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Authors

Choe, Lina

Anderson, Jocelyn

Draughon Moret, Jessica

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Psychosocial Health Factors Among Men Reporting Recent Sexual Assault

Jessica Draughon Moret, PhD, RN¹, Lina Choe, BS², Jocelyn C. Anderson, PhD, RN, SANE-A²

¹Betty Irene Moore School of Nursing at UC Davis, Sacramento, CA

²Pennsylvania State University, Ross and Carol Nese College of Nursing, University Park, PA

Abstract

Aim: Describe psychosocial health factors in a community sample of men who sought care for sexual assault in the previous three months and who were recruited using internet-based methods.

Methods: The cross-sectional survey assessed factors related to HIV PEP uptake and adherence post-sexual assault: HIV risk perception, HIV PEP self-efficacy, mental health symptoms, social responses to sexual assault disclosure, PEP costs, negative health habits, and social support.

Results: There were 69 men in the sample. Participants reported high levels of perceived social support. A high proportion reported symptoms of depression (n=44, 64%) and PTSD (n=48, 70%) consistent with cutoffs for clinical diagnoses. Just over a quarter of participants reported past 30 day illicit substance use (n=20, 29%), and 45 (65%) people reported weekly binge drinking (6 or more drinks on one occasion).

Potential impact of this work on health equity and forensic nursing: Men are underrepresented in sexual assault research and clinical care. We highlight similarities and differences between our sample and prior clinical samples, and outline needs for future research and interventions.

Conclusions: Men in our sample were highly fearful of acquiring HIV, initiated HIV PEP, and completed or were actively taking HIV PEP at the time of data collection despite high rates of mental health symptoms and physical side effects. These findings suggest that forensic nurses not only need to be prepared to provide comprehensive counseling and care to patients about HIV risk and prevention options, but also to address the unique follow up needs of this population.

Keywords

sexual assault; men; care seeking; HIV postexposure prophylaxis (HIV PEP)

Sexual violence perpetrated against men is under-studied (McLean, 2013). The National Intimate Partner and Sexual Violence survey estimates approximately 42% of men in the United States (US) experience completed or attempted penetrative sexual assault, with over 10% of men reporting being made to penetrate another person during their lifetime, and

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nearly a third (30%) endorsing contact sexual victimization during their lifetime (Basile et al., 2022). Prevalence estimates from the literature are higher ranging from 21% to 66% (Depraetere et al., 2020; Peterson et al., 2011). Men are less likely to formally report sexually assault (Hahn et al., 2020). Only 15% of sexual assaults against men are reported—compared to approximately 30% of sexual assaults against women (Weiss, 2010). While rates of reporting to informal sources of support may be higher (Eisenberg et al., Porta, 2021), the underreporting of sexual assault against men makes it difficult to determine how many men seek help following assault (Weiss, 2010).

As opposed to *reporting*, which is typically an interaction with delegates of the legal system, *help-seeking* may include connecting with community-based advocacy services, or for the purposes of the present analysis, seeking medical and forensic care following a sexual assault. Men are more likely to seek medical and forensic care following assault if physical violence also occurred (Light & Monk-Turner, 2009; Masho & Alvanzo, 2010). A recent metaanalysis estimates concurrent physical violence in 58% of male-on-male sexual assault (Ioannou et al., 2017). Men are also more likely to report sexual assault if they were under threat (Hahn et al., 2020; Masho & Alvanzo, 2010). Unlike women who are more likely to seek care in the rare circumstance of “stranger rape”; men are six times more likely to seek professional care if they were sexually assaulted by friends or family (Masho & Alvanzo, 2010).

Once healthcare is sought, men may not disclose whether an injury stemmed from sexual violence, thus, healthcare professionals would not think to provide post-sexual assault care elements such as prophylactic treatment for sexually transmitted infections (Light & Monk-Turner, 2009; Turchik & Edwards, 2012). In one study, participants were less likely to acknowledge their experience as “rape” if the perpetrator was female, however, they were still more likely to report if physical violence was involved (Artime et al., 2014). This fear is not unfounded, as there is evidence of bias in both police response (Javaid, 2015) and healthcare professionals treating men who have been sexually assaulted (Anderson & Quinn, 2009).

In addition to fear of provider bias, personal acceptance of rape myths and internal stigma may also prevent men from seeking care. Multiple studies over the past three decades found that approximately 1 in 5 men endorse male rape myths. Examples of male rape myths include “men cannot be sexually assaulted”, “men cannot be sexually assaulted by women” and “men are less traumatized by sexual assault than women;” (Chapleau et al., 2008; Hahn et al., 2020; Struckman-Johnson & Struckman-Johnson, 1992; Walfield, 2018).

Other barriers to men seeking medical or forensic care following sexual assault have been reported in the literature. More than one survey reported and ranked multiple barriers to help-seeking. In samples of college age men (Allen et al., 2015; Champlin et al., 2017; Hahn et al., 2020), and one sample of survivors of military sexual trauma (Turchik et al., 2013), respondents perceived feelings of shame, guilt, embarrassment, and fear of not being believed as negatively impacting help seeking post-sexual assault (Allen et al., 2015; Champlin et al., 2017; Turchik et al., 2013). They did not want to risk family and friends finding out (Allen et al., 2015; Turchik et al., 2013), and similarly they did not want to

be perceived as gay (Allen et al., 2015; Hahn et al., 2020). Perceiving disclosing sexual violence as synonymous with a loss of masculinity is also consistent with the broader literature (Stemple & Meyer, 2014; Walfield, 2018). While these studies were conducted and published within the past decade, they echo classic work with a community based-sample of help-seeking men conducted by Groth and Burgess (1980) who reported embarrassment, not being believed, and a loss of masculinity; all negatively impacting help-seeking and disclosure. Together, these examples spanning four decades, demonstrate the stagnation of research on male-identifying samples seeking medical and forensic care following sexual assault.

Likely as a result of lack of care seeking, men experience similar negative psychological outcomes to women following traumatic experiences such as sexual violence (Gavranidou & Rosner, 2003; Kimerling et al., 2002; Turchik & Edwards, 2012). Psychological trauma is highly likely following incidences of sexual violence. Up to seventy percent of men report feeling moderate to severe distress (Langton & Truman, 2014). Sexual violence against men increases the risk of experiencing social dysfunction, low self-worth, guilt, shame, anxiety, depression, post-traumatic stress disorder (PTSD), or suicidal thoughts (Turchik & Edwards, 2012; Walker, et al., 2005). Physical health outcomes have also been noted. In a nationally representative sample, sexual assault was associated with conditions such as stroke, high cholesterol, cigarette smoking, excessive alcohol use, and joint disease (Smith & Breiding, 2011).

In summary, there is a high rate of sexual assault of men in the United States today, largely untreated, unreported, and under-studied, with the potential for numerous negative sequelae. Therefore, we aim to characterize a subsample of men who sought care following a recent sexual assault. Information regarding the mental health, social support, and stigma men report prior to and during care seeking may be important factors in their trajectories toward healing.

Methods

This analysis is part of a larger cross-sectional survey to examine HIV postexposure prophylaxis (PEP) acceptance and completion behaviors among a sample of sexual assault patients. The study collected anonymous data via a web-based survey between October 2017 and January 2020. Participants were recruited via social media posts (e.g., Facebook, LinkedIn, and Twitter) and Craigslist ads and a University hosted recruitment site. Data were collected using a secure survey platform and database designed for the study and housed at the University of California Davis. Participants were able to complete the survey completely anonymously or provide an email address in order to receive a \$15 electronic Amazon gift card. At the close of data collection, participants could elect to be contacted for future research opportunities. The study was approved by the University of California Davis Institutional Review Board #882286.

Inclusion, Exclusion, and Participant Verification

Inclusion criteria were: 1) Age 18 or older; 2) experienced a sexual assault in the past 3 months; 3) sought medical care; 4) offered HIV PEP; 5) able to complete study procedures

in English. Technology-based and survey strategies were used to ensure participants were unique humans meeting inclusion criteria.

Technology-based strategies included: email address and internet protocol (IP) address validation. Email addresses were reviewed for duplicates and then cross referenced with a third-party email validator which checked the likelihood of the email address being used by a person rather than a scammer or bot. IP addresses were reviewed for duplications and to ensure they were not on a blacklist or from an anonymous proxy. Email addresses and IP addresses were stored in a separate non-linked database.

Survey measures to ensure eligibility included verification of participant understanding of the elements of consent, scoring higher than 25% on an automated online version of the Short Test Of Functional Health Literacy in Adults (STOFHLA) prior to enrollment (Baker et al., 1999), and assessment of what the length of time medications were prescribed to patients (“one time dose” vs “one month”) to distinguish HIV PEP from other commonly prescribed post-sexual assault care medications (e.g. pregnancy prophylaxis or gonorrhea/chlamydia prophylaxis) that are typically given as a one time dose at the time of a health care visit. We used the free text item number of cigarettes the participant reported smoking on an average day as an attention check with responses that were >80 (4 packs) per day being ineligible. For this sub-analysis, we present data from eligible participants who also identified their gender as “male” during enrollment, participants who identified as “female” or “transgender” on the survey options are not included in this analysis.

Measures

The parent-study survey included several measures to assess factors known in the literature to be associated with HIV PEP acceptance and adherence or HIV medication adherence more broadly (Draughon et al., 2014; Draughon et al., 2015; Draughon & Sheridan, 2012; Draughon, 2013; Draughon Moret et al., 2016; Draughon Moret et al., 2021). These were organized in domains adapted from the Theory of Reasoned Action/Theory of Planned Behavior: personal factors, cognitive factors, mental health, barriers, and facilitators—all of which contribute to behavioral intentions (decision to initiate HIV PEP) and downstream to ultimate behaviors (completion of HIV PEP) (Draughon, 2013; Montaña & Kasprzyk, 2008).

Personal Factors—Measured demographics included gender, age, race, ethnicity, education level, annual household income, use of community/social services (e.g. women infants, and children or WIC, temporary assistance for needy families or TANF). Health Literacy was measured with the STOFHLA, a valid and reliable measure of functional health literacy (Baker et al., 1999). The STOFHLA scoring ranges from 0–36, with 17–22 considered “marginal” and 23–36 considered “adequate” health literacy levels.

Cognitive Factors—HIV risk perception was measured with two Likert scale items, one specific to during the assault and one specific to after the assault (Resnick et al., 2002). Response options were “not at all”, “somewhat”, and “extremely”.

Self efficacy was assessed by categorical response to “how confident are you in your ability to take the full 28-day course of HIV postexposure prophylaxis medications as prescribed?” Response options were not at all confident, somewhat confident, mostly confident, and completely confident. This question was adapted from an adherence self-efficacy question used in antiretroviral adherence studies (Chesney, Ickovics, & Changers, 2000) and has previously been used by the authors Draughon, 2013.

Mental Health—Mental health symptoms were measured using the post-traumatic stress disorder (PTSD) Checklist Civilian version (PCL-C) and 10-item version of the Center for Epidemiological Studies Depression Scale (CESD-10) (Blanchard et al., 1996; Zhang et al., 2012). Both scales have been used in the general population, HIV, and sexual violence research, and have established cut points consistent with clinical diagnoses. For this analysis, cut points of 10 on the CESD-10 and 30 on the PCL-C were used as proxies for clinically significant symptomatology (Blanchard et al., 1996; Zhang et al., 2012).

Barriers—Social responses to disclosure of sexual violence were measured using the Social Reactions Questionnaire (SRQ) (Ullman, 2000). The SRQ is a 48-item measure with 7 subscales to capture the types of response individuals may note when sharing their sexual violence experience such as being treated differently, distraction, taking control, providing tangible support, making the assault about them, or victim blaming. Participants indicated how often they received each reaction ranging from 0 = “never” to 4 = “always”.

Cost of the medications was assessed by categorical response to the question of “who paid for the anti-HIV pills?” (Insurance/Copay, Free, Self, Other). And, the follow up for those who indicated self pay: “How much did the anti-HIV pills cost?” (less than \$500, \$500–1,000, \$1,001–1,500, \$1,501–2,000, more than \$2,000).

Substance use and binge drinking were assessed by items “have you taken any illegal drugs in the past 30 days?” and one item from the Alcohol Use Disorders Identification Test (AUDIT): “How often do you have six or more drinks on one occasion?” (Bohn et al., 1995). Individuals who answered “yes” to the illicit substance item were provided with a series of additional items from the Addiction Severity Index - Drug Abuse Scale to collect details of specific substance, route, and frequency (McLellan et al., 1992).

Facilitators—Social Support was measured using the Multidimensional Scale of Perceived Social Support (MSPSS) (Dahlem et al., 1991; Zimet et al., 1990). This 12-item scale includes friends, family, and significant other subscales and has been used in assessing job stress (Wu et al., 2021), substance use and violence in young transgender and gender diverse people (Newcomb et al., 2020), and depression and sleep (Grey et al., 2020).

Analysis

Descriptive statistics (e.g. means, medians, quartiles) were used to examine the data. Summary scores and cut points were used for measures that have been previously described in the literature. Cronbach’s α were calculated using our sample for scales to assess reliability and internal consistency and are reported with the results. STATA version 16.1 was used for data analyses.

Results

For the parent study 4,558 people were screened, 909 were eligible based on initial survey screening. Of those, 228 were included in the parent study after completing the full verification process. For this sample we excluded an additional 156 women, 1 transgender person, and 2 people who did not specify a gender during the survey limiting our sample to 69 cisgender men.

Personal Factors

Demographics—The sample consisted of 69 cisgender men reporting a past 3 month sexual assault, seeking health care, and being offered HIV PEP. Participants were referred to the survey primarily via social media (n=43, 62%), with another third (n=24, 35%) being referred by friends or family, and the remaining (n=2, 3%) being referred by health care providers or another source. Nearly half the sample was between the ages of 25 and 30 years (n=33, 48%). Over two-thirds were White (n=48, 71%), 19% Black (n=13), and nearly 1 in 4 reported a Hispanic ethnicity (n=16, 24%). Approximately half the sample completed high school (n=33, 48%), all were currently employed, and all but two (n=67, 97%) had health insurance. Table 1 presents additional details.

Health Literacy—Only 1 participant scored as having marginal health literacy on the STOFHLA (observed $\alpha=0.89$). Of note, this participant is the only person in the sample who did not initiate HIV PEP. All other participants scored as having adequate health literacy (68 out of 69, 99%).

Cognitive Factors

HIV risk perception—Over two-thirds of the sample reported being extremely fearful of HIV during the assault (n=53, 77%) and a similar proportion reported being extremely fearful of HIV after the assault (n=54, 78%).

Self-efficacy—Of the 68 participants who initiated PEP, over half reported being completely confident in their ability to take HIV PEP for 28 days (n=37, 54%), with 28 (41%) being mostly confident, and 3 (4%) reporting being only somewhat confident.

Mental Health

A high proportion of the sample reported symptoms of depression (n=44, 64%), PTSD (n=48, 70%), or both (n=53, 77%) consistent with cutoffs for clinical diagnoses (observed $\alpha=0.78$ for the CES-D10, and $\alpha=0.94$ for the PCL-C). Table 2 presents a summary of results for mental health, barriers, and facilitators to HIV PEP acceptance and completion.

Barriers

HIV PEP side effects—Side effect data was reported by 66 of the 68 men who initiated HIV PEP. In total, 66 (97%) reported any side effect of any duration during the time they were taking PEP. Complete frequency and severity data is available in Table 3.

Cost of the medications—All but three of the participants who initiated PEP (n=65, 96%) reported that PEP was either paid for by insurance plus a copay (n=60, 88%) or free (n=5, 7%). For the three participants who had to pay out of pocket, one reported paying \$500 or less, and two reported paying between \$1,001 and \$1,500.

Social Responses to Disclosure of Sexual Violence—Participants reported high levels of the two positive social response categories—tangible support (M: 2.81, SD: 0.83) and displaying belief in the survivor (M: 2.80, SD: 0.64) from the people they disclosed being sexual assaulted to (theoretical range 0 – 4). However, frequencies of making the situation about the support person (M: 2.27, SD: 0.56) and attempting to distract the person (M: 2.17, SD: 0.52) were also high (additional response categories presented in Table 2). The Cronbach's α observed in our sample was 0.96.

Substance Use—Just over a quarter of participants reported past 30-day illicit substance use (n=20, 29%). Reported substances included: marijuana (n=9), cocaine (n=6), and hallucinogens (n=3), opiates (n=2), and methadone (n=1). Additionally, seven participants noted they used more than one substance during the past month. Just over two-thirds (n=45, 65%) of participants reported weekly binge drinking (6 or more drinks on one occasion).

Facilitators

Social Support—The sample reported high levels of perceived social support with a mean score of 5.32 (theoretical range 1–7; sample range 2.23–6.92, SD 1.250). Men reported receiving social support from all groups included in the scale including significant others (5.46, SD 1.27), family (5.27, SD 1.31), and friends (M 5.22, SD 1.28). The observed Cronbach's α was 0.97.

Behavioral Intention and Completion—Of the 69 men in the sample, 68 (98.55%) initiated HIV PEP. At the time of data collection, 40 (58.82%) had completed the full course, 26 (38.24%) were still taking the medications, and 3 (4.41%) reported discontinuing the medications before completing the full 28 days.

Discussion

Our results add to the paltry literature on the experiences of men who experience sexual assault and more specifically men who seek acute medical and forensic care following sexual assault. We provide a description of an internet-recruited, community-based sample that demonstrates an overall well educated and employed group of men, who were able to access post sexual assault care. We cannot determine whether this set of demographics comes from our recruitment methods (which can bias towards people with the time, means, and desire to access and participate in research) or from a previously undetected trend in men who seek care to have higher education, health literacy, and employment levels than men who do not seek care after sexual assault. This finding requires additional research to assess which men are and are not seeking care following sexual assault using multi-method and multisite studies.

From a theoretical perspective, high levels of fear regarding HIV (77% during the assault, and 78% after the assault) should result in high levels of PEP uptake. Similarly, higher levels of self-efficacy to complete HIV PEP (90% of the sample endorsed being mostly or completely confident) should also result in high levels of PEP uptake and adherence. Both of these relationships are supported in this sample—all but one participant initiated PEP, and only three had discontinued PEP at the time of survey completion. Additional research is needed to support these potential relationships statistically.

Consistent with both the more robust literature examining men who experienced sexual abuse in childhood and the literature about adolescent boys and adult men who experience sexual violence (Langton & Truman, 2014; Peterson et al., 2011), high levels of post-traumatic stress symptoms and depression were noted in our sample. Over three-quarters scored higher than clinical cut points for either depression or PTSD. It is possible that our estimates are so much higher than prior research (21%) (Ratner et al., 2003) due to the recency of the assault in our sample, as compared to lifetime experiences. Participants in our sample also reported high levels of illicit substance use (29%) and weekly binge drinking (65%). This result is much higher than previous estimates of problem drinking (23%) in men who report experiencing sexual assault in their lifetime (Ratner et al., 2003).

The overall high rate of side effects is consistent with other work on HIV PEP (Abrahams & Jewkes, 2010; Garcia et al., 2005; Inciarte et al., 2020; Krause et al., 2014; Leal et al., 2016; Sonder et al., 2010; Vetten & Haffejee, 2005, 2008). Although the U.S. Centers for Disease Control and Prevention updated their HIV PEP Guidelines in 2016 (Centers for Disease Control and Prevention, 2016) to include medication regimens with more tolerable side-effect profiles prior to data collection for this study, it is apparent that PEP and associated side effects still interfere with sexual assault survivors' daily life (Abrahams & Jewkes, 2010; Draughon Moret et al., 2021).

The moderate social support reported by the sample supports prior literature describing reasons men may resist seeking care. Our sample of help-seeking participants may have had enough social support to overcome barriers such as concerns regarding whether family or friends found out about the assault (Allen et al., 2015; Turchik et al., 2013). In a qualitative study by Petersson and Plantin (2019), participants reported disclosing their assault to family and friends by mentioning that it had happened, but declined to discuss any further. Similarly social support was positively correlated with experiencing more positive social reactions after disclosing the assault and negatively correlated with negative social reactions. It is possible that social support mitigates the negative social reactions post-sexual assault participants experience (Sivagurunathan et al., 2019). Social support may also assist patients in overcoming gender-norms and myths about male rape (Hahn et al., 2020).

Implications for Forensic Nurses

In individual site clinical samples, men typically make up a small proportion of patients seen (Breiding et al., 2014; Du Mont et al., 2013; Larsen & Hilden, 2016; Smith et al., 2017; Young et al., 2018). This makes identifying areas of success in providing care or areas for outreach and continuous quality improvement for men difficult.

The high rates of PTSD, depression, and substance use we noted in this sample suggest a need to embed or link acute forensic nursing care with access to these long-term services. Work completed with other samples suggests that patients who seek acute forensic nursing care report a sense of safety and support during the time they are with the forensic nurse, but that lack of follow up and negative messages from other sources (e.g. law enforcement, friends, family, co-workers) leads to withdrawing from care and an increase in mental health symptomatology (Wright et al., in press). As a participant in one study noted: “cause there was so much caring and then it was just done...as soon as I walk through that magically locked door...catch ya later...” (Draughon, 2013b). Creating better systemic follow up mechanisms and increasing collaboration with multidisciplinary teams to address patients who are “lost to follow up” are potential ways to address these concerning findings.

Regarding HIV PEP, men reported both high levels of fear of acquiring HIV during and after the assault. This finding suggests that forensic nurses should be prepared to have clear, evidence-based discussions about HIV and HIV PEP. The specific impact of fear on decision making around care seeking, HIV PEP initiation, and HIV PEP completion should also be explored in future larger scale research.

Men also reported many side effects. While only three men reported stopping the medications at the time of data collection, additional data collection timepoints would be necessary to determine whether side effects were associated with PEP cessation as 26 (38.24%) were still taking the medications. Recognizing that side effects are common (presumably even with newer HIV medications given a data collection timeframe beginning in 2017 after the most recent Centers for Disease Control and Prevention (CDC) Guidelines were released (Centers for Disease Control and Prevention, 2016)) and have a range of severities and frequencies is another opportunity for clinical intervention. Forensic nurses should be prepared to provide information regarding potential side effects, and perhaps more importantly, what patients should do if they have side effects. Unlike patients taking HIV medications for treatment or even pre-exposure prophylaxis (PrEP), the decision to take PEP currently has a very limited time frame and typically must be made “in the moment” during an acute care encounter (Centers for Disease Control and Prevention, 2016; Mwamba et al., 2022; Robertson, et al., 2020). Given this limitation of the current medication regimens and care models, the settings most commonly prescribing PEP (e.g. emergency departments, health department) means the likelihood that patients have a long term relationship with a trusted provider to counsel them on the side effects is low (Chacko et al., 2012).

From a policy perspective, the regularly changing world of new antiretrovirals present opportunities for forensic nurses to collaborate with local, state, and federal policy makers to more regularly and rapidly update guidelines to provide post-sexual assault patients access to the most tolerable medications. As one recent study noted, a once-a-day multi drug formulation for HIV PEP was more tolerable from both a side effect standpoint and was successfully completed by more patients than other regimens (Mayer et al., 2022). Malinverni and colleagues (Malinverni et al., 2021) also report overall higher adherence to HIV PEP with a single-tablet multi formulation, although lower rates of adherence in those exposed via sexual assault. These studies were not conducted in forensic nursing specific contexts which we have seen to have uniquely challenging concerns for follow up, HIV

PEP completion, and patient decision making (Draughon Moret et al., 2021; Scannell et al., 2018). Lag time in updating guidelines and payor restrictions may limit access to better tolerated options for forensic patients.

Limitations

Recruitment via the internet presented contrasting strengths and limitations. It presented us with a sample that is demographically atypical of what we see presented in samples from individual clinical sites in our ability to recruit a high proportion of men into a post-health care sexual violence study. Given men report care seeking at rates lower than women and make up a small proportion of (2–4%) of reported care seeking samples (Breiding et al., 2014; Du Mont et al., 2013; Larsen & Hilden, 2016), this represents a helpful addition to the literature. This allowed us to use a nationwide, anonymous, internet-based sample to learn more about the psychosocial factors related to HIV PEP uptake and adherence among men who sought acute medical care following sexual assault.

While our sample was larger than other recent samples of acute care seeking men (Du Mont et al., 2013; Young et al., 2018), it was still not large enough to conduct robust statistical analyses. Additionally, as the primary aim of the parent study was not to conduct gender specific outcome analyses, limiting our analysis to the descriptive results presented here was the most prudent approach. A third limitation of the dataset itself was the measure of gender used, a one-item, single select measure was used to determine gender with three selection options (male, female, transgender). More inclusive measurement items that accurately reflect the range of gender identities and sex assigned at birth categories would perhaps better capture patient experiences.

These internet-based methods, however forced us to rely entirely on our survey measures prior validity and the assumption that they performed adequately in capturing data in this sample as we have no other way of triangulating or verifying data (e.g., medical records, follow up surveys or interviews) that are available to us in other study contexts. Additional prospective, multisite and internet-based research is needed to more fully understand the experiences of men who have been sexually assaulted and present for medical care.

Conclusion

Despite evidence that suggests men are exposed to significant amounts of sexual violence, they represent a small proportion of those who present for acute medical care following sexual assault and are underrepresented in clinical research (Du Mont et al., 2013; Smith et al., 2017; Young et al., 2018). Using internet-based recruitment and data collection techniques, we were able to recruit a sample that included a modest sized group of care seeking men, adding to the literature from more traditional clinical or nationally representative samples.

Our findings highlight that the men who presented for care and participated in an online research study were demographically different than those that have been described as experiencing sexual violence in population based studies (Breiding et al., 2014). Of clinical significance, we found that men in our sample were highly fearful of acquiring HIV,

overwhelmingly initiated HIV PEP, and completed or were actively taking the medications at the time of data collection despite high rates of mental health symptoms and physical side effects. These findings suggest that forensic nurses not only need to be adequately prepared to provide comprehensive counseling and care to patients about HIV risk and prevention options, but also to address the follow up needs these patients have.

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Table 1.

Personal Factors: Demographics and Health Literacy

Variable	n (n=69)	%
<i>Age</i>		
19–24	14	20.29
25–30	33	47.83
31–35	5	7.25
36+	17	24.64
<i>Hispanic (1 missing)</i>		
Yes	16	23.53
No	52	75.36
<i>Race</i>		
Asian	6	8.82
Black	13	19.12
Hawaiian/API	1	1.47
White (race 1 missing)	48	70.59
<i>Highest level of education (1 missing)</i>		
Less than high school	7	10.14
High school diploma/GED	33	47.83
Some college	10	14.49
College degree	19	27.54
<i>Employed</i>	69	100
<i>Health Insurance</i>		
Yes	67	97.1
No	2	2.9
<i>Income</i>		
Monthly <\$1,200	6	8.7
Monthly \$1,201–2,000	2	2.9
Monthly >\$2000	61	88.41
<i>Public Assistance</i>		
Yes	8	11.59
No	61	88.41
<i>Functional Health Literacy</i>		
Adequate	68	98.55
Marginal	1	1.45

Notes: Proportions may not total 100% due to missing data.

Table 2.**Barriers and Facilitators to Participant Acceptance and Completion of HIV PEP**

	n	%	M	SD
Barriers				
<i>Side Effects (any reported side effect)**</i>	66	97.06		
<i>How were medications paid for?***</i>				
Insurance & copay	60	88.24		
Free	5	7.35		
Out of Pocket	3	4.41		
<i>Out of pocket cost *</i>				
<\$500	1	1.47		
\$1,001 – \$1,500	2	2.94		
<i>Social Reactions to Disclosure of Sexual Violence</i>				
Believe the survivor			2.801	0.638
Treat the survivor differently			1.072	0.844
Attempt to distract the survivor			2.169	0.518
Take control of the situation			1.373	0.673
Provide tangible support(s)			2.808	0.83
Blame the survivor			1.159	0.9121
Make the situation about themselves instead of the survivor			2.272	0.56
<i>Binge drinking weekly</i>	45	65.22		
<i>Substance Use (any reported past 30 day illicit substance use)</i>				
methadone	1	1.45		
opiates	2	2.9		
cocaine	6	8.7		
marijuana	9	13.04		
hallucinogens	3	4.41		
methamphetamines/amphetamines	0	0		
<i>>1 substance per day (including alcohol) in the past 30 days</i>	7	10.14		
Facilitators				
<i>Social Support</i>				
Overall			5.319	1.25
Family			5.269	1.31
Friend			5.223	1.275
Significant Other			5.464	1.269
Mental Health				
Symptoms of PTSD	48	69.57		
Symptoms of depression	44	63.77		
Symptoms of PTSD or depression	53	76.81		

Notes: Binge drinking defined as an instance of more than 6 drinks on one occasion; PTSD symptoms defined as >30 on PCL; symptoms of depression defined as score of >10 on CESD

* Categories with no participant responses not displayed

** n=68 questions only asked for participants who initiated HIV PEP

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Table 3.

Participant report HIV PEP side effects (n=68 patients who initiated HIV PEP)

Symptom	Proportion	%	Reported Frequency			Intensity	
			Once	Weekly	2-3x/week	Mild	Moderate
Diarrhea	8	12.12	Once	1	Mild	6	
			Weekly	3	Moderate	2	
			2-3x/week	2	Severe	0	
			Almost every day	2			
			Daily	0			
Nausea	25	37.88	Once	2	Mild	3	
			Weekly	3	Moderate	15	
			2-3x/week	10	Severe	7	
			Almost every day	7			
			Daily	3			
Vomiting	14	21.21	Once	0	Mild	6	
			Weekly	7	Moderate	8	
			2-3x/week	0	Severe	0	
			Almost every day	7			
			Daily	0			
Fatigue	16	24.24	Once	2	Mild	4	
			Weekly	2	Moderate	9	
			2-3x/week	5	Severe	3	
			Almost every day	6			
			Daily	1			
Headache	19	28.79	Once	4	Mild	10	
			Weekly	4	Moderate	9	
			2-3x/week	6	Severe	0	
			Almost every day	4			
			Daily	1			
Abdominal Pain	6	9.09	Once	0	Mild	6	
			Weekly	0	Moderate	0	
			2-3x/week	4	Severe	0	
			Almost every day	2			
			Daily	0			
Insomnia	4	6.06	Once	0	Mild	6	
			Weekly	0	Moderate	2	
			2-3x/week	3	Severe	2	
			Almost every day	1			
			Daily	0			
Muscle Aches	5	7.58	Once	1	Mild	3	
			Weekly	2	Moderate	2	
			2-3x/week	1	Severe	0	
			Almost every day	1			

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Symptom	Proportion	%	Reported Frequency		Intensity	
Dizziness	14	21.21	Daily	0		
			Once	1	Mild	4
			Weekly	2	Moderate	10
			2-3x/week	8	Severe	0
			Almost every day	3		
			Daily	0		

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