Article

Association of Trauma History with Current Psychosocial Health Outcomes of Young African American Women

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Abstract: African American women have a higher likelihood of experiencing lifetime trauma compared to other racial/ethnic groups. Trauma exposure may be associated with higher substance misuse and greater adverse sexual and mental health outcomes. This study expands upon previous empirical findings to characterize the effect of trauma history on substance use, sexual health, and mental health among young African American women. This study included 560 African American women aged 18–24 years in Atlanta, Georgia. Trauma history was defined as having ever experienced a traumatic event based on the Traumatic Events Screening Inventory (TESI). Relative to women not reporting a trauma history and controlling for age, education, and employment, women who experienced trauma were over 2.5 and 2.3 times, respectively, more likely to report alcohol misuse and marijuana misuse. They were 3.0 times more likely to experience peer normative pressure for substance use. Women who experienced trauma were 2.1 times more likely to have multiple sex partners, 2.9 times more likely to have peer norms for risky sex, 1.8 times more likely to perceive barriers to using condoms with sex partners, 2.1 times more likely to report lower communication frequency about sex, 2.0 times more likely to report lower self-efficacy for refusing sex, and 1.9 times more likely to report less relationship control. Women with a trauma history were also 5.0 times more likely to have experienced intimate partner violence, 2.1 times more likely to report high depression symptomatology, 4.0 times more likely to report high overall stress, 3.2 times more likely to have worse coping skills, and 1.8 times more likely to have poor emotional regulation. Findings suggest that trauma history may increase myriad adverse psychosocial health outcomes. Screening for trauma history may help inform the provision of services. Intensified TESI screenings may help identify a history of trauma and assist in identifying adverse health outcomes.

Keywords: trauma; trauma history; young African American women; alcohol misuse; marijuana misuse; sexual health; mental health; TESI

1. Introduction

Lifetime trauma exposure is a widespread health concern with detrimental consequences when left untreated. In the United States, approximately 51% of women report at least one lifetime trauma exposure [1,2]. Trauma exposure is defined as exposure to potentially traumatic events, including non-interpersonal (e.g., accident, illness, or disaster), interpersonal (e.g., physical abuse, witnessing family or community violence, war), and loss (e.g., separation from a primary caregiver) [3]. Exposure to traumatic events, even for a short period, may have lifelong consequences. Having a trauma history is associated with poor outcomes across a continuum of health risks, such as chronic and acute physical conditions [4]. Trauma exposure has been linked to an increased risk of cardiovascular and pulmonary diseases [5,6] and other chronic physical conditions later in life, such as asthma, diabetes mellitus, and frequent or severe headaches [7]. Furthermore, having a trauma history may also result in maladaptive coping behaviors and in the loss of human capital

and financial capital, such as lost wages, creating detrimental long-term effects for both the individual and their family [8].

African Americans are more likely to experience trauma and report adverse health outcomes [9–11]. Geographic differences are also salient. African Americans living in urban areas experience greater exposure to trauma, with prevalence rates ranging from 65 to 90 percent [2,11,12]. Gender differences are also prominent, with African American women having a greater risk of developing adverse psychosocial symptoms, including depression and other disorders, after trauma exposure compared to African American men [13,14]. Additionally, African American women are more at risk for having multiple traumatic exposures and are less likely to seek mental health services compared to white women [15]. Young African American women experience disproportionate rates of sexual coercion and intimate partner violence (IPV) compared to white women and often delay help-seeking for fear of anticipatory discrimination until their situation is severe [16,17].

Trauma exposure increases the risk of misusing alcohol and substances, often used to cope with trauma [18]. Women have a greater risk of developing a co-occurring disorder, meaning the coexistence of both substance use and mental health problems [19,20]. The increased morbidity outcomes from trauma increase women's vulnerability to premature mortality in later adulthood [21,22]. It is critical to understand the co-occurring disorders associated with trauma history so that public health providers, such as physicians and community health workers, can implement more effective screening practices, offer brief treatment, and refer to more intensive treatment services, as needed [23,24].

Trauma history can be a key social determinant of health. Experiencing other adverse social determinants, such as those caused by race-based structural inequity, may further aggravate the adverse effects of trauma exposure. While there is substantial literature on the adverse effects of post-traumatic stress disorder (PTSD), to date, the effects of general trauma exposure and its effects on health outcomes have been less well characterized, particularly among young African American women [25,26]. Consequently, the present study aims to describe the prevalence and severity of trauma history and its associated adverse health outcomes among young African American women, using a social determinants of health lens. The social determinants framework highlights the interplay among multiple factors, and how socio-economic and political contexts are associated with health disparities [27]. It is vital to understand trauma history and its relationship to other social determinants, such as substance use, sexual health, and mental health, as they may be key outcomes of trauma exposure [28,29].

This study expands upon previous empirical findings to characterize the effect of trauma history on substance use, sexual health, and mental health among young African American women. The study findings will highlight the effects of trauma history on a spectrum of health outcomes. This study also highlights strategies to promote screening for trauma history and the implementation of brief interventions or referral to more intensive treatment to reduce the risk of adverse sequelae.

2. Materials and Methods

This cross-sectional study uses baseline data (all data were collected prior to random assignment to treatment conditions) from a randomized experiment to evaluate an HIV prevention intervention among 560 African American women ages 18–24 years old living in Atlanta, Georgia. The intervention effectiveness has been previously reported (Clinical trial registration number: NCT01553682).

2.1. Sample Recruitment

Trained African American community outreach workers in Atlanta, Georgia, recruited the study participants. The outreach workers recruited participants from multiple sites in community settings. They prioritized settings where African American women would predominantly congregate, such as beauty salons, nightclubs, and shopping malls, located in high-density African American communities. The community outreach workers

approached potential eligible women for a confidential screening or scheduled them for a phone screening later. A female African American recruitment coordinator described the study, solicited participation, and assessed the woman's eligibility and interest in participating in the program. The eligibility criteria for this study included women who self-identified as African American, were 18–24 years of age at the time of recruitment, were not married, tested negative for pregnancy with a urine test, had consumed alcohol on at least three occasions in the past 90 days, had unprotected vaginal or anal sex with a male in the past 90 days, and did not present with a severe illness or active psychosis that would preclude participation in the program and follow-up assessments. Pregnancy was an exclusion criterion, as it may alter women's typical sexual and drug use behavior patterns during pregnancy, such as feeling that she does not need to use contraception for the duration of her pregnancy. We did not specify whether the partner was male or female. We discussed males because their behavior affects pregnancy risk. Among the eligible women, 96% (N = 560) enrolled in this study and completed the baseline assessments. Participants received an incentive of $60 for the baseline session. The research team recruited a sufficient sample to achieve the study's aims, and the sample was recruited within the proposed allocated time. All the study protocols were approved by Emory University's Institutional Review Board (IRB00048502).

2.2. Predictor

Trauma history was defined as "ever experiencing a traumatic event" based on the Traumatic Events Screening Inventory (TESI). The scale is composed of 8 items, and the scores range from 0 to 8. Each item requires a binary response: No, Yes [30]. Scores ≥ 1 indicate trauma history and were coded as 1; scores < 1 indicate no trauma history and were coded as 0. The trauma assessment measure had high internal consistency, as assessed by Cronbach's alpha ($\alpha = 0.77$).

Covariates were included in the statistical analysis to minimize and adjust for potential confounding. The covariates included were age, education, and employment. Age was defined as the individual's age at baseline assessment. Education was defined as "last grade completed in school", and the response was based on 6 categories: 8th grade or less, some high school, graduated high school or GED, some college, graduated college and higher. Employment was based on whether or not the women had a paid job at the time of the baseline survey [31].

2.3. Outcomes

2.3.1. STI

For sexually transmitted infections (STI) outcomes, DNA laboratory-confirmed tests assessed whether the participants had one of three prevalent conditions: chlamydia, gonorrhea, or trichomoniasis. The composite score for STIs was coded as a binary (0 = no STI; 1 = any of the assessed STI).

2.3.2. Substance Use

Substance use was assessed by the Alcohol Use Disorders Identification Test (AUDIT) and Rutgers Alcohol Problem Index (RAPI) scale. The AUDIT measures alcohol misuse. The AUDIT is composed of 10 items that range from 0–40 (Cronbach's $\alpha = 0.89$). Scores ≥ 8 indicate more harmful alcohol use and were coded as 1; scores < 8 indicate less harmful alcohol use and were coded as 0 [32]. Binge drinking was derived from the AUDIT scale. The question states: "How often do you have six or more drinks on one occasion" [32]. Those who reported drinking 6 or more drinks daily or weekly were coded as 1. Those who reported drinking less than 6 drinks on one occasion weekly were coded as 0.

RAPI was used to measure alcohol dependence. The scale includes 23 items; scores range from 0–69 (Cronbach's $\alpha = 0.96$). Higher scores indicate problem use. Scores ≥ 18 indicate harmful alcohol use and were coded as 1, while scores < 18 were coded as 0 [33].

Current marijuana use was defined as using marijuana for 1 or more days in the past month [34] Participants reporting marijuana use for 1 or more days in the past month were coded as 1, and those who did not were coded as 0.

RAPI Marijuana, which was adapted from the RAPI [33], included 30 items, with a score range from 0 to 87 (Cronbach's α = 0.90). Higher scores indicate problem use. The variable was dichotomized based on a median split, and scores $\geq$ 18 indicated harmful marijuana use and were coded as 1; scores < 18 indicated less harmful use and were coded as 0.

Peer norms for substance use were based on a 10-item scale, with scores ranging from 8 to 40 (Cronbach's α = 0.78). Higher scores indicate greater perceived peer norms supporting substance use. Categorization was based on a median split, with scores $\geq$ 26 classified as indicating greater perceived peer norms supporting substance use, and these were coded as 1; scores < 26 were classified as indicating lower perceived peer norms supporting substance use, and these were coded as 0 [35]

2.3.3. Sexual Behaviors

Sexual behaviors were assessed using an ACASI system to enhance confidentiality and using timeline followback procedures to enhance accurate reporting. We observed the number of sex partners, condom use, recent transactional sex (RTS), and condom use intention.

The term sex partners was defined as the number of male sex partners that participants reported during the baseline assessment; participants with $\geq$2 sex partners were coded as 1, whereas individuals with <2 sex partners were coded as 0 [36].

Condom use in the past 3 months was defined as using a condom at least once for vaginal or anal sex in the past 3 months [37]. Those using condoms at least once were coded as 0, while those reporting no condom use were coded as 1.

RTS was defined as those reporting exchanging sex for drugs, money, food, or shelter [38] in the past 3 months. Those who reported RTS were coded as 1, while those without any history of RTS were coded as 0.

Peer norms for risky sex were assessed based on 5 items, with scores ranging from 5 to 25 (Cronbach's α = 0.78) [39]. The response to each item was based on 5 categories: none, few, some, most, all. Based on a median split, the cutoff score was 10, and scores $\geq$ 10 were defined as high-risk peer norms and coded as 1; scores < 10 were defined as low-risk peer norms and coded as 0.

2.3.4. Interpersonal Sexual Communication and Behaviors

For interpersonal sexual communication and behavior outcomes, we observed lower condom use intention, partner condom barriers, self-efficacy in sex communication, sexual communication frequency, refusal self-efficacy, and relationship control and power.

Lower condom use intention was assessed by a 5-item scale, with scores ranging from 4 to 16 (Cronbach's α = 0.88) [40]. Scores $\geq$ 11 indicated high condom use intention and were coded as 0. Scores < 11 indicated lower condom use intention and were coded as 1.

Partner condom-use barriers was derived from a partner sub-scale [41], which comprised 6 items, with scores ranging from 6–30 (Cronbach's α = 0.92). Higher scores indicated more perceived partner barriers to using condoms. Based on a median split, scores $\geq$ 13 indicated more perceived partner barriers to condom use and were coded as 1. Scores < 13 indicated less perceived partner barriers to condom use and were coded as 0.

Low partner communication self-efficacy was defined as the total score on a 6-item self-report scale assessing self-efficacy for communicating with a partner about sex and consent related to sex. Scale scores range from 6 to 28; the response to each item was based on 4 categories: very hard, hard, easy, very easy (Cronbach's α = 0.86) [36]. The scale was dichotomized based on a median split of the distribution of scale scores. Scores $\geq$ 19 showed high communication self-efficacy and were coded as 0, and scores < 19 indicated low communication self-efficacy and were coded as 1.

Low partner communication frequency was assessed based on the partner communication frequency scale and was defined as the frequency of communication with her partner about safe sex practices. These discussions include topics such as preventing pregnancy, using condoms to prevent STIs, and sharing their own sexual history [36]. The scale consists of 5 items, and scores range from 5 to 20 (Cronbach's α = 0.84). The response to each item was based on 4 categories: never in the past 3 months, 1–3 times in the past 3 months, 4–6 times in the past 3 months, and 7 or more times in the past 3 months. The scale was dichotomized based on a median split of the distribution of scale scores. Scores $\geq$ 9 were categorized as more frequent communication and coded as 0; scores < 9 were categorized as low refusal self-efficacy and coded as 1.

Refusal self-efficacy was assessed by a self-report scale using 7 items; scores range from 7 to 28 (Cronbach's α = 0.89) [42]. The scale was dichotomized based on a median split of the distribution of scale scores. Scores $\geq$ 18 were categorized as high refusal self-efficacy and were coded as 0; scores < 18 were categorized as less frequent communication and were coded as 1.

Behavior related to relationship control and power was evaluated using a 9-item scale derived from the Sexual Relationship Power Scale–Relationship Control Subscale. Scores range from 9 to 36, with higher scores indicative of higher levels of perceived relationship control (Cronbach's α = 0.87) [43]. The scale was dichotomized based on a median split, and scores $\geq$ 29 indicated greater perceived relationship control, while scores < 29 indicated less perceived relationship control.

2.3.5. Intimate Partner Violence

For assessing intimate partner violence (IPV), we used a recent interpersonal abuse scale to capture if the woman had experienced either emotional, physical, or sexual abuse by a boyfriend or casual sex partner in the past three months (Cronbach's α = 0.78) [36]. Those who had experienced recent IPV were coded as 1, and those who had not were coded as 0.

2.3.6. Psychosocial Health

In terms of psychosocial health outcomes, we observed depression, racial discrimination stress, overall stress, anger, coping, and emotional dysregulation.

Depressive symptoms were assessed via the Brief-Center for Epidemiologic Studies Depression Scale (CES-D), based on 8 items, with a total score of 32 (Cronbach's α = 0.91). The response to each item was based on 4 categories: less than 1 day, 1–2 days, 3–4 days, and 5–7 days [44]. The cutoff score was 9; scores $\geq$ 9 were indicative of depression and coded as 1; scores < 9 were not identified as indicative of depression and were coded as 0.

The stress from racism scale (SSR) was used to assess the stress level related to racism and discrimination in the following categories: no stress, a little stress, some stress, a lot of stress, or extremely stressful [45]. Women reporting that stress from racism was not applicable, "no stress, or a little stress" were coded as 0; those who reported that they experienced "some stress, a lot of stress, or extreme stress" were coded as 1.

Overall stress was measured with the following question, "I would rate my overall stress level as," and the response was based on 5 categories: does not apply, no stress, a little stress, some stress, a lot of stress, and extreme stress [45]. Those who reported that, overall, they had no stress or a little stress were coded as 0; those who reported some stress, a lot of stress, or extreme stress overall were coded as 1.

The anger trait was assessed to measure the predisposition to experience angry feelings. It was based on the Trait Anger Scale, which includes 15 items, with a maximum score of 60 (Cronbach's α = 0.93). The response to each item was based on 4 categories: almost never, sometimes, often, almost always. Scores $\geq$ 28 indicate greater anger and were coded as 1; scores < 28 indicate less anger and were coded as 0 [46].

Coping was defined as how well one can manage difficulties and was based on the coping scale; the coping scale consists of 10 items, with scores ranging from 10 to 40

(Cronbach's α = 0.85) [47]. The coping scale includes 4 behavioral disengagement items, such as "I admit to myself that I can't deal with it and quit," 3 active coping items such as, "I take additional action to try to get rid of the problem," and 3 denial items, such as "I say to myself, 'this isn't real'" [47]. The response to each item was based on 4 categories: I usually don't do this at all, I usually do this a little bit, I usually do this in a moderate manner, I usually do this a lot. Based on a median split, scores $\geq$ 30 indicated better coping skills and were coded as 0; scores < 30 indicated worse coping skills and were coded as 1.

Emotional dysregulation was defined as having less capacity to modulate and regulate emotional responses and was derived from 18 items, with scores ranging from 18 to 90 (Cronbach's α = 0.94). Responses to each item were based on 5 categories: not true, rarely true, somewhat true, mostly true, very true [48]. Based on a median split, the cutoff score was 38. Scores $\geq$ 38 indicated higher dysregulation and were coded as 1; scores < 38 indicated lower dysregulation and were coded as 0.

2.4. Analysis

We calculated Cronbach's α for each of the relevant variables, and the reliability of the scales was more than acceptable, as noted above. This study then dichotomized each variable based on the definitions stated above. A correlation test was conducted to further examine the relationships between trauma history and mental health symptoms, such as CES-D depression, overall stress, coping skills, and emotional dysregulation. There was a weak association (0.15–0.26), therefore we did not exclude any variables in our final model. A contingency table analysis assessed the association of trauma history with the outcomes of interest. Those associations that were significant at $p < 0.05$ were fitted into logistic regression models. The adjusted logistic models controlled for the participants' age, education, and employment. Model statistics included adjusted odds ratio, 95% confidence interval, and the corresponding *p*-value. STATA 17 was used to compute all statistical analyses.

3. Results

The median age of the participants was 20 (interquartile range of 19–22 years). Two-thirds of the participants had a high school diploma or more, and 27% of the participants were employed. Approximately 85% of the participants had a current boyfriend, and 51% had been monogamous in the past 3 months. Almost 21% of the participants perceived that their current partner had other partners in the past 3 months. STIs were prevalent; 18% of participants tested positive for chlamydia or trichomoniasis. Table 1 displays descriptive statistics for sociodemographic and other characteristics by trauma history.

The adjusted logistic regression models access the associations between trauma history across multiple outcomes of interest (Table 2). Relative to women not reporting a trauma history and after controlling for age, education, and employment, women who experienced trauma were over 2.5 and 2.3 times, respectively, more likely to report problematic use of alcohol and marijuana. They were 3.0 times more likely to experience peer norms pressure for substance use. Women who experienced trauma were 2.1 times more likely to have multiple sex partners, 2.9 times more likely to have peer norms for risky sex, 1.8 times more likely to perceive barriers to using condoms with sex partners, 2.1 times more likely to report lower communication frequency about sex, 2.0 times more likely to report lower self-efficacy for refusing sex, and 1.9 times more likely to report having less relationship control. Women with a history of trauma were also 5.0 times more likely to have experienced intimate partner violence, 2.1 times more likely to report high depression symptomatology, 4.0 times more likely to report high overall stress, 3.2 times more likely to have worse coping skills, and 1.8 times more likely to have poor emotional regulation.

Table 1. Descriptive statistics of sociodemographic and other characteristics by trauma history.

	Total	Trauma History Prevalence %		
Variables	N (%)	No n (%)	Yes n (%)	p-Value
Total	560 (100%)	82 (23.4%)	268 (76.6%)	
Chlamydia				0.164
Negative for Chlamydia	455 (81.3%)	63 (76.8%)	224 (83.6%)	
Positive for Chlamydia	105 (18.7%)	19 (23.2%)	44 (16.4%)	
Gonorrhea				
Negative for Gonorrhea	531 (94.8%)	76 (92.7%)	256 (95.5%)	0.308
Positive for Gonorrhea	29 (5.2%)	6 (7.3%)	12 (4.5%)	
Trichomoniasis				0.283
Negative for Trichomoniasis	456 (81.4%)	69 (84.2%)	211 (78.7%)	
Positive for Trichomoniasis	104 (18.6%)	13 (15.9%)	57 (21.3%)	
STI				0.482
No STI	371 (66.2%)	51 (62.2%)	178 (66.4%)	
At least one of any STI	189 (33.8%)	31 (37.8%)	90 (33.6%)	
Age group				0.573
17–20	286 (51.1%)	43 (52.4%)	131 (48.9%)	
21–24	274 (48.9%)	39 (47.6%)	137 (51.1%)	
Education				0.169
Less than high school	185 (33.0%)	35 (42.7%)	92 (34.3%)	
High school graduate and higher	375 (67.0%)	47 (57.3%)	176 (65.7%)	
Employment				0.510
No	408 (72.8%)	65 (79.3%)	203 (75.8%)	
Yes	152 (27.2%)	17 (20.7%)	65 (24.3%)	
AUDIT				0.007
No problem use	307 (54.8%)	54 (65.9%)	131 (48.9%)	
Problem use	253 (45.2%)	28 (34.2%)	137 (51.1%)	
RAPI				0.008
No problem use	411 (73.4%)	67 (81.7%)	178 (66.4%)	
Problem use	149 (26.6%)	15 (18.3%)	90 (33.6%)	
Marijuana				0.058
No current use	180 (32.1%)	32 (39.0%)	75 (28.0%)	
Current use	380 (67.9%)	50 (61.0%)	193 (72.0%)	
RAPI Marijuana				0.025
No problem use	255 (59.6%)	38 (71.7%)	117 (54.7%)	
Problem use	173 (40.4%)	15 (28.3%)	97 (45.3%)	
Peer norms for substance use				<0.0001
Low peer norms	229 (40.9%)	50 (61.0%)	95 (35.5%)	
Peer norms supports use	331 (59.1%)	32 (39.0%)	173 (64.6%)	
Sex partners				0.005
Only one	287 (51.5%)	54 (66.7%)	131 (48.9%)	
Multiple	270 (48.5%)	27 (33.3%)	137 (51.1%)	
Condom use in the past 3 months				0.887
No condom use	179 (32.0%)	27 (32.9%)	86 (32.1%)	
Condom use	381 (68.0%)	55 (67.1%)	182 (67.9%)	
Transactional sex in the past 3 months				0.425
No transactional sex	494 (88.2%)	74 (90.2%)	233 (86.9%)	
Had transactional sex	66 (11.8%)	8 (9.8%)	35 (13.1%)	
Peer norms for risky sex				<0.0001
Low peer norms	304 (54.3%)	60 (73.2%)	134 (50.0%)	
High peer norms	256 (45.7%)	22 (26.8%)	134 (50.0%)	
Condom intention				0.946
Low condom intention	225 (40.2%)	34 (41.5%)	110 (41.0%)	
High condom intention	335 (59.8%)	48 (58.5%)	158 (59.0%)	
Partner condom barriers				0.027
Less perceived barriers	270 (48.2%)	46 (56.1%)	113 (42.2%)	
More perceived barriers	290 (51.8%)	36 (43.9%)	155 (57.8%)	

Table 1. *Cont.*

Variables	Total N (%)	Trauma History Prevalence %		*p*-Value
		No *n* (%)	Yes *n* (%)	
Self-efficacy for communicating about sex with partner				0.758
Less self-efficient	228 (40.7%)	33 (40.2%)	113 (42.2%)	
More self-efficient	332 (59.3%)	49 (59.8%)	155 (57.8%)	
Partner communication frequency				0.004
Less frequent	277 (49.5%)	29 (35.4%)	144 (53.7%)	
More frequent	283 (50.5%)	53 (64.6%)	124 (46.3%)	
Refusal self-efficacy				0.009
Less refusal self-efficacy	274 (48.9%)	30 (36.6%)	142 (53.0%)	
Greater refusal self-efficacy	286 (51.1%)	52 (63.4%)	126 (47.0%)	
Relationship control/power				0.030
Less perceived relationship control/power	265 (47.3%)	28 (34.2%)	128 (47.8%)	
More perceived relationship control/power	295 (52.7%)	54 (65.9%)	140 (52.2%)	
Recent intimate partner violence (IPV)				0.001 *
Had not experienced recent IPV	398 (78.4%)	60 (93.8%)	188 (74.9%)	
Had experienced recent IPV	110 (21.7%)	4 (6.3%)	63 (25.1%)	
Binge drinking				0.966
Has less than six or more drinks more than once monthly	82 (23.4%)	61 (74.4%)	200 (74.6%)	
Has six or more drinks more than once monthly	268 (76.6%)	21 (25.6%)	68 (25.4%)	
CES-D depressive symptoms				0.004
Little to no depression	158 (28.2%)	36 (43.9%)	73 (27.2%)	
Depression	402 (71.8%)	46 (56.1%)	195 (72.8%)	
Stress from racism				0.829
No stress from racism	171 (55.2%)	15 (53.6%)	87 (55.8%)	
Stress from racism	139 (44.8%)	13 (46.4%)	69 (44.2%)	
Overall stress				<0.0001
No stress	286 (51.1%)	63 (76.8%)	125 (46.6%)	
Stressed	274 (48.9%)	19 (23.2%)	143 (53.4%)	
Anger trait				0.229
Less anger trait	267 (47.7%)	46 (56.1%)	130 (48.5%)	
More anger trait	293 (52.3%)	36 (43.9%)	138 (51.5%)	
Coping				<0.0001
Worse coping	248 (44.3%)	21 (25.6%)	135 (50.4%)	
Better coping	312 (55.7%)	61 (74.4%)	133 (49.6%)	
Emotion dysregulation				0.045
Lower dysregulation	273 (48.7%)	48 (58.5%)	123 (45.9%)	
Higher dysregulation	287 (51.3%)	34 (41.46%)	145 (54.1%)	

* Fisher's exact *p*-value.

Table 2. Adjusted [a] models to assess the associations of trauma history with key outcomes [1].

Any STI AOR (95%)	AUDIT Problem Use AOR (95%)	RAPI Problem Use AOR (95%)	MJ Current Use AOR (95%)	MJ Problem Use AOR (95%)	Peer Norms for Substance Use AOR (95%)	Multiple Sex Partners AOR (95%)	Peer Norms for Risky Sex AOR (95%)	Perceived Barriers to Using Condoms AOR (95%)	Lower Communication Frequency with Partner about Sex AOR (95%)	Lower Self-Efficacy for Refusing Sex AOR (95%)	Less Perceived Relationship Control/Power AOR (95%)	Experienced Recent IPV AOR (95%)	Overall Stress AOR (95%)	CES-D Depression AOR (95%)	Worse Coping Skills AOR (95%)	Emotional Dysregulation AOR (95%)
0.877 (0.52, 1.48)	2.14 ** (1.27, 3.62)	2.50 ** (1.34, 4.69)	1.74 * (1.03, 2.96)	2.34 * (1.19, 4.60)	3.01 *** (1.80, 5.06)	2.11 ** (1.25, 3.56)	2.89 *** (1.66, 5.02)	1.83 * (1.10, 3.03)	2.08 ** (1.24, 3.48)	2.00 ** (1.12, 3.35)	1.85 * (1.09, 3.31)	5.03 ** (1.75, 14.42)	3.97 *** (2.24, 7.04)	2.14 ** (1.27, 3.58)	3.18 *** (1.81, 5.58)	1.83 * (1.09, 3.09)

[1] The reference group for calculation of the odds ratio was not report a history of trauma; * $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$; AOR = adjusted odds ratio; 95% CI = 95% confidence intervals; [a] adjusted multivariate models controlled for age, education, and employment.

4. Discussion

4.1. Summary of Findings

This study highlights and quantifies the prevalence and association between trauma history and adverse health outcomes among young African American women [49–51]. Most women (76.6%) reported experiencing at least one traumatic event. The high prevalence of trauma exposure among young African American women is a critical public health concern. The findings indicate an urgent need to address this threat, especially as research shows that exposure to trauma, left untreated, may significantly increase the risk of morbidity and mortality [2].

This study observed a high prevalence of alcohol and substance misuse among women with a trauma history. Over a third of women with trauma experienced alcohol misuse, and nearly half of women reported marijuana misuse. Furthermore, women who experienced trauma were over 2.5 and 2.3 times, respectively, more likely to report greater misuse of alcohol and marijuana. Women with trauma history may be susceptible to engaging in substance misuse to self-regulate and cope with trauma [52]. This study supports research showing that women with trauma exposure have a greater risk of developing a co-occurring disorder, the coexistence of both substance misuse and mental health illnesses [19,20]. The toll of trauma exposure on the women's mental health is equally severe. Women with trauma exposure exhibit nearly four times higher overall stress and are twice as likely to have greater depressive symptoms compared to women without a trauma history. This finding aligns with previous research, highlighting that depression is a common reaction to trauma and can develop following traumatic events, even without achieving levels commonly associated with PTSD [14,53]. Screening for trauma at nonmental health service locations, such as alcohol and substance misuse support centers, may help identify those who may benefit from biomedical, psychosocial, mental health treatment, or combination therapies.

Poor mental health and substance misuse are not the only adverse health effects markedly increased by trauma exposure. Trauma also adversely affects women's likelihood of adverse sexual health outcomes. Women who have trauma history are over twice as likely to have multiple sex partners, perceive peer norms for risky sex, have lower communication frequency with partners about sexual boundaries, and have lower self-efficacy for refusing sex. This study adds to the literature showing that having a history of trauma may be associated with greater adverse interpersonal sexual communication and behaviors such as decreased condom use [54]. A history of trauma is not only associated with women's sexual health outcomes but is also associated with IPV [55]. This study found that women who have a history of trauma, were five times more likely to have experienced IPV in the past 3 months; the finding is consistent with the literature, showing that African American women living in urban areas are at high risk of experiencing IPV [56,57].

While we observed a relationship between trauma exposure and IPV, given the cross-sectional nature of this study, we could not disentangle the temporal causality; however, other empirical evidence indicates there is a relationship between trauma and IPV. Future research should utilize longitudinal designs to assess the temporal order of trauma and IPV more precisely, as well as their interactions with other health outcomes. The barriers to receiving IPV support result from intersections around race, class, and gender, such as discrimination from health providers during IPV help-seeking. This may hinder young African American women from securing timely IPV support and increase the likelihood of future IPV experiences, as well as that of further trauma [16]. To address the root causes of health inequality among young African American women, health stakeholders could benefit from understanding the impact of race-based structural inequity when addressing trauma history and its adverse social determinants of health effects [58].

Disparities in the social determinants of health, such as poverty, dilapidated neighborhoods, and low-performing schools, decrease community resiliency to trauma and may increase the likelihood of experiencing trauma history [59]. A history of trauma can have adverse consequences, such as increased rates of mental illness, substance misuse,

disability, shortened life expectancy, and increased healthcare utilization, creating adverse long-term human resource and economic costs to the individual, their family, and society [60]. Consequently, treatment services should prioritize addressing trauma history, as it not only reduces or prevents long-term adverse health consequences but also offers monetary, cost-saving benefits. Primary structural and systemic prevention interventions should be prioritized to decrease the impact of adverse life events associated with experiencing trauma history [61]. Evidence suggests that a close parental bond, better schools, and safer neighborhoods may be promising interventions to protect young women [62]. Preventing and treating trauma can considerably decrease total health cost expenditures and optimize health outcomes [63].

4.2. Implications for Clinical Practice

Increased awareness of trauma exposure's adverse consequences to health is vital for encouraging treatment-seeking behaviors and even for increasing the availability of trauma-based care. African American women may face greater hindrances to receiving trauma assistance, resulting from intersecting factors around their race, age, class, and gender [16,64]. Furthermore, even when African American women are receiving trauma treatment, they may be less willing to discuss trauma exposures, such as sexual assault, particularly with a therapist who does not identify as African American [65]. To cope with trauma, women may employ maladaptive coping strategies, such as alcohol and marijuana misuse [66]. Given that women experiencing a trauma history were three times more likely to have poorer coping skills, coping skills education and support may be valuable additions to programs designed to help women who have experienced trauma. Trauma exposure treatment can teach women healthier coping skills to decrease alcohol and marijuana misuse risks [67]. Additionally, moving those with trauma away from the use of avoidant coping mechanisms to active coping mechanisms, such as planning and positively reframing stressors, may decrease adverse psychosocial symptoms [68]. Consequently, providers may intensify screening efforts to identify women with trauma exposure and provide treatment and referral services.

Several treatments may provide support for women experiencing a trauma history. Therapies to treat trauma, such as cognitive-behavioral therapy, can improve health and even potentially decrease the symptoms of other adverse health outcomes [69–71]. Treating trauma exposure can result in physical health benefits, even in the absence of modifications directly targeting physical health [71,72]. Reducing trauma exposure is vital to decreasing the adverse health outcomes associated with trauma history. In addition to treatments, social support may improve resilience [68]. However, research shows that many African American women tend not to seek post-trauma support out of fear of burdening others [15]. Making trauma screening a standardized component of a medical assessment may encourage greater discussion and normalize post-trauma support, potentially making trauma care more accessible and feel less burdensome. Furthermore, intensified screening efforts may help identify more women with trauma history and encourage engagement in medical and psychosocial services and trauma social support groups. Trauma history treatments should encourage women with a trauma history to contact others who may relate, empathize with women's struggles, and foster emotional support [73].

Trauma history services can be delivered in nontraditional formats and integrated into other healthcare services to increase availability and accessibility. Culturally tailored, trauma-focused treatment can be effective when delivered via telehealth and can be disseminated in school settings [74]. Integrating trauma care into community-based interventions, along with other health treatments, provides a more comprehensive, holistic approach and improves health outcomes across all targeted treatments [75]. Additionally, as many patients with trauma exposure often seek care in medical settings, healthcare providers should prioritize routine screening for trauma history in often-frequented medical settings, such as primary care and women's clinics [76].

It is may be necessary to consider the impact of racism when addressing trauma among young African American women. Racial discrimination may be an essential risk factor that exacerbates the adverse sequelae of traumatic events [77]. For example, a study found that racial discrimination over the lifetime predicts sexual risk behaviors in the mid-thirties among African American women [78]. We observed a high prevalence of women reporting stress due to racism and discrimination (44%). Future studies should explore the effects of racism on mental health. Studies should also seek to understand the types of racism and discrimination that cause stress and their effects on the psychosocial health of young women of color.

These findings highlight the significant toll trauma has on many aspects of health. Consideration of trauma history is critical when providing services to those who may have experienced IPV, alcohol and substance misuse, depression, and abuse. Treating trauma exposure may decrease adverse health and support treatment across a multitude of outcomes. Health stakeholders need to increase the availability and widespread use of trauma history screenings so that providers can more readily identify and treat the adverse effects of trauma exposure, thus improving health outcomes across the lifespan.

4.3. Limitations and Future Directions

This study has several methodological limitations. The data is from a convenience sample. As the women in this study fall within a narrow age range, the findings cannot be more broadly generalized. However, we believe it is important to study young adults, since it is a critical age in identifying and addressing health concerns to reduce potential lifelong adverse health outcomes. Additionally, this study is also bound by race and gender. This study chose to focus solely on those who identify as African American women, as this is a population that is often overlooked in research or is compared to "white" as the norm, which reinforces stereotypes [79]. Even studies that include African Americans often have a small sample of African American women, limiting meaningful statistical analysis and racial/ethnic comparisons. This study is also geographically limited, as it was implemented in Atlanta, Georgia. Future studies should include a wider range of geographic locations, both inner city and rural, and in more diverse regions to understand how the prevalence of trauma history and the severity of its adverse health outcomes may differ across geographical locations. These findings are potentially limited by recall bias, as the interview data were solely derived from self-reports. To mitigate the effect of response bias, this study included a timeline followback (TLFB) strategy to enhance the accurate recall of events. TLFB is a retrospective self-report calendar tool that has been used successfully to measure prior sensitive behaviors, such as sexual behavior and substance use [80]. To limit nonresponse, the survey was administered via an ACASI system where the women wore headphones to enhance privacy and answered questions through a "talking computer". This system was designed to enhance feelings of confidentiality and to promote a more candid response to sensitive questions. This study used baseline data collected as part of an intervention study; all baseline assessments were conducted prior to assignment to the treatment conditions; thus, the baseline data are not affected by exposure to the intervention conditions. We have also included several single-item measures in our analyses. Lastly, given the cross-sectional nature of the analysis, we cannot establish the temporal ordering between the predictor and the outcomes, nor do we have measures of the severity or chronicity of traumatic exposure. Further studies are necessary to minimize several of these limitations.

5. Conclusions

Exposure to trauma has many severe adverse psychosocial health outcomes among young adults. Young African American women who have a trauma history were at markedly greater risk for alcohol and marijuana misuse, risky sex, STIs, and poor mental health. This study suggests that young African American women could be at risk for chronic and acute health issues, without a diagnosis of PTSD. Primary prevention strate-

gies addressing the social determinants of health may be important in preventing trauma exposure, and secondary prevention strategies are vital to mitigate the effects of trauma. Strategies are needed to identify and treat the adverse effects of trauma exposure, improving health outcomes across the lifespan. Screening for trauma history may be crucial in identifying women who may benefit from brief counseling and, if warranted, referral and linkage to more intensive treatment. Enhancing strategies to integrate trauma screening and treatment into primary medical care can be an important component for reducing the adverse sequelae of trauma [81,82].

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