



Empirical Articles

Neighborhood and Community Factors Related to Youth Conduct Disorder Among Adolescents

Características do Bairro e da Comunidade associados ao Transtorno de Conduta dos Jovens

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Abstract

Aim: An estimated 3% to 5% of youth are annually diagnosed with conduct disorder (CD), making it a pressing mental health concern. While many studies have focused on the behavioral aspects of conduct disorder, environmental and neighborhood factors have yet to be explored. The present study examined specific neighborhood and community characteristics associated with youth conduct disorder.

Method: A secondary analysis of the United States' 2011-2012 National Survey of Children's Health was conducted. Participants included a total of 34,601 adolescents aged 12-17 (52.3% were male and 47.7% were female).

Results: Results from the final multivariate logistic regression model revealed that neighborhoods without parks or playgrounds, libraries or bookmobiles, litter or garbage on the sidewalks, vandalism, not being on to count on others in neighborhoods, and perceived child safety were all significant risk factors for youth conduct disorder.

Conclusion: Implications of these findings and future strategies for preventing conduct disorder are discussed.

Keywords: conduct disorder, neighborhood effects, youth mental health

Resumo

Objetivo: Estima-se que entre 3% a 5% dos jovens sejam anualmente diagnosticados com o Transtorno de Conduta (DC), tornando-se uma preocupação premente de saúde mental. Embora muitos estudos se tenham focado sobre os aspetos comportamentais do transtorno de conduta, os fatores ambientais e de vizinhança ainda necessitam de ser explorados. O presente estudo examinou as características específicas do bairro e da comunidade associadas ao transtorno de conduta nos jovens.

Método: Foi realizada uma análise secundária do Questionário Nacional de Saúde Infantil dos Estados Unidos de 2011-2012. Os participantes incluíram um total de 34.601 adolescentes com idade entre os 12 e os 17 anos (52,3% de sexo masculino e 47,7% de sexo feminino).

Resultados: Os resultados do modelo final de regressão logística multivariada revelaram que os fatores de risco significativos para o transtorno de conduta dos jovens foram: os bairros sem parques ou parques infantis, bibliotecas ou veículos, presença de lixo nas calçadas, vandalismo, a impossibilidade de contar com os outros nos bairros e a segurança infantil percebida.

Conclusão: São discutidas as implicações desses resultados e as estratégias futuras para a prevenção do transtorno de conduta.

Palavras-Chave: transtorno de conduta, efeitos de vizinhança, saúde mental dos jovens

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Conduct disorder remains a critical mental health concern in the United States. Estimates from the Collaborative Psychiatric Epidemiology Studies (Moore, Silberg, Roberson-Nay, & Mezuk, 2017) reveal the prevalence of

conduct disorder in the general population of the United States to currently be 5.9% (Moore et al., 2017), while other research estimates the prevalence of conduct disorder to be higher at 9.5% (Nock, Kazdin, Hirpi, & Kessler, 2006). Patterns of behaviors characterized by violation of social norms, episodes of disruptive behavior, and social/academic ineptitudes (American Psychiatric Association, 2013), conduct disorder can also cause psychosocial impairments such as academic difficulties and complications in occupational functioning.

Conduct disorder is bifurcated into two subtypes: adolescent-limited (AL) and life-course-persistent (LCP). Individuals with adolescent-limited conduct disorder exhibit beginning symptoms of conduct disorder during adolescence; however, their patterns of behavior seem to subside into adulthood. Individuals with life-course-persistent conduct disorder demonstrate symptoms of conduct disorder during adolescence and continue into adulthood. In the United States, the prevalence of AL is 4.8% and LCP is 1.1% (Moore et al., 2017).

Sex differences exist in conduct disorder, with males being more likely than females to be diagnosed with conduct disorder (American Psychiatric Association, 2013). Ethnically, Caucasian youth are at highest risk to be diagnosed with conduct disorder (Angold et al., 2002). Regarding ethnicity and sex, Caucasian males have a higher likelihood to be diagnosed with conduct disorder than their counterparts (Angold et al., 2002).

A variety of risk factors have been identified in the development of conduct disorder including social, psychological, neurological, and environmental factors (American Psychiatric Association, 2013; Budhiraja et al., 2017; Murray & Farrington, 2010). With regards to environmental factors, exposure to violence, lack of community involvement, and social disarray can predispose the development of conduct disorder (American Psychiatric Association, 2013). Examining environmental factors are important, as previous research demonstrates a link between environmental development and adolescent psychosocial well-being (Jennings, Perez, & Gonzalez, 2018). A greater understanding of specific neighborhood and community aspects and how they influence the development of conduct disorder is warranted.

Neighborhood and Community Examination

Though colloquial terms, “neighborhood” and “community” have multiple operational definitions and thus, can be nebulous in the social sciences. Chaskin (1997) implies that communities are units in which some set of connections are concentrated. That is, people are connected either through a set of shared beliefs, circumstances, priorities, relationships, or concerns. Additionally, the community can be viewed as a capitalistic enterprise, in which goods and services are provided, social connections are enhanced, and the particular settings begin to surface in the community. Through these certain connections, the development of group identity or collective action starts to emerge (Warren, 1978).

That communities infer some sense of connection is important for the development of neighborhoods, which Chaskin (1997) defines as the physical location in which people share proximity and the associated circumstances with it. Additionally, Hallman (1984) states that a neighborhood is a large urban area by which people interact and inhabit residences. The neighborhood is seen as residential and is deemed a subunit of a larger area. A variety of different elements make up a neighborhood including physical boundaries, ethnic differences, or particular use of commodities to construct a social status (Chaskin, 1997).

Neighborhood Effects and Adolescent Development

There is a strong relationship between neighborhood effects and psychological development in adolescents (Arcaya et al., 2016). For example, Furr-Holden and colleagues (2015) examined the relationship between neighborhood environment and marijuana use among adolescents and found a significant direct effect between neighborhood disorder and youth marijuana use. Similar research conducted by Voisin and Kim (2018) have asserted that disorderly neighborhoods can predict drug use, risky sexual involvement, and poorer mental health among African American youth.

Several possible explanations exist regarding the association between neighborhoods and adolescent well-being. First, adolescents enjoy interacting with their peers and spend most of their time playing with them in their neighborhoods, which can result in positive social connectedness. Second, neighborhoods can provide a basis for identity development and maturation. Previous research has theorized that particular surroundings, including neighborhoods, play a unique role in identity formation among youth (Harter, 1999). Third, neighborhoods can provide a context for which the adolescent may experience growth and increased communication skills (Boardman & Onge, 2005).

While the above findings indicate strong links between neighborhood conditions and mental health, several gaps have been identified in the literature. Research studies involving a nationally representative sample are needed (Arcaya et al., 2016). Moreover, specific risk factors regarding neighborhood quality, environment and conduct disorder have yet to be examined. There is a call for supplemental inspection into specific environmental factors and mental health (Voisin & Kim, 2018). Therefore, the present study examined specific neighborhood and community factors that may be associated with conduct disorder.

Theoretical Background

Several theories exist regarding neighborhood development and its consequential effects on adolescent development. Social disorganization theory, first posited by Shaw and McKay (1969), states that a lack of resolution over specific problems a community faces (e.g., poverty, heterogeneity) may likely lead to a decrease in the neighborhood's capacity to deal with such risk factors, and lead to a potential increase in crime-related activities (Kubrin & Weitzer, 2003).

Moreover, social disorganization theory suggests that the specific characteristics of a neighborhood may displace individuals and negatively affect their development. For example, individuals living in poverty-stricken neighborhoods may experience less community ties, disrupted family structure, and heightened gang-related activity, all of which are significant risk factors for conduct disorder (American Psychiatric Association, 2013; Bassarath, 2001; Jennings et al., 2018).

The physical quality of a neighborhood is also of interest when critically examining social disorganization theory. Prior research suggests that adolescents living in poorer physical quality housing are at increased risk for neuropsychological deficits and greater psychosomatic symptoms (Coley, Leventhal, Lynch, & Kull, 2013). Specifically, Coley and colleagues (2013) found that children experiencing housing problems exhibited lower than average functioning, difficulties with math skills, and increased externalizing and internalizing symptoms. Contrarily, other research has concluded that the physical quality of the neighborhood did not matter (Rollings, Wells, Evans, Bednarz, & Yang, 2017).

Another theory, Broken-windows theory, posits that disorder is a process that starts in a particular neighborhood and if left unchecked, disorganization will continue to increase and lead to further degradation of the neighborhood. Additionally, the loss of community control will start to occur, hinting at “no one cares” (Hoeben, Steenbeek, & Pauwels, 2018; Wilson & Kelling, 1982). Indeed, numerous empirical studies confirm a negative relationship between neighborhood disorder health problems including gonorrhea, substance use, and higher levels of anxiety and stress (Cohen et al., 2000; Gary, Stark, & LaVeist, 2007; Jang & Johnson, 2006).

Study Purpose and Research Questions

While many studies have examined the link between neighborhood variables and mental health, gaps persist in the research investigating the relationship among neighborhood and community factors associated with youth conduct disorder. Therefore, the present study examined specific neighborhood and community factors related to youth conduct disorder. Specifically, the present study sought to address the following questions:

- (1) What percentage of youth have been diagnosed with conduct disorder?
- (2) Does youth conduct disorder differ based on sex or race?
- (3) Does youth conduct disorder differ based on neighborhood and community factors?
- (4) Does youth conduct disorder differ based on perceived neighborhood and community togetherness?

Method

Procedures

A secondary analysis of the 2011-2012 National Survey on Children’s Health (NSCH; National Center for Health Statistics, 2013) was conducted. The National Survey on Children’s Health is a nationwide survey conducted by the U.S. Center for Health Statistics. The purpose of the NSCH was to provide nationwide and state-wide prevalence of children and adolescent’s well-being, health, and psychosocial indicators. The survey contained an extensive array of questions about children and adolescent’s health including disease prevalence, parental health, and environmental factors, such as school, neighborhood and community factors.

Telephone interviews were conducted with parents using a random-digit-dial sample of households with children. One child was selected from each household to be the subject of the survey. Interviews were conducted in English, Spanish, and several Asian languages. The interview completion rate for the NSCH was 54.1% for the landline sample and 41.2% for the cellphone sample (National Center for Health Statistics, 2013). Other methodological details of the 2011-2012 NCHS are detailed elsewhere (National Center for Health Statistics, 2013). All data collection procedures were approved by the NCHS Research Ethics Review Board.

Participants

The sample size for the current analysis was 34,601 children and adolescents with ages between 12-17. For the purpose of the present study, questions regarding family factors were employed. Family factors were defined as adverse experiences in the home or things families did together. Questions included eating as a family, living with a divorced parent, living with a deceased parent, living with an incarcerated parent, witnessing domestic violence, child living with parent with a mental health problem, and child living with parent who had a

drug/alcohol problem. The National Children's Health Survey has been shown to be a valid and reliable survey instrument (National Center for Health Statistics, 2013).

Measures

Conduct Disorder

Conduct disorder was assessed by asking parents whether their child had conduct disorder. Answers to this question were dichotomized into Yes/No responses.

Neighborhood and Community Factors

Neighborhood and community factors were assessed via the following questions: "Please tell me if the following places and things are available to children in your neighborhood, even if [your child] does not use them: (1) "Sidewalks or walking paths?" (2) "A park or playground area?" (3) "A recreation center, community center or boys' or girls' club" (4) "A library or bookmobile?". Conditions of the neighborhood were assessed by the following questions: (1) "In your neighborhood, is there litter or garbage on the street or sidewalk?" (2) "How about poorly kept or dilapidated housing?" and (3) "How about vandalism such as broken windows or graffiti?". Answers to these questions were dichotomized into Yes/No responses.

Perceived Neighborhood and Community Togetherness

Perceived neighborhood and community togetherness were operationally defined as perceived community cohesiveness and willingness to help others out. This was assessed by the following questions: (1) "People in my neighborhood help each other out" (2) "We watch out for each other's children in this neighborhood" (3) "There are people I can count on in this neighborhood" and (4) "If my child was outside playing and got hurt or scared, there are adults nearby who I trust to help my child." Response options to these questions were *Definitely agree/Somewhat agree* and *Definitely disagree/Somewhat disagree*.

Data Analysis

To account for sampling weights, poststratification, and non-response, all data were conducted in Stata (StataCorp, 2017). Prior to data analysis, several diagnostic procedures were done. First, using Grubb's procedure to check for outliers (Grubbs, 1969), tests reveal little outliers ($n = 3$) and were removed from the analysis. Multicollinearity was also not an issue ($VIF = 1.32$). Frequencies were performed to determine the prevalence of neighborhood and community factors as well as the prevalence of youth conduct disorder. A series of odd ratios were computed via logistic regression analyses to determine whether youth conduct disorder differed significantly based on sex, neighborhood and community factors (e.g., presence of sidewalks, parks and playgrounds, recreation center, library, litter or garbage, poorly kept housing, and vandalism) and perceived neighborhood and community togetherness. Significant variables were retained and a final multivariate logistic regression analysis was performed. An alpha level of .05 was utilized as the significance level for all analyses.

Table 1

Demographic Characteristics of Youth

Demographic Characteristic	<i>n</i> (%)
Sex	
Male	18110 (52.4)
Female	16453 (47.6)
Race/Ethnicity	
Hispanic	3780 (11.2)
White, non-Hispanic	23698 (69.9)
Black, non-Hispanic	3190 (9.4)
Multi-racial/other, non-Hispanic	3218 (9.5)
Family-Structure	
Two-parent – biological or adopted	22302 (65.2)
Two-parent – stepfamily	3558 (10.4)
Single mother – no father present	5573 (16.3)
Other family type	2793 (8.2)
Poverty Level	
0-199% FPL	10241 (29.6)
200-299% FPL	5678 (16.4)
300-499% FPL	5006 (14.5)
400% FPL or greater	13676 (39.5)

Notes. *N* = 34,601; missing values excluded

Results

Demographics

Participants included a total of 34,601 adolescents aged 12-17. Of these participants, 52.3% were male and 47.7% were female (Table 1). Regarding prevalence of conduct disorder, 4.1% of males and 2.4% of females were diagnosed with conduct disorder. There was a significant difference of conduct disorder based on sex, with males less likely than females to have conduct disorder, $\chi^2 = 75.33$, $df = 1$, $p < .001$, $OR = .582$, 95% CI [.515, .659].

Youth Conduct Disorder Based on Neighborhood and Community Factors

Most adolescents (96.7%) had sidewalks or walking paths that existed in their neighborhood, whereas 3.3% of adolescents did not. There were no significant differences between having sidewalks or walking paths and development of conduct disorder, $\chi^2 = 0.04$, $df = 1$, $p = .43$, $OR = 1.01$, 95% CI [.887, 1.16] (Table 2). Regarding the existence of a playground or park in the neighborhood, there was a significant difference, such that adolescents who lived in a neighborhood without a park or a neighborhood were at increased risk for developing conduct disorder, $\chi^2 = 19.1$, $df = 1$, $p < .001$, $OR = 1.36$, 95% CI [1.19, 1.57]. A total of 414 (3.8%) adolescents did not have access to a recreation center, community center, or boys' and girls' club, and were at elevated risk for developing conduct disorder, $\chi^2 = 13.1$, $df = 1$, $p < .001$, $OR = 1.25$, 95% CI [1.11, 1.42]. A total of 4.9% of adolescents ($n = 173$) did not have access to a library or a bookmobile and were at increased risk for conduct disorder, $\chi^2 = 30.1$, $df = 1$, $p < .001$, $OR = 1.58$, 95% CI [1.34, 1.87].

Table 2

Youth Conduct Disorder Based on Neighborhood and Community Factors

Neighborhood/Community Factors	Youth Conduct Disorder		OR	[95% CI]
	Child Does not Have Conduct Disorder <i>n</i> (%)	Child Does Have Conduct Disorder <i>n</i> (%)		
Do sidewalks or walking paths exist in your neighborhood?				
Yes ^a	24,740 (96.7)	842 (3.3)	1.00	
No	8718 (96.7)	301 (3.3)	1.01	[0.887, 1.160]
Does a park or playground area exist in your neighborhood?				
Yes ^a	27,270 (96.9)	873 (3.1)	1.00	
No	6188 (95.8)	270 (4.2)	1.36	[1.19, 1.57]***
Does a library or book mobile exist in your community?				
Yes ^a	30,071 (96.9)	970 (3.1)	1.00	
No	3387 (95.1)	173 (4.9)	1.58	[1.34, 1.87]***
In our neighborhood, is there litter or garbage on the street or sidewalk?				
Yes ^a	29,330 (97.0)	900 (3.0)	1.00	
No	4128 (94.4)	243 (5.6)	1.92	[1.66, 2.22]***
How about poorly kept housing or rundown housing?				
Yes ^a	28,402 (97.0)	883 (3.0)	1.00	
No	5056 (95.1)	250 (4.9)	1.65	[1.44, 1.91]***
How about vandalism such as broken windows or graffiti?				
Yes ^a	30,270 (97.0)	948 (3.0)	1.00	
No	3,188 (94.2)	195 (5.8)	1.95	[1.68, 2.29]***

Notes. *N* = 34,601; percent refers to valid percent; missing values excluded.

^aReferent

p* < .01. *p* < .001.

Conduct Disorder Based on Physical Neighborhood Environment

Adolescents who lived in a neighborhood with litter or garbage in the street or sidewalk had a significantly higher risk for being diagnosed with conduct disorder than those who did not $\chi^2 = 79.7$, $df = 1$, $p < .001$, $OR = 1.92$, 95% CI [1.66, 2.22] (Table 2). Adolescents who lived in a neighborhood with poorly kept housing or rundown housing were at greater risk for developing conduct disorder, $\chi^2 = 49.6$, $df = 1$, $p < .001$, $OR = 1.65$, 95% CI [1.44, 1.91]. Neighborhoods with broken windows or graffiti placed an adolescent at increased risk for being diagnosed with conduct disorder, $\chi^2 = 71.1$, $df = 1$, $p < .001$, $OR = 1.95$, 95% CI [1.67, 2.29].

Conduct Disorder Based on Perceived Neighborhood and Community Togetherness

Questions were asked about neighborhood and community togetherness (how strong a community feels to the people living in it). Adolescents were at increased risk for conduct disorder if their parents thought people in the neighborhood did not help each other out, $\chi^2 = 114.4$, $df = 1$, $p < .001$, $OR = 2.31$, 95% CI [1.97, 2.70] (Table 3). If parents thought the neighborhood did not watch out for each other's children, adolescents were 1.36 times more likely to have conduct disorder, $\chi^2 = 100.2$, $df = 1$, $p < .001$. Adolescents were at increased risk for conduct disorder if their parents did not have people in the neighborhood they could count on, $\chi^2 = 160.4$, $OR = 2.66$, $df = 1$, $p < .001$, 95% CI [2.27, 3.11]. Lastly, if parents thought their children were never safe in their neighborhoods, adolescents were 2.43 times more likely to have conduct disorder ($\chi^2 = 142.1$, $df = 1$, $p < .001$).

Table 3

Youth Conduct Disorder Based on Perceived Neighborhood and Community Togetherness and Parent-Reported Conduct Disorder

Neighborhood Characteristics	Youth Conduct Disorder		OR	[95% CI]
	Child Does not Have Conduct Disorder <i>n</i> (%)	Child Does Have Conduct Disorder <i>n</i> (%)		
People in this neighborhood help each other out?				[1.97, 2.70]***
Strongly Agree/Agree ^a	30641 (97.0)	943 (3.0)	1.00	
Disagree	2,817 (93.4)	200 (6.6)	2.31	
We watch out for each other's children in this neighborhood?				[1.19, 1.57]***
Strongly Agree/Agree ^a	27,270 (96.9)	873 (3.1)	1.00	
Strongly Disagree/Disagree	6,188 (95.8)	270 (4.2)	1.36	
There are people I can count on in this neighborhood?				[2.27, 3.11]***
Strongly Agree/Agree ^a	30,944 (97.1)	940 (2.9)	1.00	
Strongly Disagree/Disagree	2,514 (92.5)	203 (7.5)	2.66	
How often do you feel your child is safe in your community or neighborhood?				[2.09, 2.83]***
Usually/Always ^a	30,411 (97.1)	919 (2.9)	1.00	
Never/Sometimes	3,047 (93.2)	224 (6.8)	2.43	

Notes. *N* = 34,601; percent refers to valid percent; missing values excluded.

^aReferent

p* < .01. *p* < .001.

Final Multivariate Logistic Regression Model

All significant variables were retained and a multivariate logistic regression model was performed. The final model predicted 0.8% to 3.1% of the variance in youth conduct disorder. Significant predictors included not having a park or playground, *OR* = 1.20, *p* < .05, 95% CI [1.03, 1.40], not having a library or a bookmobile, *OR* = 1.27, *p* < .05, 95% CI [1.05, 1.53], having litter or garbage on the streets, *OR* = 1.40, *p* < .001, 95% CI [1.19, 1.65], vandalism, *OR* = 1.33, *p* < .01, 95% CI [1.10, 1.60], not being able to count on others to watch own children, *OR* = 1.81, *p* < .001, 95% CI [1.49, 2.20], and perceived child safety, *OR* = 1.76, *p* < .001, 95% CI [1.49, 2.07] (Table 4).

Discussion

Conduct disorder remains a critical mental health concern needing to be addressed in adolescence. The present study examined the relationship of neighborhood and community factors and youth conduct disorder. Significant variables from the final multivariate regression model indicated that neighborhoods littered with garbage, rundown housing, and broken windows were associated with increased risk for youth conduct disorder. Additionally, the absence of a park/playground or a bookmobile placed youth at elevated risk for conduct disorder. Between 3% to 5% of adolescents do not have access to these community areas, and this is detrimental to a child's development, as parks and playgrounds increase social connectedness, communication, and friendship development (Filipova, Syroed, & Goncharova, 2016).

The present study found that adolescents living in neighborhoods with litter or garbage on the sidewalk were nearly twice as likely as their counterparts to have conduct disorder. Previous research has indicated a positive

Table 4

Final Multivariable Regression Model for Youth Conduct Disorder

Item	B	SE	Wald	Exp b	[95% CI]
Parks and playgrounds (No)	.181	.078	5.391	1.198	[1.029, 1.396]*
Recreational center (No)	.094	.070	1.813	1.099	[0.958, 1.261]
Library or bookmobile (No)	.241	.096	6.342	1.273	[1.055, 1.536]*
Litter or garbage on sidewalks (Yes)	.338	.084	16.628	1.402	[1.190, 1.653]***
Poorly kept housing (Yes)	.106	.084	1.573	1.111	[0.942, 1.311]
Vandalism (Yes)	.289	.095	9.308	1.335	[1.109, 1.608]**
Watch other's children (No)	.173	.104	2.760	1.189	[0.969, 1.458]
Counting on others in neighborhood (No)	.593	.101	34.667	1.809	[1.485, 2.204]***
Perceived child safety (is not safe)	.564	.084	45.252	1.758	[1.492, 2.073]***

Notes. $N = 34,601$; percent refers to valid percent; missing values excluded. The model significantly predicted lifetime conduct disorder (omnibus $\chi^2 = 269.596$, $df = 9$, $p < .001$) and accounted for 0.8% to 3.1% of the variance in parent-reported conduct disorder.

* $p < .05$. ** $p < .01$. *** $p < .001$

relationship between good neighborhood quality and child mental/physical health (Christian et al., 2015). Neighborhoods littered with trash and garbage could be perceived by some youth as the community having given up and not caring about the environment. Littered environments could also signify a lack of authority and direction from the community. More research is needed to determine the specific effects of neighborhood quality on adolescent mental health.

Rundown housing was a significant risk factor for conduct disorder, with adolescents living in neighborhoods with this particular anomaly were 1.65 times more likely to have conduct disorder. Butler, Kowalkowski, Jones and Raphael (2012) examined the relationship between poor physical neighborhood characteristics and externalizing behaviors among a national sample of adolescents, and found an increased risk for behavioral problems for adolescents living in rundown neighborhoods. Signs of dilapidated housing could signal a lack of care and authority for direction, and could contribute to a decrease in community cohesiveness. Contrarily, Pajer and colleagues (2008) examined whether poor neighborhood physical characteristics could lead to conduct disorder among girls and failed to find any significant relationship. Additional studies are warranted to examine longitudinally the specific neighborhood characteristics and whether it plays a role in the development of externalizing behaviors.

The present study found adolescents without access to a park or playground were at elevated risk for developing conduct disorder. Playgrounds and parks are essential environments for prosocial behaviors, increased physical activity, friendship development, and adolescent psychosocial maturation (Filipova et al., 2016). The lack of a playground or park may hinder adolescent growth, perhaps increase isolation from peers and potentially prohibit enhanced social connectedness. Adolescents may turn to other inimical health behaviors as a result of not having an available play area. Communities should increase access to play areas and parks to further enhance adolescent psychosocial development.

The present study also found that if parents perceived their child to not be safe, those children were 1.76 times more likely to have conduct disorder. Previous research has established a link between parental monitoring and adolescent health. Li, Feigelman and Stanton (2000) found a significant relationship between parental monitoring and their child's health, with low monitoring increasing the child's risk to engage in deleterious health behav-

iors (e.g., drug use and risky sexual behaviors). If left unsupervised or not perceived as safe, adolescents may succumb to a wide variety of toxic behaviors and perhaps be influenced by peers involved in deleterious behaviors. Parents should monitor their children closely to supervise their behaviors and influences within their neighborhood.

Conduct disorder remains a critical mental health concern needing to be addressed. The present study identified neighborhood and community factors associated with increased risk for youth conduct disorder. Those at highest risk for conduct disorder lived in neighborhoods with trash or garbage, vandalism, no bookmobile present, no parks or playgrounds, and increased parental perceived risk of child's safety. Findings from the current study could assist health educators in further developing prevention initiatives and programs aimed at conduct disorder. Messages framed around the association of neighborhood and community factors with conduct disorder are warranted.

Limitations

Limitations should be noted when interpreting the results of this study. First, data are parent-reported, thus, parents may have chosen to respond with socially desirable answers. Second, the age range of youth was delimited to individuals aged 12 to 17 years. Thus, findings may not be generalizable to youth of younger ages.

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Competing Interests

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