good levels of data quality (e.g., reliability and validity) in their research (Schrimshaw *et al.*, 2006). This is particularly relevant for self-reported measures that involve relatively small occurrences (e.g., number of times having a particular kind of sex during the previous 30 days), which characterize the substantial majority of the data collected in this study (Bogart *et al.*, 2007). Other researchers have also commented favorably on the reliability and/or the validity of self-reported information in their studies regarding topics such as condom use (Morisky, Ang, & Sneed, 2002) and substance use/abuse (Anglin, Hser, & Chou, 1993; Jackson *et al.*, 2004; Yacoubian & Wish, 2006).

A second potential limitation is the possibility of recall bias. For most of the measures used, respondents were asked about their beliefs, attitudes, and behaviors during the past 7 or 30 days. These time frames were chosen specifically: (1) to incorporate a large enough time frame in order to facilitate meaningful variability from person to person, and (2) to minimize recall bias. Although the authors cannot determine the exact extent to which recall bias affected the data, other researchers who have used similar measures have reported that recall bias is sufficiently minimal that its impact upon study findings is likely to be negligible (Kauth, St. Lawrence, & Kelly, 1991). This seems to be especially true when the recall

period is small (Fenton *et al.*, 2001; Weir *et al.*, 1999), as was the case for the measures used in the present study.

Third, this study was based on one very specific subpopulation of men who have sex with other men—namely, those who actively sought unprotected sex online. Accordingly, the findings probably cannot be generalized to gay and bisexual men more broadly, although the extent to which the same types of relationships observed in the present research do apply to a more “general population” of MSM is unknown and well worth examining in future research.

Conclusions

Despite these potential limitations, the present research has much to offer by way of interesting and informative findings. First, emotional neglect was commonplace among the men who took part in *The Bareback Project*. This is consistent with previous studies of MSM (Balsam *et al.*, 2010; Neilands *et al.*, 2008), which have reported high rates of childhood maltreatment among members of this population, including research specifically identifying high rates of emotional maltreatment among gay and bisexual men (Corliss, Cochran, & Mays, 2002). This research expands upon those research findings by demonstrating that emotional neglect, too, is a very frequent problem among MSM—at least those MSM who use the Internet to identify potential sex partners with whom they can engage in unprotected sex. The high rates of emotional neglect that were reported by men in this population indicate a need for counseling and mental health services to be made available to them.

This is particularly true when one considers the fact that, in this research population, emotional neglect during one’s childhood and/or adolescent years was associated with suffering from lower self-esteem later in life. Many scholars have reported that childhood maltreatment experiences correspond with poorer psychological functioning in adulthood (Arreola *et al.*, 2008; Balsam *et al.*, 2010; Mimiaga *et al.*, 2009). The present study’s finding complements that body of research. Given the plethora of problems caused in people’s lives by low self-esteem—such as greater propensity for substance use/abuse (Klein, Elifson, & Sterk, 2010; Rosario, Schrimshaw, & Hunter, 2006) and greater involvement in sexual risk practices (Preston *et al.*, 2007; Rosario, Schrimshaw, & Hunter, 2006) among others—the fact that emotional neglect early in life is associated with lower self-esteem later in life is of great concern. It highlights the importance of developing and implementing programs that can help people to feel better about themselves and their lives, and for ascertaining what types of strategies can be effective at elevating feelings of self-worth among people who are deficient in this area. The present author has spoken about this issue in other published papers based on different research populations than that examined in the present study (Klein, Elifson, & Sterk, 2010; Sterk, Klein, & Elifson, 2004); and the present research serves to reemphasize the role that self-esteem can play in people’s health decisions and health practices.

One interesting and unexpected finding obtained by the present study was that emotional neglect experiences during men’s formative years were *not* related (directly, anyway) to their involvement in HIV risk behaviors during adulthood. This was true across the board,

regardless of which HIV risk behavior measure was examined. It appears that, for men who use the Internet to find partners for unprotected sex, early-life emotional neglect experiences are of secondary importance when determining just what it is that leads them to engage in higher rates of risky practices.

This is not to say, however, that emotional neglect was irrelevant in the overall equation, or that it was unimportant when trying to understand these men's HIV risk behaviors. On the contrary, as the final structural model depicted in Figure 2 demonstrated, emotional neglect was one of several factors contributing significantly to the overall prediction of men's involvement in (un)protected sex. Rather than having direct effects, though, the structural model suggests that emotional neglect affects HIV risk taking indirectly. Ostensibly, for many men, experiencing emotional neglect appears to reduce self-esteem levels. Reduced self-esteem, in turn, was associated with developing poorer attitudes toward using condoms. (When one thinks about this particular finding, it makes very good sense: If men do not have a strong sense of self-worth, then it stands to reason that they would not go out of their way to take the best possible care of themselves or their health. Thus, where condom use is concerned, we would hypothesize—and the data would support such an hypothesis—that lower self-esteem would be predictive of attitudes toward condoms that were less conducive to the use of these devices.) And as Figure 2 clearly shows, attitudes toward condom use were the strongest indicator of men's actual involvement in (un)protected sex. Therefore, conceptualizing the relationship as

emotional neglect → increased involvement in HIV risk

appears to be oversimplified, and this conceptualization is not supported by the research data. Instead, conceptualizing the relationship as

emotional neglect → lower esteem → poorer condom attitudes → increased HIV risk

appears to be more accurate and to have greater support by the research data from *The Bareback Project*.

Increasingly, research published in recent years has addressed the complexity of the interrelationships amongst the factors that affect HIV risk involvement (Catania *et al.*, 2008; Rosario, Schrimshaw, Hunter, 2006). This has lent support to approaches, like that used in conjunction with *The Bareback Project*, that consider multiple types of factors as being relevant predictors, particularly when they interact in accordance with the principles of syndemics theory (Egan *et al.*, 2011; Halkitis, 2010). The present study clearly shows the importance of continuing to develop a better understanding of how various types of childhood maltreatment experiences may affect later-life HIV risk practices, and how childhood maltreatment experiences such as emotional neglect interact with other factors such as psychological/mental health functioning, substance use/abuse, and so forth. One cautionary note is in order here as well: Some studies have reported that different types of childhood maltreatment are related to different types of adverse behavioral outcomes (Paradis & Boucher, 2010; Rodgers *et al.*, 2004). Therefore, it is unwise to examine “childhood maltreatment” broadly, simply combining the various types of abuse and neglect

experiences into a single, global measure. Instead, researchers need to focus attention on specific types of maltreatment, and try to understand the mechanisms by which sexual abuse affects behaviors similarly to and differently from physical abuse, emotional abuse, physical neglect, and emotional neglect. Developing such an understanding would be a very useful way of moving the discipline forward, and this is likely to be an effective way of helping practitioners to reduce the long-lasting harms of childhood abuse and neglect.

Recommendations for Future Research

Future research examining the relationship between childhood maltreatment and HIV risk practices would benefit by extending the present study in a few ways. First, as a study of men who used the Internet specifically to find other men for unprotected sex, *The Bareback Project* did not include any type of comparison group, such as men who used the Internet to find men with whom they might engage in protected sex. The findings obtained in the present analysis would be strengthened if, in a future study, they could be examined vis-a-vis an appropriate comparison group, to “tease out” the nature of the observed relationships in a bit more detail.

Along these same lines, it would be beneficial if future studies similar to *The Bareback Project* were based on somewhat larger sample sizes. That would enable researchers to undertake more comparisons of key subgroups of higher/lower risk persons, such as HIV-positive versus HIV-negative men, self-identified sexual “tops” versus sexual “bottoms,” younger versus older men, those who specifically seek unprotected sex online versus those who are more “open” in the types of sex or sex partners they seek online, Caucasians versus men of color, and so forth. Although some of these comparisons were possible within *The Bareback Project*, some were not viable analytically/statistically due to the sizes of the comparison groups involved.

Another way that future researchers could improve upon the present study would be to build into their study designs and questionnaires “validity checks” to ensure that the measures that they use are as scientifically sound as possible. Other than examining the reliability parametrics of the various scale measures used, this was something that was not done in *The Bareback Project*, because most of the measures adopted for use in this study had been used by other researchers (cited earlier in this paper, where appropriate) in their own studies of the constructs at hand. Still, it is always preferable for researchers to validate and cross-check their own measures whenever possible; and this would be a worthwhile endeavor for future researchers to pursue.

Additionally, future researchers might wish to focus more attention specifically on the role that neglect—whether it is physical neglect or emotional neglect—experiences play in HIV risk taking. As mentioned earlier in this paper, most of the published research on the relationship between childhood maltreatment and HIV risk taking has focused specifically on sexual abuse and/or physical abuse experiences. Yet there is mounting evidence suggesting that neglect experiences are every bit as important to consider, and a growing recognition of the need for research to examine neglect experiences separately from but in addition to actual abuse experiences (Stoltenborgh, Bakermans-Kranenburg, & Van Ijzendoorn, 2013). Also largely unknown and undocumented in the scholarly literature at

this point in time is the role played by the person's age or age categorization (e.g., infant, young child, older child, preadolescent, adolescent) at the time(s) of abuse or neglect. It may prove to be useful to know exactly when in people's lives maltreatment occurs, as emotional and psychological issues pertaining to development might be relevant to later-life outcomes. Similarly, little is known and little has been documented with regard to who in relation to the victim the abuser/neglectful person(s) is/are, and the way(s) in which being abused or neglected by different persons might affect outcomes. For example, it is possible that being abused or neglected by a mother has different effects than being abused or neglected by a father, particularly for boys who, later in life, grow up to be bisexual or gay. At this point in time, almost nothing has appeared in the scientific literature to examine these types of factors and how they might affect the childhood-maltreatment-and-HIV-risk-behavior nexus.

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CLINICAL CONSIDERATIONS

- \$ Experiences with emotional neglect during one's childhood and/or adolescent years appear to be commonplace among men who use the Internet to find partners for unprotected sex. There appears to be a great need for mental health counseling and psychological services among men in this population based on their past experiences with childhood maltreatment.
- \$ The relationship between early-life emotional neglect experiences and later-life involvement in HIV risk behaviors is not a straightforward one. Rather, childhood maltreatment experiences appear to interact with a variety of other factors, all of which converge and "conspire" to shape men's HIV risk behavior profiles.
- \$ Emotional neglect during the formative years appears to influence adulthood HIV risk behavior practices indirectly. Primarily, emotional neglect appears to have an adverse effect on self-esteem, which in turn has an adverse effect on how men feel about using condoms.

Figure 1:
Conceptual Model

Figure 2:
Structural Equation Model

Table 1

Prevalence of Emotional Neglect

	Never	Rarely or Sometimes	Often or Very Often
People in your family felt close to each other	43.3	45.3	20.4
You felt loved	49.2	36.2	14.6
Someone in your family helped you feel important or special	39.5	45.0	15.5
People in your family looked out for each other	42.9	42.5	15.6
Your family was a source of strength and support	40.7	41.9	17.3