



Adolescents in the Community: Extracurricular Activities and Sexual Harassment

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Abstract

Sexual harassment and participation in extracurricular activities are two common experiences for adolescents, yet little research examines the interplay between these two phenomena, particularly among low-income, racial/ethnic minority adolescents. This study examined whether participation in four types of extracurricular activities—school-based, structured community-based, unstructured community-based, and home-based—was associated with adolescents' PTSD and depressive symptoms over time, and whether those relations were mediated by neighborhood-based sexual harassment. Participants were 537 adolescents who were on average 15.6 years old, 54% girls, and majority Latino/a ($n = 416$; 77.5%). Path analyses revealed a significant indirect effect between unstructured community-based activities, but not structured community-based, school- nor home-based extracurricular activities and PTSD symptoms via sexual harassment. The findings point to the importance of examining how unstructured community-based extracurricular activities may increase neighborhood risks for adolescents, and the need for creating opportunities for adolescents to engage in structured and well supervised after-school extracurricular activities.

Keywords Extracurricular activities · Sexual harassment · Racial/ethnic minority adolescents · Depressive symptoms · PTSD symptoms

Introduction

Up to 50% of adolescents experience sexual harassment in a given year (American Association of University Women AAUW Educational Foundation (2011)), and almost 25% of adolescents will experience sexual harassment before adulthood (Bucchianeri et al., 2013). While many researchers have focused on adolescents' experiences with sexual harassment in schools (Bolduc et al., 2022), much less research has examined adolescents' experiences with sexual harassment in neighborhood settings where harassment is also likely to occur (Mora et al., 2022). Similarly,

most research has examined demographic characteristics that increase adolescents' risk of experiencing sexual harassment (Espelage et al., 2016), and less attention has focused on malleable factors, like participation in extracurricular activities. Given the prevalence of sexual harassment and the negative effect on adolescents' psychological well-being, it is particularly important to examine factors that may increase or decrease adolescents' risk of harassment. Thus, the current study investigates the relations between adolescents' participation in several different types of extracurricular activities, including home-, school-, and community-based after-school activities, the risk of experiencing sexual harassment in neighborhoods, and subsequent effects on adolescents' PTSD and depressive symptoms.

Adolescents' Experiences of Sexual Harassment

Sexual harassment is categorized by “unwelcome sexual advances, requests for sexual favors, and other verbal, nonverbal, or physical conduct of a sexual nature” (U.S. Department of Education, 2018). The psychological forms of sexual harassment, such as name-calling and inappropriate comments, are more common among adolescents

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compared to the more physical forms of sexual harassment, such as assault (American Association of University Women AAUW Educational Foundation (2011)). Not surprisingly, adolescents' experiences with sexual harassment vary depending upon their social identities. Racial/ethnic minorities and adolescent girls tend to experience greater and more severe forms of sexual harassment. Indeed, several studies indicate that girls experience sexual harassment at greater rates compared to boys (e.g., Espelage et al., 2016). A nationally representative study of 1,965 adolescents found that girls were much more likely than boys to experience unwanted sexual jokes or comments (46% versus 22%), to be shown sexual pictures they did not ask to see (16% versus 10%), to be touched in an unwelcome sexual way (13% versus 3%), to be physically intimidated in a sexual way (9% versus 2%), and to be forced into doing something sexual (4% versus 1%; American Association of University Women AAUW Educational Foundation (2011)). Among a sample of 1086 White (54%) and Black (45%) adolescents, findings revealed that adolescent girls were more than twice as likely as boys to experience more invasive and physically intrusive forms of harassment, such as forced kissing, hugging, or sexual touch (Young et al., 2009). Similarly, in a sample of 18,090 adolescents, racial/ethnic minority adolescents experienced higher levels of sexual harassment victimization in the past year compared to their White peers (Clear et al., 2014). Specifically, 29% of the White adolescents reported experiencing sexual harassment compared to 34% of the racial/ethnic minority adolescents. Taken together, these findings illustrate that racial/ethnic minority adolescents and adolescent girls are at an increased risk for sexual harassment.

Sexual Harassment and Adolescents' Mental Health

Sexual harassment has an array of negative effects on adolescents' mental health. Experiencing sexual harassment is associated with feelings of distress, low self-esteem, risky behaviors, difficulty concentrating, spending more time alone, and excessive worrying (Bolduc et al., 2022). In a study of 182,699 adolescents, those who reported experiencing sexual harassment also reported greater depressive symptoms (Kaltiala-Heino et al., 2016). Likewise, a study with 1225 predominantly White (89%) adolescents found that those who reported greater rates of sexual harassment were more likely to behave unsafely at school, to experience suicidal ideation, to inflict self-harm, and to use substances (Chiodo et al., 2009). Finally, adolescent girls were at an increased risk for self-harm compared to boys (Chiodo et al., 2009).

Research on adolescents' experiences of sexual harassment and PTSD symptoms is sparse, and most of the existing work focuses on PTSD symptoms among adults. However, in a study with 103 adolescent girls with a history

of sexual harassment, more than half (57%) of the participants exhibited symptoms of PTSD at clinical levels (Daigneault et al., 2006). Further, among 416 Latino/a adolescents, both community violence and sexual harassment in neighborhood settings were associated with greater PTSD symptoms (Mora et al., 2022). Notably, the effect of sexual harassment on PTSD symptoms was far greater than the effect of community violence, highlighting the importance of adolescents' experiences with sexual harassment in neighborhoods.

Extracurricular Activities

American adolescents spend, on average, 5 hours per week engaging in extracurricular activities (Mahoney et al., 2006). While researchers have struggled to obtain an exact estimate of how many adolescents are engaged in extracurricular activities, one nationally representative longitudinal study ($N = 8599$) found that 39% of adolescents were consistently involved in at least one extracurricular activity, while 59% of adolescents inconsistently participated in extracurricular activities, suggesting that only about 2% did not participate in any extracurricular activities at all (Zaff et al., 2003). A great deal of research documents racial/ethnic discrepancies in adolescents' rates of extracurricular activity participation. In a nationally representative sample ($N = 1583$) with Latino/a, African American, Asian, and White adolescents, racial/ethnic minority adolescents were involved in fewer extracurricular activities compared to their White peers (Shann, 2001). In another study, findings showed that White and African American adolescents were involved in extracurriculars at similar rates, but Latino/a youth reported lower levels of involvement (Meier et al., 2018). Similarly, in a separate study Latino/a adolescents reported that they participated in fewer extracurricular activities compared to both White and African American adolescents (Im et al., 2016). More specifically, Latino/a youth are much less likely than their White peers to participate in sports-related and fine-arts extracurricular activities (Feldman & Matjasko, 2007), to engage in volunteer work, and to play music (Shann, 2001).

The current study examined an expansive range of adolescents' after-school activities, including school-, community-, and home-based extracurriculars. Activities that are organized and supported by schools and primarily occur on school grounds are referred to as school-based extracurriculars, and can include activities such as band, sports teams, and student council. Studies suggest that girls are two to three times more likely to participate in school-based extracurricular activities (e.g., student council, theater, yearbook committee) compared to boys (Feldman & Matjasko, 2007). Conversely, community-based extracurriculars may include structured activities or unstructured activities.

Structured community-based activities, such as team sports, clubs, or volunteering at a library, refer to adult-sponsored activities that occur outside of the regular school curriculum and typically include regularly scheduled meetings, adult supervision, multiple participants, rules (Bohnert et al., 2010), and a focus on developing specific skills (Gilman et al., 2004). Alternatively, unstructured extracurricular activities are more informal or spontaneous and often occur in a variety of settings without adult supervision (Fletcher et al., 2003), such as playing pick-up sports games with peers in the neighborhood. Finally, the current study classified all activities that occur within an adolescent's home, such as doing homework or chores, as home-based activities.

Extracurricular activities and sexual harassment

Given the range of contexts that adolescents may be exposed to, participation in extracurricular activities may influence adolescents' risk for experiencing sexual harassment. Adolescents who are involved in extracurriculars are likely to interact with many people and may spend more time traveling to and from activities, increasing their likelihood of being harassed by strangers in their neighborhoods. Indeed, recent research suggests that the effect of involvement in after-school activities on exposure to sexual harassment depends on the type of activity, the amount of time engaged in the activity, and the adolescents' sex. In a mixed method neighborhood case-study of 310 Latino youth, findings indicated that adolescents' participation in structured after-school community-based activities was associated with witnessing more violence, even after controlling for adolescents' age, sex, number of friends in a gang and whether the adolescent drove their own car (Camacho and Vargas (2018)). Qualitative findings further revealed that adolescent girls were deterred from participating in after-school community-based activities due to the threat of sexual harassment in the neighborhood as they walked to and from the activity. In a separate study with 122,501 middle and high school students, findings revealed that adolescent boys who were highly involved (5+ days per week) in after-school sports were significantly more likely to experience sexual harassment, whereas adolescent girls who were moderately involved (1–4 days per week) in any after-school team sport were at risk for greater sexual harassment (Cheever & Eisenberg, 2022). In a longitudinal study with 1852 college students, findings showed that school club involvement was associated with greater sexual harassment for both male students and female students, and female students participating in intramural sports were at increased risk of experiencing sexual harassment (McGinley et al., 2016).

Together, the aforementioned studies suggest that participation in some extracurricular activities may place adolescents at risk of experiencing sexual harassment in

neighborhoods. A recent qualitative study with 47 adults who discussed their experiences of street harassment during adolescence revealed that incidents of sexual harassment were often perpetrated by unknown peers, groups of men, and individual strangers in the neighborhood (Fileborn & Hardley, 2023). Moreover, it is plausible that participating in community-based activities, or traveling to and from school-based activities, may increase adolescents' risk for being sexually harassed in the neighborhood. Scholars have not investigated whether distinct extracurricular activities place adolescents at risk of experiencing sexual harassment in the neighborhood context, and how this affects adolescents' mental health. This is surprising given that prior research shows that adolescents contend with high rates of sexual harassment in neighborhoods that can have deleterious effects on adolescents' mental health (Mora et al., 2022). Therefore, this study examined whether there were any indirect effects between extracurricular activities and mental health via neighborhood-based sexual harassment.

The Current Study

This study examined whether participation in after-school activities was associated with neighborhood-based sexual harassment, and in turn, PTSD and depressive symptoms, among a racially diverse sample of adolescents from low-income homes. Specifically, the current study investigated (a) the relations between participation in school-, community-, and home-based extracurricular activities and adolescents' risk for neighborhood-based sexual harassment, (b) the associations between neighborhood-based sexual harassment and adolescents' PTSD and depressive symptoms, and (c) whether neighborhood-based sexual harassment acted as a mediator in the relations between participation in extracurricular activities and adolescents' subsequent psychological outcomes one year later. In keeping with prior studies, it was expected that girls would report greater experiences of sexual harassment in the neighborhood compared to boys. Additionally, given that community-based extracurriculars take place in the context of the neighborhood, it was hypothesized that greater involvement in community-based, but not school-based—which does not take place in the neighborhood—activities would be associated with higher rates of neighborhood-based sexual harassment. Given the scarcity of research on community-based activities and risk for neighborhood-based sexual harassment, no a priori hypotheses on the links between structured or unstructured community-based activities and harassment were made. It was also expected that home-based activities would not be associated with sexual harassment. In keeping with previous research, it was hypothesized that sexual harassment would be associated

with higher rates of PTSD and depressive symptoms. Finally, it was hypothesized that sexual harassment would mediate the significant relations between extracurricular activities and adolescents' psychological outcomes.

Method

Participants

The sample consisted of 537 adolescents from two Midwestern high schools in Chicago, Illinois and Detroit, Michigan who participated in a 2-wave longitudinal study that examined risk and protective factors for adolescents exposed to different types of violence. Both charter schools serve primarily low-income families in Southwest Detroit and the entire city of Chicago. About two-thirds of the students ($n = 333$) attended the Chicago high school, with the remainder attending the Detroit high school ($n = 204$). Participants were, on average, 15.6 years old ($SD = 1.03$) and 54% were girls ($n = 290$). Adolescents mostly identified as either Latino/a ($n = 416$, 77%) or African American ($n = 92$, 17%), with the remaining adolescents identifying as Asian American, European American, or multiracial. Most adolescents reported that their mother's highest level of education was either grammar school ($n = 105$, 19.7%) or some high school ($n = 102$, 19.1%). In addition, the majority of the sample was of low socioeconomic status (SES) as indicated by the 82% who were eligible for free or reduced lunch. Of the original wave 1 sample, 81% ($n = 437$) participated in the second wave and were on average 16.6 years old, split roughly by gender (55% girls; $n = 241$), and majority were Latino/a ($n = 335$, 77%) followed by African American ($n = 72$), 17%. Adolescents in wave 2 were also majority of low SES, with 84% ($n = 359$) who were eligible for free or reduced lunch.

Procedure

Trained members of the research team visited classrooms in each high school to explain the purpose of the study and answer students' questions. Informational recruitment packets and consent forms were sent home with students; adolescents with written parental consent participated in this study. Adolescents completed the survey in group settings at a designated computer lab in their school. Response rates for the Chicago and Detroit sample were 51% and 47% respectively. All participating students were compensated with a \$25 gift card for their participation. Approval to conduct this study was granted by appropriate administrators at both schools, as well as the University of Michigan Institutional Review Board. All data collection occurred before the COVID-19 pandemic.

Measures

Neighborhood sexual harassment

Participants' experiences with sexual harassment in the neighborhood were measured using a reduced 6-item version of the Sexual Experiences Questionnaire-Latina (SEQ-L; Cortina, 2001). The SEQ-L originally aimed to address the unique experiences with sexual harassment among working Latinas in the United States, therefore, items that were not relevant for adolescents were omitted from the current measure. For instance, items that referred to workplace interactions were not relevant for an adolescent sample and therefore omitted. Additionally, given that the sample was racially/ethnically diverse, items that referred specifically to a participants' Latino/a identity were omitted (e.g., been told things that insult Latinas specifically, for example, saying Latinas are "hot-blooded" and "loose"). Students were asked to rate on a scale from (1) "never" to (5) "most of the time" how often they experienced uncomfortable events in their *neighborhood* in the past year. Sample items asked adolescents how often they have "been made to feel uncomfortable by someone staring at you," and "had someone whistle at you or make kissing noises at you." Students' scores were summed and ranged from 6 to 30, with higher scores indicating more frequent experiences with sexual harassment in their neighborhood in the past year. Moreover, although the SEQ-L has not been used in research with adolescent boys, prior work provides evidence that the original SEQ (Fitzgerald et al., 1988) functions similarly for men and women (Donovan & Drasgow, 1999) and the 6-item reduced SEQ-L has previously demonstrated high internal validity with Latino/a adolescent boys and girls (Mora et al., 2022). The measure demonstrated strong internal reliability among the entire sample (Cronbach's $\alpha = 0.93$), among boys only (Cronbach's $\alpha = 0.94$), and among girls only (Cronbach's $\alpha = 0.91$).

Extracurricular activities

Students' involvement in extracurricular activities was measured using a 23-item scale drawn from several studies that focused on adolescents' involvement in extracurriculars (Brown & Evans, 2002; Kennedy & Ceballo, 2013; Shanahan & Flaherty, 2001; Warren et al., 2000). To comprehensively assess a wide variety of extracurricular activities, the items included in this scale asked adolescents how often—on a scale from (1) "never" to (5) "five or more times per week"—they were typically involved in school-, community-, and home-based activities after school. Activities that the participants engaged in over the summer were not included. Cronbach's alpha was not calculated for these scales, as it is not assumed that items examining frequency

of participation in extracurricular activities are necessarily correlated with each other (Streiner, 2003).

Participation in extracurricular activities was categorized into four different types of activities based on their contextual setting. Frequency of participation in *school-based activities* was measured with 6 items; example items include organized sports (e.g., school soccer team) and school-based art, theater, or music activities (e.g., school choir). Frequency of participation in *structured community-based activities* was measured using 5 items, such as organized sports (e.g., community basketball team), music or art lessons (e.g., community center art classes), and religious groups or activities (e.g., bible study group). Frequency of involvement in *unstructured community-based activities* was measured using 4 items; example items include playing sports with friends outside (e.g., pick-up soccer games), “hanging out” with friends in the neighborhood, and driving around in a car with friends without adult supervision. Frequency of participation in *home-based activities* was measured with 8 items, such as hanging out with family at home, doing chores at home, hanging out with friends at home, or playing video games at home. Items for each type of activity category were mean scored, such that higher scores reflected greater frequency of participation in that type of activity.

PTSD symptoms

PTSD symptoms at wave 2 were assessed with the 19-item Child Post-Traumatic Stress Reaction Index (PTSRI; Frederick, 1985b; Pynoos et al., 1993). Survey items measuring PTSD symptoms asked adolescents how often they experienced a range of symptoms from (1) “never” to (5) “most of the time.” Sample items include, “have thoughts about something bad that happened in the past even when you don’t want to?” and “feel so scared, upset, or sad that you couldn’t even talk or cry?” Items were summed and final scores ranged from 0 to 76, with higher scores indicating more PTSD symptoms. The internal reliability of this measure was high among the sample with a Cronbach’s alpha of 0.93.

Depressive symptoms

Adolescents’ depressive symptoms at wave 2 were measured using the commonly used and psychometrically sound, 26-item Children’s Depression Inventory (CDI; Kovacs, 1981). Statements that described feelings and perceptions about one’s self were presented to adolescents in groups of three statements. Adolescents were then asked to choose the statement that most closely described how they had been feeling over the past two weeks. An example group statement is: “I like myself,” “I do not like myself,”

and “I hate myself.” Participants’ responses were summed, with final scores ranging from 0 to 52. Higher scores indicated greater depressive symptoms. The CDI demonstrated high internal reliability among the sample (Cronbach’s $\alpha = 0.89$).

Covariates

Five demographic variables were used as covariates in the analyses: adolescents’ age, sex, maternal education, free-reduced lunch eligibility, and association with gang members. These demographic characteristics have been associated with experiences of sexual harassment, as well as adolescents’ PTSD and depressive symptoms in previous studies (e.g., Camacho & Vargas, 2018). Age was measured in years; sex was coded as (0) for boys and (1) for girls; maternal education was coded from (1) grammar school, grades 1–8 to (6) a graduate/professional degree (e.g., law, medicine); free-reduced lunch eligibility was measured with one question that asked whether students qualified for free or reduced lunch and was coded as (0) no and (1) yes; gang-affiliated peers was measured with one question that asked students whether they hang out with teenagers who are in gangs, coded as (0) no and (1) yes.

Analysis Strategy

Preliminary analyses were first conducted to ensure data were normally distributed, followed by independent samples *t*-tests to compare adolescent girls’ and boys’ reports of the individual sexual harassment items. Next, correlations of all the study main variables were conducted. To test whether sexual harassment would mediate the relations between after-school activities and adolescents’ PTSD and depressive symptoms, path analysis of observed variables was conducted in *Mplus* 8.5 with 1500 bootstrapped samples (see Fig. 1), adjusted for adolescents’ age, sex, maternal education, free/reduced lunch eligibility, and gang-affiliated peers, measured at wave 1. Standard cutoffs were used to assess model fit: a non-significant chi-square value, a comparative fit index (CFI) and Tucker–Lewis Index (TLI) ≥ 0.95 , root-mean-square residual (RMSEA) ≤ 0.05 , and standardized root-mean-square residual (SRMR) ≤ 0.06 (MacCallum & Austin, 2000).

Results

Preliminary Findings

Table 1 illustrates the frequency with which adolescents experienced sexual harassment in their neighborhoods at least once in the past year by sex. Results demonstrate that

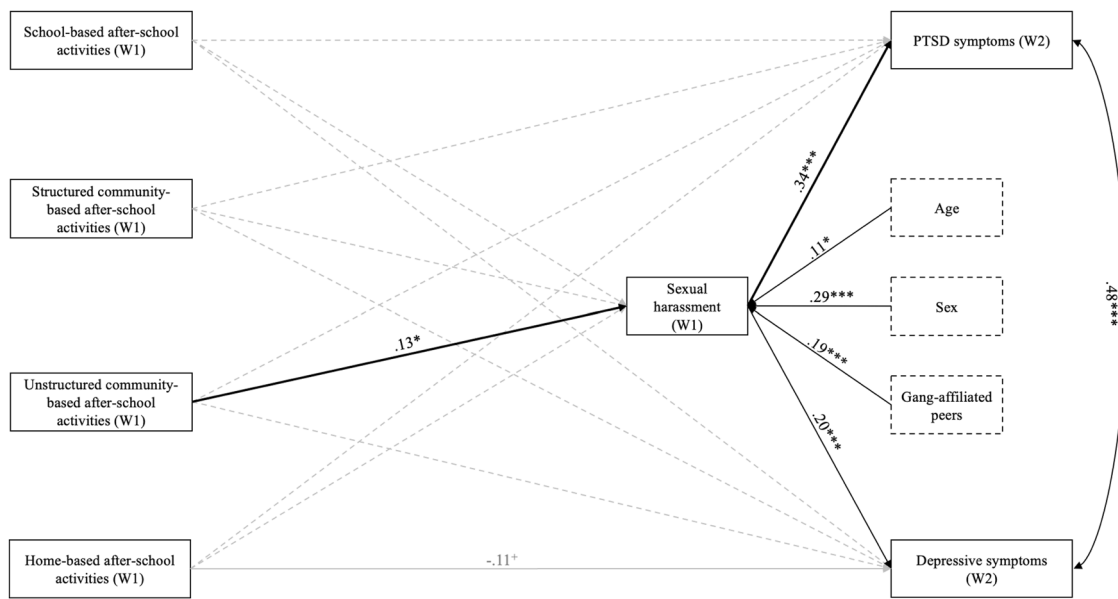


Fig. 1 Path Analysis Model. *N* = 497. Standardized coefficients of path analysis linking adolescents’ after-school activities and psychological outcomes one year later. Dashed lines = nonsignificant paths; bold = significant indirect path. The mediator and both outcomes were

controlled for by age, sex, mother’s highest education level, free/reduced lunch eligibility, and gang-affiliated peers at wave 1; only significant control paths are shown. This model is a just-identified (saturated) model. **p* < 0.05; ****p* < 0.001; +*p* = 0.054

Table 1 Frequency of Past Year Sexual Harassment by Sex

Sexual Harassment in Neighborhoods	Boys	Girls
made to feel uncomfortable by someone staring at you	149 (65%)	243 (87%)***
someone whistle at you or make kissing noises at you	93 (41%)	197 (70%)***
someone slowly looked at your entire body	100 (44%)	197 (71%)***
someone said offensive or embarrassing things about your body	129 (57%)	191 (68%)**
someone gave you a sexual look that made you uncomfortable	89 (39%)	188 (67%)***
someone called you an inappropriate name, like “Mamacita” or “Marica”	78 (35%)	169 (60%)***

p* < 0.01; *p* < 0.001

most adolescents experienced at least some form of sexual harassment. For both adolescent boys (65%) and girls (87%), the most frequently experienced form of sexual harassment was being made to feel uncomfortable by someone staring at them. Consistent with this study’s expectation and prior research, independent samples *t*-tests revealed that adolescent girls experienced statistically significantly higher rates of all 6 forms of sexual harassment incidents compared to boys. For instance, adolescent girls (*M* = 0.60, *SD* = 0.49) experienced statistically significantly higher rates of having someone call them an inappropriate name compared to boys (*M* = 0.35, *SD* = 0.48), *t*(486.95) = -5.99, *p* < 0.001. These results support the hypothesis that adolescent girls would report greater experiences of sexual harassment compared to boys.

Table 2 displays bivariate correlations of all study variables. As illustrated, adolescent girls were more likely to experience sexual harassment than adolescent boys, *r*(508) = 0.21, *p* < 0.001. Additionally, adolescents who

reported hanging out with gang-affiliated peers spent more time participating in school-based, *r*(517) = 0.11, *p* < 0.05, more structured community-based, *r*(517) = 0.14, *p* < 0.01, and more unstructured community-based after-school activities, *r*(515) = 0.18, *p* < 0.001 than adolescents who did not report hanging out with gang-affiliated peers. Additionally, adolescents who experienced greater sexual harassment also reported greater PTSD, *r*(409) = 0.35, *p* < 0.001 and depressive symptoms, *r*(415) = 0.20, *p* < 0.001.

Primary Findings

Results from the path analysis suggest that neither the frequency of participation in school-based, structured community-based, unstructured community-based, nor home-based after school activities were associated with PTSD or depressive symptoms, although home-based after-school activities was negatively and marginally significantly

Table 2 Pearson’s Correlations and Descriptive Statistics Among Study Variables

	M	SD	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.
1. Age	15.56	1.03											
2. Sex ^a			−0.06										
3. Mother’s education ^b			−0.09*	−0.14**									
4. Free/Reduced lunch ^c			0.10*	0.04	−0.11*								
5. Gang-affiliated peers ^d			0.001	−0.05	0.05	0.03							
6. School-based activities	5.33	5.35	0.10*	−0.09*	0.03	0.05	0.11*						
7. Structured community-based activities	3.55	4.78	0.07	−0.10*	0.11*	0.02	0.14**	0.76***					
8. Unstructured community-based activities	5.92	4.43	0.13**	−0.09*	0.07	0.04	0.18***	0.51***	0.59***				
9. Home-based activities	21.75	7.27	0.04	0.18***	−0.09*	0.10*	−0.08	0.25***	0.29***	0.34***			
10. Sexual harassment	13.75	6.71	0.10*	0.21***	−0.04	−0.02	0.23***	0.15***	0.15***	0.17***	0.00		
11. Depressive symptoms	14.43	8.63	0.02	0.05	−0.02	0.01	0.09	0.01	−0.03	0.03	−0.08	0.20***	
12. PTSD symptoms	28.94	15.20	0.02	0.17***	−0.01	−0.002	0.08	0.07	0.03	0.03	0.02	0.35***	0.52***

Ns range from 409 to 537. ^a0 = Boys, 1 = Girls; ^b1 = Graduate/professional degree; ^c0 = Does not qualify for free/reduced lunch, 1 = Does qualify for free/reduced lunch; ^d0 = Does not hang out with peers who are in gangs, 1 = Yes, does hang out with peers who are in gangs

p* < 0.05, *p* < 0.01, ****p* < 0.001

associated with depressive symptoms ($b = -0.11$, $SE = 0.06$, $p = 0.054$). There were also no significant associations between any of the after-school activities and sexual harassment, except between unstructured community-based after-school activities ($b = 0.13$, $SE = 0.05$, $p < 0.05$) and sexual harassment. Thus, adolescents who participated more frequently in unstructured—but not structured—community-based after school activities, reported greater rates of sexual harassment. Further, the indirect effect of unstructured community-based after-school activities on PTSD symptoms was significant, $\beta = 0.04$, 95% CI $[-0.18, 0.02]$. This finding supports a full mediational model wherein sexual harassment mediated the relation between unstructured community-based after-school activities and PTSD symptoms one year later. No other significant indirect associations via sexual harassment were found. In terms of the covariates included, adolescents’ age, sex, and gang-affiliated peers were significantly and positively linked to sexual harassment, such that older adolescents, girls, and those who reported hanging out with gang-affiliated peers reported greater rates of sexual harassment compared to younger adolescents, boys, and those who did not report hanging out with gang-affiliated peers.

Discussion

Adolescents experience high rates of sexual harassment that impacts their mental health. To date, research on adolescents’ experiences with sexual harassment has mainly focused on sexual harassment that occurs in school settings and on identifying non-malleable risk factors, like adolescents’ demographics. This study examined how low-income, racial/ethnic minority adolescents’ participation in various types of extracurricular activities are associated with experiences of sexual harassment in neighborhoods, and in turn, how this may affect adolescents’ mental health longitudinally. The results confirmed previous findings showing that girls experience greater sexual harassment in their neighborhoods than adolescent boys and further reveal that adolescents’ participation in unstructured community-based activities is associated with more experiences of sexual harassment. Findings draw attention to the need for providing greater opportunities for adolescents to engage in well supervised extracurricular activities, particularly for low income, racial/ethnic minority youth.

The finding that adolescent girls experience more sexual harassment in their neighborhoods than adolescent boys was not surprising, given that a considerable amount of research has established these gender differences (Eom et al., 2015). The results demonstrate that these gender differences are also present in urban neighborhoods and among racial/ethnic minority adolescents from low-income

households and particularly affect adolescent girls. Prior research indicates that adolescent girls who experience sexual harassment in public spaces often face difficulties in developing successful coping strategies given the unpredictability of sexual harassment around their neighborhoods (Harding et al., 2021). Thus, interventions that specifically help adolescent girls cope with experiences of sexual harassment in neighborhood settings is more than warranted.

An important strength of this study is the comprehensive assessment of adolescents' after-school activities, including school-, community-, and home-based activities and the additional distinction between structured versus unstructured community-based activities. Findings document an association between adolescents' frequency of participation in unstructured community-based activities and greater experiences of sexual harassment. Given the sparse research on community-based extracurricular activities and their relation to sexual harassment, no speculations were made on differences in the links between structured versus unstructured community-based activities and sexual harassment. However, there are a couple reasons why unstructured—but not structured—community-based activities were linked to greater experiences of sexual harassment. First, community-based activities occur in public spaces within the neighborhood; *unstructured* activities often involve socializing with peers, a lack of structure, and the absence of authority figures (Hoeben & Weerman, 2016). Aligned with this, some of the activities endorsed by the current study sample included playing sports by themselves or with friends in the community, going to parties or social events, and riding around in a car with friends—all public spaces that can expose adolescents to a greater number of strangers and community members, and therefore, sexual harassment (Fileborn & Hardley, 2023). Thus, more frequent engagement in unstructured community-based activities may be exposing adolescents to a greater number of peers, adults, and strangers, compared to school-, home-, and structured community-based activities, partially explaining the significant relation between participation in unstructured community-based activities and experiences of neighborhood-based sexual harassment.

Second, given that unstructured—versus structured—community-based activities occur in the absence of authority figures, it is plausible that lack of adult supervision may increase adolescents' risk of being sexually harassed. Whereas adolescents engaged in structured community-based activities have the additional protective supervision that an adult can provide (Antunes & Ahlin, 2017), adolescents engaged in unstructured community-based activities may be more vulnerable to being sexually harassed. Interestingly, one study revealed that Latina adolescents were less likely to engage in structured community-based activities due to a fear of experiencing

sexual harassment in the neighborhood on their way to the activity (Camacho & Vargas, 2018). Further, adolescents who remain in the community to engage in unstructured activities, may be increasing their risk of sexual harassment by strangers in the neighborhood. Although beyond the scope of the current study, future research should examine who tends to perpetrate neighborhood-based sexual harassment and whether it is strangers in the neighborhood or known peers of adolescents.

As predicted, adolescents' experiences with sexual harassment were linked to greater PTSD and depressive symptoms. Notably, the magnitude of effect was much stronger for the relation between sexual harassment and PTSD symptoms, compared to depressive symptoms. This finding further illuminates how harmful sexual harassment can be for adolescents' psychological well-being and highlights the importance of studying sexual harassment in multiple settings, not simply school contexts. In addition, findings point to the need for therapists, social workers, and psychologists who work with adolescents who have experienced sexual harassment in the neighborhood setting to evaluate for PTSD and depressive symptoms.

Partially consistent with the hypothesized mediation model, sexual harassment emerged as a significant mediator in the relation between frequency of participation in unstructured community-based after-school activities and adolescents' PTSD symptoms one year later. Neither school-based, home-based, nor structured community-based after-school activities emerged as significant mediators. While previous research shows that participation in extracurricular activities is associated with positive psychosocial outcomes (e.g., Mahoney et al., 2006), the present study found that unstructured community-based after-school activities are associated with greater PTSD symptoms over time through adolescents' increased exposure to neighborhood-based sexual harassment. That is, adolescents who participated more frequently in unstructured community-based after-school activities experienced greater sexual harassment, and in turn, displayed worse PTSD outcomes. These results extend previous research that showed adolescents, and particularly girls, are at risk of experiencing sexual harassment when out in main streets of the neighborhood (Camacho & Vargas, 2018). The current study shows how participating in unstructured community-based activities can place adolescents at risk of experiencing sexual harassment, and in turn, contribute to greater PTSD symptoms. This finding highlights the importance of providing low-income adolescents more opportunities to participate in well-supervised structured community-based activities (Ceballo et al., 2021). Effective prevention efforts will have to consider ways that communities can offer adolescents spaces to safely engage in unstructured activities with friends. Moreover, expanding programs that offer

these opportunities, such as the Boys and Girls Clubs of America, is crucial. Greater research on racial/ethnic minority adolescents' experiences with sexual harassment in supervised and unsupervised community settings will assist efforts to minimize adolescents' risks in inner-city neighborhoods.

All studies have limitations, and the geographical restriction of the midwestern, urban sample is one such limitation. Adolescents' experiences with sexual harassment may vary greatly across geographical regions of the US. Therefore, findings from this study may not be generalizable to adolescents in other regions of the US or other neighborhoods (e.g., rural, or suburban contexts). Additionally, it is important to understand whether there are differences in sexual harassment between youth from diverse racial/ethnic backgrounds and if the links between extracurricular activities and sexual harassment vary across racial/ethnic groups. Similarly, while data was not available on adolescents' gender or sexual identity, future studies should further examine how neighborhood-based sexual harassment is similarly and differentially experienced among adolescents with diverse sexual orientations and gender identities. Finally, the present findings revealed that being a girl and spending time with gang-affiliated peers were each associated with greater sexual harassment. Much more work is needed to understand the nature of adolescents' friendships with gang-affiliated peers and how these relationships place adolescents at increased risk.

Conclusion

Sexual harassment and participation in extracurricular activities are two common experiences for adolescents that have been studied separately. Previous research examines demographic factors that place adolescents at risk of sexual harassment, but little research examines more malleable factors, like participation in after-school activities. The current study explored the link between frequency of participation in four different types of extracurricular activities—home-, school-, structured community- and unstructured community-based activities—the risk for sexual harassment in urban neighborhoods, and subsequent effects on adolescents' PTSD and depressive symptoms one year later. The results showed that among a sample of primarily low income, racial/ethnic minority adolescents, more frequent participation in unstructured community-based activities placed adolescents at greater risk of sexual harassment, and in turn, greater PTSD symptoms over time. Moreover, encouraging adolescents to engage in structured and supervised extracurricular activities may reduce their risk for experiencing sexual harassment in neighborhoods. Further, the results highlight the need for expanding

opportunities for adolescents to participate in structured and well-supervised extracurricular activities in the community.

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Data Sharing and Declaration The dataset generated and analyzed during the current study is not publicly available but is available from the third author on reasonable request.

Compliance with Ethical Standards

Conflict of Interest The authors declare no competing interests.

Ethical Approval This study was approved by the Institutional Review Board (IRB) at the University of Michigan and performed in accordance with the ethical standards as laid down in the 1964 Declaration of Helsinki and its later amendments or comparable ethical standards.

Informed Consent All participating students under 18 years of age provided signed parental consent forms and completed adolescent assent forms. Students who were 18 years old provided signed consent forms. School administrators at each school approved of all recruitment materials, survey measures, and data collection procedures.

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