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Abuse experiences, substance use and reproductive health in women seeking care at an emergency department

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Abstract

Introduction—Abuse experiences can have negative health consequences for women. Many women present to the emergency department for episodic, non-emergent care and may have unique needs as survivors of abuse. The purpose of this study was to describe child sexual abuse experiences, intimate partner violence, substance use, and reproductive health outcomes in a sample of adult women who were seeking care from a rural emergency department to better understand the health care needs of this unique population.

Methods—One hundred forty-five (145) adult women (18- 45 years old) were recruited at an emergency department in southeastern United States. Questionnaires were used to assess for demographic characteristics, history of child sexual abuse (CSA), intimate partner violence (IPV), reproductive health, and substance use.

Results—In the sample, 42.8% (n = 62) women reported a positive history of CSA and 34.7% (n = 49) experienced past year intimate partner physical violence. Over 46% (n = 65) of the women had harmful drinking patterns in the past year and greater than 50% reported some type of substance use in the past 3 months. Women who experienced CSA had significantly greater number of lifetime sexual partners, were more likely to report pain with sexual intercourse, and report a past medical history of abnormal pap smear.

Discussion—The women in this sample had high rates of abuse, harmful drinking patterns, substance use and were at risk for sexually transmitted infections. Through screening for lifetime

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violence, including sexual violence, emergency nurses can be an important liaison between women who have experienced CSA and appropriate referrals within the health care system.

Introduction

Child sexual abuse and its consequences represent a significant health care burden. Child sexual abuse (CSA) as defined by the Centers for Disease Control and Prevention (2010)[1] is a type of child maltreatment involving words or overt actions, sexual in nature, that cause harm, potential harm, or threat of harm to a child. Estimating rates of CSA is difficult due to differences in measurement, definition, and low disclosure rate.[2] A recent meta-analysis of international studies found that 19.7% of women suffered some form of sexual abuse prior to age 18.[3] In the U.S., it has been estimated that up to 25% of women have reported sexual abuse as children.[4]

CSA has been linked to long-term health problems, including increased utilization of health care services, risky sexual behaviors, gastrointestinal issues, and increased incidences of reproductive, psychological, and health problems.[5-8] Additionally, women who have experienced CSA are at an increased risk for re-victimization in adulthood.[9] Understanding the health care needs of women who have experienced CSA is important to providing effective care. The purpose of this study was to describe the abuse experiences, substance use patterns and reproductive health of a sample of women who sought health care in the emergency department to better understand this complex population.

Women who experience CSA are at increased risk for reproductive and sexual problems as adults. In one study researchers examined the persistence of risky sexual behaviors in a birth cohort of men and women.[8] In this study, 30% of the 465 female participants reported CSA and had increased rates of sexual partners, sexually transmitted infections (STIs), unplanned pregnancies and pregnancy terminations when compared to participants who did not report CSA. Researchers have also documented increased rates of unprotected sex, casual sex, and sexual re-victimization in adulthood among CSA victims.[9] Additional reproductive health consequences of CSA include sexual victimization through prostitution, trading sex for drugs, money, or shelter, and an increased risk for HIV and sexually transmitted infections.[10-13]

Numerous researchers have documented the association between CSA and alcohol abuse in adulthood, [14-16] and there is evidence to suggest that the association between CSA and alcohol abuse also exists in adolescence. One study of 2,187 male and female adolescents, ages 10-12, found that study participants who reported a positive history of CSA were more than 3 times as likely to have higher alcohol intake as their non-abused peers.[17] A history of CSA has also been linked to an increased risk of polysubstance use in adolescence.[18]

In addition to the association between CSA and substance use, women with a history of CSA report more somatic symptoms and utilize health care services more often than women without a history of CSA.[19] One study found that compared with non-abused study participants, women with a history of CSA reported more medical office visits, emergency department visits, and health problems. [20] More recently, researchers reported an association

between CSA and frequent emergency department visits and a self-rating of personal health as poor or fair. [5]

Although the prevalence and negative sequelae of CSA has been well established, less is known about the prevalence of CSA among women who utilize emergency department services. Feldhaus, Houry & Kaminsky[21] investigated lifetime sexual assault prevalence rates among women who presented for care at an urban Level I trauma center. Of the 360 study participants, 30% reported the assault happened when they were age 15 or younger, but analysis of assault characteristics and reporting patterns was limited to those who had experienced assault as an adult. Other research exists that documents medical care of children who present to the emergency department with suspicion of sexual abuse, but little work has been done to examine the sexual health and risk behaviors of women who have experienced CSA.[22]

Mandatory screening for domestic violence exists but there are no current universal recommendations for screening for previous or lifetime trauma such as child sexual abuse.[23] The literature clearly demonstrates a relationship between a history of CSA and increased negative health outcomes. Therefore the purpose of this study was to describe abuse experiences, substance use patterns, and sexual health in a sample of women who sought care in an emergency department to better understand the health care needs of this unique population of women.

Methods

Study design

This paper is a descriptive analysis of a sample of women recruited from an Emergency Department (n = 145) as part of the Women's Health Study.[24] University Institutional Review Board approval for the protocol was obtained. All participants completed an informed consent.

Sample and Setting

A convenience sample of 145 women seeking care (no traumatic or serious emergency issues) at an emergency department in southeast United States was recruited. Eligibility criteria included (a) women between the ages of 18 - 45 years (sexually active in the past year), (b) seeking healthcare (no trauma or serious illness) (c) ability to understand spoken and written English. The upper age limit of 45 years old was chosen based on studies completed by other researchers.[25-26]

Participants were recruited on site between February and August 2007 after referral from health care providers in the emergency department. ED staff gave women, who met the inclusion criteria, a flyer describing the study and also informed them of a study relating to women's health being conducted. Women who expressed interested were then approached by a member of the research staff to discuss the study in more detail, answer questions, and complete the consent process. Study questionnaires were completed on site after women had been triaged and were waiting to be seen for their ED visit. Most of the time, the researchers had access to a private consultation room to use for the study. After completion

questionnaires were given back to the researcher. All women who consented to participate in the study were paid $20. Additionally, each participant was provided with resource brochures and referral numbers related to substance use, intimate partner violence, and mental health services when questionnaires were returned and the study visit completed. To reduce the potential for selection bias, the ED staff were briefed and updated about the research and study eligibility on a weekly basis by the researchers.

Measures

Demographic characteristics—The demographic questions included age, education, marital status, place of residence, race and ethnicity, and insurance status. Data on race and ethnicity was collected using the National Institutes of Health categories.[27]

Reproductive/sexual health questionnaire—Questions about reproductive and sexual health were asked of women using a researcher-designed questionnaire. Questions asked about number of pregnancies, number of abortions, and sexually transmitted infection history.

Child sexual abuse—Child sexual abuse experiences were measured using "The Severity of Childhood Sexual Abuse Scale (SCSAS)."[28] Child sexual abuse was defined as ever "experiencing any type of sexual incident (exposure, contact, intercourse), with a person who was at least 5 years older, when I was 16 years of age or younger." Scores range from 0 to 14, with higher scores indicating more severe sexual abuse.[28] The reliability coefficient was 0.92 for a sample of 622 women and was 0.88 for this sample. For the analysis, scores were dichotomized and greater than 1 indicated having experienced sexual abuse during childhood.

Intimate partner violence—Past year intimate partner violence was measured using the physical violence (12 items) and sexual coercion (7 items) scales of the revised Conflict Tactics Scale (CTS2). CTS2 items are scored on an 8-point frequency scale. Women were instructed to "Think back over the past year" and indicate "How many times your partner has done each of the behaviors listed on the CTS2." The CTS2 has been found to have good reliability and construct validity.[29, 30] For this sample, the reliability coefficient of the physical violence and sexual coercion scale was 0.93 and 0.83. One or more physically violent or sexually coercive events in the past year were indicative of IPV.

Substance Use—Substance use was measured using the Alcohol, Smoking and Substance Involvement Screening Test (ASSIST) developed for the World Health Organization (WHO).[31] The ASSIST is an 8-item questionnaire assessing tobacco, alcohol, cannabis, cocaine, amphetamine type stimulants, sedatives, hallucinogens, inhalants, opioids, and injection drugs and provides a total substance use score as well as information on 'ever used' and 'past three months use'. 'Ever used' describes use of a substance across a person's lifetime as the ASSIST asks "In your life, have you ever used tobacco, alcohol, etc.?" Validity of the ASSIST has been supported. [32-33] The reliability coefficient for this sample was 0.91. Both 'ever used' and 'past 3 month use' for each of the specific substances was examined in the analysis.

Alcohol misuse—The Alcohol Use Disorders Identification Test-Consumption Items (AUDIT-C) is an alcohol screening instrument consisting of three items and was used to determine alcohol misuse in the past year.[34-35] The items ask about frequency of drinking, quantity consumed at a typical occasion, and frequency of heavy episodic drinking (six standard drinks or more on a single occasion). The AUDIT-C is scored on a scale from 0-12 (0 reflects no alcohol use) and the higher the score, the more likely the participant's drinking is affecting health/safety. According to author guidelines, for women, a score of 3 or more is considered positive for alcohol misuse in the past year and was used as the cutoff for the analysis. [36]

Data Analysis

Descriptive analysis was conducted with SPSS 16.0 (SPSS Inc, Chicago, IL) to determine the prevalence of child sexual abuse and to describe characteristics of the sample. Differences between those women who reported a history of CSA and those with no history of CSA on the background variables of age, race, education, and marital status were assessed. No significance differences were noted on background variables between the two groups. Women with a history of CSA were compared to women with no history of CSA on reproductive health variables using independent sample T-tests/Mann-Whitney U and Chi-Square.

Results

Participant characteristics

The sample consisted of women (n = 145), mean age of 30.1 years (SD = 8.39). Fifty-eight (40.3%) of the sample identified themselves as African-American and nearly 86% (n = 124) of the women had a high school degree or greater. Over 12% (n = 18) reported no insurance and 17.9% (n = 26) reported having 'public' insurance. Demographic characteristics of the study sample are summarized in Table 1. In the sample, 42.8% (n = 62) of the women reported having experienced child sexual abuse (SCSAS), and greater than 34% (n = 49) reported past year physical violence.

Substance use

Ever used—Over 75% (n = 110) of the sample reported having ever used tobacco, 90.3% (n = 131) alcohol, 60.7% (n = 88) cannabis, 24.1% (n = 35) cocaine, 20% (n = 29) amphetamines, 1.4% (n = 2) inhalants, 14.5% (n = 21) sedatives, and 9.6% (n = 14) opioids during their lifetime.

Past 3 months—Twenty three percent of the sample reported 'monthly use' of alcohol while 21% reported 'weekly' and 7% 'daily use' in the past 3 months. Twenty-two percent (22%) reported cannabis, 9.0% cocaine, 5.5% amphetamine, 7.6% sedative, 4.1% hallucinogen, 3.5% opioid, and 1.4% injection drug use in the past 3 months. Both monthly and past 3-month use of substances was measured using the ASSIST.

Alcohol misuse (AUDIT-C)—Over 46% (n = 65) of the women were positive for past year alcohol misuse, scoring greater than 3 on the AUDIT-C. When examining problem

drinking in the past year and abuse status, the relationship was non-significant (p = 0.172); although women who experienced CSA were more likely to report alcohol misuse in the past year (53.3%) compared with women reporting no history of CSA (40.7%).

Reproductive/sexual health of the sample

The mean number of pregnancies for this sample of women was 2.26 with a range of 0-6. The average number of lifetime sexual partners was 10.07 (SD = 13.05) with a range from 1-100. Thirteen (9.1%) of the women reported 25 or more lifetime sex partners. The mean age of 1st intercourse was 16.9 (SD = 5.36). Almost 38% (n = 54) of the women reported have been diagnosed with a sexually transmitted infection during their lifetime, with 10.4% (n = 15) reporting two sexually transmitted infections and nearly 5% (n = 7) reporting 3 or more sexually transmitted infections. Eight (5.7%) of the women have been diagnosed with pelvic inflammatory disease and over 35% (n = 50) reported pain with sexual intercourse.

Abuse status and substance use

Ever used and past 3 month substance use by CSA status is described in Table 2. Having ‘ever used’ was significant between the two groups of women for cannabis, amphetamine, sedative, and opioid use. Women who experienced CSA were more likely to report having ever used cannabis, amphetamines, sedatives, or opioids during their life. Analysis of past 3 months substance use revealed cocaine, sedative, and opioid use to be statistically different between the two groups. Women who experienced CSA were more likely to report past 3 month use for the substances of cocaine, sedatives, and opioids.

CSA and reproductive health outcomes

Table 3 is a comparison of reproductive health outcomes by history of CSA. Abuse status was statistically significant for the number of lifetime sex partners, age of first intercourse, and pain with sexual intercourse. Women with a history of CSA reported more lifetime sexual partners, younger age of first sexual intercourse, and were more likely to report pain with sexual intercourse. In addition, ever being treated for gonorrhea, trichomoniasis, and bacterial vaginosis were significant across abuse status, with women reporting CSA being more likely to have a past medical history of gonorrhea, trichomoniasis, and bacterial vaginosis.

Discussion

Over 42% of our sample had experienced CSA, and almost 35% reported past year physical violence, a rate higher than many studies of women in health care settings. Previous researchers have reported rates ranging from 13.8% to 30.3%. [3,8,37] The higher rates of CSA in this study may have resulted from using an anonymous self-administered questionnaire to collect data. Additionally, the SCSAS used a broad definition of CSA which included exposure as well as contact, which may account for the higher rate in this sample.

A history of CSA has also been linked to alcohol and substance abuse in previous studies. [38-39] It is estimated that drug and alcohol related incidents account for over one million emergency department visits annually.[40-41] Patients who present for care after

substance use or abuse require information about resources, rehabilitation options, and possible psychological evaluation. If history of CSA is a contributing factor to current alcohol and/or substance use, successful treatment will require referral for assistance to process childhood events.

Consistent with other published research, this study sample demonstrated an association between a history of CSA and negative sexual health outcomes, specifically greater lifetime partners, abnormal pap smear results, vaginal infections, and pain with intercourse. These episodic events may cause women to seek care in the emergency department, especially if they do not have a consistent primary care provider. Repeated STIs and multiple partners increase a woman's risk of HIV, and women with a history of CSA may need additional counseling on safer sexual behaviors and condom use.

Limitations

The study had several limitations. First this analysis was done on cross-sectional data and therefore a causal relationship cannot be determined. In addition, while findings support an association between CSA and adverse sexual health, the analysis did not examine mechanisms of the association. Although a frequently used method of data collection, self-report of participant's past alcohol/drug use, STI diagnosis, and abuse experiences may have resulted in bias. Additionally, this study included women who had been sexually active within the past year and the results may not apply to women who had been abstinent for greater than one year. Also the analysis and implications of our study are based upon a sample in which just over 42% of the women experienced child sexual abuse and therefore the authors are cautious related to generalizability. The study utilized a convenience sample drawn from one geographical location, and therefore results may not be generalizable to all populations.

Areas for Future Research

Future research on this complex and sensitive topic is necessary to provide adequate health care to this vulnerable population of women. As this research was descriptive and cross-sectional, future prospective studies may help establish causality between CSA and adult reproductive health behaviors. Additionally, research that includes diverse ethnic and racial groups will increase generalizability. Intervention studies that target risky sexual health behaviors among women with a history of CSA are necessary to identify specific actions nurses can use to promote health among this population of women.

Implications for Emergency Nurses

The findings of this study have important implications for nurses working in the emergency department. Childhood violence and trauma can result in negative health consequences for women, and CSA has been identified as a one of the strongest predictors of re-victimization in adulthood.[42] The emergency department may be the first entry point into the health care system for women who are survivors of CSA and either at risk for or are experiencing health consequences associated with CSA, such as sexually transmitted infections, alcohol and substance use. Therefore, assessment of a woman's lifetime violence history, including

CSA, enables providers to screen for risk and address potential psychosocial and physical consequences.[43]

Emergency department nurses often have limited time in which to complete assessments. When asking about a history of IVP and current safety, nurses can also inquire about abuse during childhood. Incorporating this into violence screening will establish opportunities for patient disclosure of sensitive information. Obtaining this information will also elicit a more thorough history that can be used when developing a comprehensive plan of care.

It is important for patients to feel safe and comfortable when discussing abuse topics. Although standardized screening questions are not commonly used there are ways to gather CSA information in a nonjudgmental and nonthreatening manner. Researchers have tested a brief screening questionnaire that asks about unwanted sexual contact in childhood and found that asking this question as part of the patient history was approximately 85% sensitive for detecting previous CSA.[44] Suggestions for initiating discussion include statements such as “We ask all patients about safety and violence. I’m going to ask you some questions about physical, emotional, and sexual violence, including things that may have happened when you were a child.” Wording can be adapted from screening questionnaires and adjusted for the patient’s age and specific situation. This starts a dialogue that fosters an environment of trust and caring.

If a history of CSA is disclosed, patients can be offered referrals if they wish to consider counseling. Emergency departments should have a list of local support groups, phone numbers for abuse hotlines, and individual and group therapy providers. Social work services at the hospital may also be an option. Patients can decide individually if they want to utilize these services but emergency department nurses can play a pivotal role in the initial access of follow-up care.

Conclusions

History of sexual abuse in childhood can have negative health outcomes for women that continue into adulthood. These may include STIs, reproductive complaints, alcohol and substance use and abuse. Women may seek care for these episodic health issues in the emergency department. Increased awareness and screening of lifetime violence, including CSA, is a necessary first step to identifying women who may need ongoing and long-term follow up care to address abuse issues that are contributing to risk behaviors and negative health outcomes.

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Table 1

Demographics of women recruited from emergency room department (n = 145) for “Women’s Health Study”

	Mean	SD
Age (in years)	30.10	8.39
Race/ethnicity (n = 145)	**N**	**%**
Black/African American	58	40.3
White	81	56.2
Native/Asian/pacific	2	1.4
Don’t know/Refused	3	2.1
Missing	1	0.7
Education (n = 145)		
< High school	21	14.5
≥ High school	124	85.5
Type of insurance (n = 140)		
None	18	12.4
Public	26	17.9
Private	94	64.8
Military	2	1.4
Child sexual abuse experiences (n = 145)		
No child sexual abuse	83	57.2
Child sexual abuse	62	42.8
Intimate partner violence past year (n = 141)		
Physical violence	49	34.7
Sexual coercion	55	39.0

Table 2

Alcohol and substance use (ever used and past 3 months) in women reported no history of CSA (n = 83) and those with a history of CSA (n = 62)

	No CSA		CSA		
Variable	**n**	**%**	**n**	**%**	**p-value**
Tobacco[a]					
Ever used	55	66.3	55	88.7	0.002*
Past three months	39	47.0	35	56.5	0.314
Alcohol[a]					
Ever used	72	86.7	59	95.2	0.153
Past three months	63	75.9	51	82.3	0.416
Cannabis[a]					
Ever used	42	50.6	46	74.2	0.006*
Past three months	17	20.5	15	24.2	0.687
Cocaine[a]					
Ever used	16	19.3	19	30.6	0.122
Past three months	4	4.8	9	14.5	0.043*
Amphetamine[a]					
Ever used	10	12.0	19	30.6	0.007*
Past three months[b]	3	3.6	5	8.1	0.246
Inhalants[a,b]					
Ever used	0	NA	2	3.2	0.181
Past three months	0	NA	0	NA	NA
Sedatives[a]					

	No CSA		CSA		
Variable	**n**	**%**	**n**	**%**	**p-value**
Ever used	6	7.2	15	24.2	0.007*
Past three months[b]	2	2.4	9	14.5	0.009*
Opioids[a]					
Ever used	2	2.4	12	19.4	0.001*
Past three months[b]	1	1.2	4	6.5	0.164
Hallucinogens[a]					
Ever used	11	13.3	7	11.3	0.803
Past three months[b]	3	3.6	3	4.8	0.714

[a] categorical variables;

[b] A common rule is 5 or more in all cells of a 2-by-2 table; minimum expected cell count not met;

* Chi-Square Tests, statistically significant at $p < 0.05$

Table 3

Reproductive health outcomes in women who reported no history of CSA (n = 83) and those with a history of CSA (n = 62)

Variable	No CSA		CSA		
Reproductive outcome (continuous)	**M**	**SD**	**M**	**SD**	**p-value**
Number of pregnancies [a]	1.99	2.25	2.63	3.11	0.197
Number of children [a]	1.26	1.39	1.61	1.45	0.112
Number of abortions [a]	0.32	0.78	0.47	1.31	0.624
Number of miscarriages [a]	0.43	0.92	0.61	2.11	0.865
Number of sex partners [a]	6.86	6.47	14.4	17.71	<0.001 *
Age of first sexual intercourse [a]	17.73	5.31	16.1	5.3	0.003 *
Reproductive outcome (categorical)	N	%	N	%	p-value
Pain with sexual intercourse [b]	20	24.7	30	49.2	0.004 *
Ever diagnosed with STI [b]	20	24.4	34	54.8	<0.001 *
Ever treated for gonorrhea [b]	3	3.7	10	16.1	0.016 *
Ever treated for Chlamydia [b]	12	14.6	16	25.8	0.136
Ever treated for trichomoniasis [b]	4	4.9	13	21.0	0.004 *
Ever treated for bacterial vaginosis [b]	8	9.8	17	27.4	0.007 *
History of abnormal pap smear [b]	25	31.6	30	50.0	0.036 *
Diagnosis with pelvic inflammatory disease [b,c]	2	2.5	6	10.0	0.072
Positive for douching [b]	23	28.0	25	40.3	0.154
Ever had urinary tract infection [b]	52	64.2	46	74.2	0.276
Use birth control regularly [b]	46	76.7	32	76.2	0.956

[a] continuous variables; means reported;

[b] categorical variables; counts reported;

[c] minimum expected cell count not met;

* statistically significant at $p < 0.05$

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Table 4

Description of instruments used to measure study constructs

Construct	Instrument	Possible scores	How measured for analysis
Child sexual abuse	Severity of Childhood Sexual Abuse Scale (SCSAS)[a]	0- 14	≥ 1 indicated an experience of CSA
Alcohol misuse	Alcohol Use Disorders Identification Test-Consumption Items (AUDIT-C)[b]	0- 12	≥ 3 positive for risk drinking/misuse per instrument scoring guidelines
Substance use	The Alcohol, Smoking and Substance Involvement Screening Test (ASSIST)[c]		'Ever used' and 'use in the past 3 months'
Intimate partner violence	Conflict Tactics Score Revised (CTS2)[d]		One or more physically violent or sexually coercive events in past year

[a] Draucker, 1997

[b] Dawson, Grant, Stinson, & Zhou, 2005

[c] World Health Organization ASSIST Working Group, 2002

[d] Straus, Hamby, Boney-McCoy, & Sugarman, 1986