Professional and informal help-seeking among low-income adolescents exposed to violence in the community and at school

Abstract

Background: Adolescents may seek help for many reasons beyond health needs, such as personal stress due to violence exposure.

Objective: To investigate factors associated with receiving professional assistance and informal help due to violence exposure in the community and at school.

Participants and setting: This study was conducted in Itaboraí, a low-income medium-size city in the State of Rio de Janeiro, Southeast Brazil, characterized by poverty, inequality and violence. It analyses data reported by 669 in-school adolescents (11-15-years, 51.7% girls).

Methods: This is a cross-sectional study nested in a longitudinal study (Itaboraí Youth Study). The Itaboraí Youth Study involved a probabilistic community-based sample of 1,409 6-to-15-year-olds based on a 3-stage probabilistic sampling plan that included a random selection of census units, eligible households and the target child.

Results: Professional assistance was mainly received from psychologists (the Brazilian population has free access to health services). Family members were the main source of informal help. Correlates of professional assistance were having clinical emotional problems and not counting on an adult (if needing help) for community violence victims, and absent father for community and school violence victims. Correlates of informal help were female sex, maternal anxiety/depression and absent father for community violence victims, and younger age and higher maternal education for school violence victims.

Conclusions: The mental health needs of violence victims, and maternal difficulties to deal with the adolescent distress resulting from violence exposure (maternal increased burden due to

father absence and/or having anxiety/depression) are important influences on the help-seeking process.

1. Introduction

Children around the world are exposed to different forms of violence that can occur in any setting and be perpetrated by different individuals with immediate and long-term negative consequences for their mental health and educational achievement (United Nations Children's Fund, 2014). However, violence exposure is much more prevalent among children and adolescents living in low- and lower-middle-income countries than among those living in high and upper-middle income countries (Le, Holton, Romero, & Fisher, 2018). Adolescents with low socioeconomic status are more likely to be exposed to different forms of violence such as community violence (Larke, 2014), involvement in bullying (Jansen, Veenstra, Ormel, Verhulst & Reijneveld, 2011), and abuse and neglect (Bywaters et al., 2016). At school, bullying victimization may occur not only face-to-face, but also online (cyberbullying victimization), while exposure to community violence may include not only direct victimization, but also witnessed events (seeing events happening with another person).

Studies investigating the prevalence of exposure to violence at school showed that prevalence rates vary widely due to methodological differences that include the definitions and measures adopted; the sex and age of participants; the number and types of aggressive acts investigated; the reference time frame; and the type of report (self, peer, teacher) (Hymel & Swearer, 2015; Menesini & Salmivalli, 2017; Salmon et al., 2018). The Health Behaviour in School-aged Children (HBSC), a World Health Organization cross-national study, collected data from almost 220,000 young people (aged 11, 13 and 15) in 42 countries in Europe and North America in a 2013/2014 survey, and noted that the prevalence of bullying victimization (suffering bullying at least two or three times a month in the past couple of months) varied by

country. Considering adolescents aged 13 years, the highest prevalence rates were found in Lithuania (boys: 31%, girls: 29%), while the lowest rates were observed in Armenia (boys: 4%, girls: 1%) (Walsh & Cosma, 2016). More recently, Koyanagi et al. (2019) examined bullying victimization in 48 countries (predominantly low- and middle-income countries) (N = 134,229; ages 12-15 years) and found that the overall prevalence of being bullied on one or more days in the past-30 days was 30.4%. In Brazil, the National Adolescent School-Based Health Survey (Malta et al., 2010) investigated bullying victimization at school in a representative sample of 60,973 Brazilian ninth grade students from 26 State capitals and the Federal District of Brasília (response rate: 88.7%). The authors found that 5.4% of students suffered bullying at school most of the time or always in the past 30 days, with a higher prevalence rate among boys compared to girls (6.0% vs. 4.8%). In 2012, the National Adolescent School-Based Health Survey (Malta et al., 2014) investigated bullying victimization at school among another representative sample of 109,104 Brazilian ninth grade students from 26 State capitals and the Federal District of Brasília. Using the same measure, it was noted a higher prevalence of bullying victimization in the past 30 days (7.2%) among ninth grade students, with a higher prevalence rate among boys than girls (7.9% vs. 6.5%).

In the United States, the national prevalence of witnessed community violence among adolescents (N = 3,614, 12-17 years) was estimated to be 38% (Zinzow et al., 2009). Students (12–17 years) from Belgium (Antwerp, N = 4,743), Russia (Arkhangelsk, N = 2,823), and the US (New Haven, N = 4,101) reported relatively high levels of exposure to community violence, with a higher proportion of girls than boys reporting witnessing violent events (37.4% vs. 35.0% in Belgium; 41.1% vs. 37.4% in Russia; 51.6% vs. 38.7% in the US), and a higher proportion of boys than girls reporting community violence victimization (49.9% vs. 38.8% in Belgium; 32.3% vs. 17.7% in Russia; 41.8% vs. 24.0% in the US) (Koposov et al., 2021). In Brazil, a cross-sectional study involving 693 students in their second year of high school from public and private schools in the city of Rio de Janeiro, investigated the frequency

of exposure to and involvement in community violence situations. The adolescents reported that someone close to them had been murdered (30%), and that they had already seen the corpse of a victim of homicide (40%). They had been victims of robberies (38%), interpersonal aggression (13%), and death threats to either themselves or their relatives (25%). In general, community violence was more frequently reported by boys than girls. Public school students with lower socioeconomic status were more exposed to lethal violence than the other students (de Moraes et al., 2021).

Independent of socioeconomic status, internalizing and externalizing behavior problems were found to be associated with exposure to violence in the community (Hardaway, Sterrett-Hong, Larkby, & Cornelius Hardaway, 2016; Darawshy & Haj-Yahia, 2018; Pierre, Burnside, & Gaylord-Harden, 2020), at school (e.g., victimization by peer aggression and bullying) (Bowes, Maughan, Caspi, Moffitt, & Arseneault, 2010; Brunstein-Klomek et al., 2019) and at home (e.g., harsh physical punishment and abuse) (Curto, Paula, Do Nascimento, Murray, & Bordin, 2011; Murray, Anselmi, Gallo, Fleitlich-Bilyk, & Bordin, 2013; Brunstein-Klomek et al., 2019). However, adolescents are often reluctant to seek help for mental health problems despite their need for assistance and the potential benefit of communicating their difficulties to formal sources of help such as mental health practitioners or informal sources such as family members (Divin, Harper, Curran, Corry, & Leavey, 2018).

According to an international literature review on the topic of adolescents and help-seeking behavior (Barker, 2007), which is part of the World Health Organization discussion papers on adolescence, adolescents may seek help for many reasons beyond health needs, such as personal stress due to family violence or victimization by abuse, and they may use multiple kinds of health services together with other sources of help. Seeking both formal and informal support for their problems depends not only on the adolescents' perceptions of their needs but also on the adults' perceptions of the adolescents' needs. Seeking help from either formal or informal sources is also affected by whether the need for help is associated with stigma or is

perceived as a sign of weakness. Receiving professional assistance also depends on the existence of formal health and social service infrastructures, whether they are accessible and affordable, transportation costs, and how long adolescents have to wait for an appointment. In addition, whether adolescents trust help providers or view their available social supports (e.g., parents, other adults, peers) as helpful is an important factor in help-seeking behavior (Barker, 2007).

Seeking help and finding help are fundamental to adolescent health, development and well-being (Barker, 2007). However, studies on the prevalence of help-seeking behaviors of children who ever experienced physical and/or sexual violence are rare. The existing literature shows that the great majority of adolescents exposed to physical and/or sexual violence do not disclose their victimization experiences, do not seek or receive formal help, and help-seeking from family, friends and neighbors is much more common than formal sources such as medical facilities, police, social workers, or teachers (Grinstein-Weiss, Fishman & Eisikovits, 2005; United Nations Children's Fund, 2014; Meinck et al., 2017; Pereira et al., 2020). In South Africa, a longitudinal study involving a community-based sample of 10-to-17-year-olds (N = 3,515) was carried out in two provinces including two health districts with high deprivation in each province. The authors observed that 20.0% of adolescents exposed to physical, emotional and/or sexual violence disclosed their victimization experiences and 14.4% received help (4.9% from formal health or social services and 7.1% through community vigilante action) (Meinck et al., 2017). When analyzing nationally-representative data from six countries (Cambodia, Haiti, Kenya, Malawi, Nigeria and Tanzania), Pereira et al. (2020) found that among adolescents (13-17 years) exposed to physical and/or sexual violence, informal disclosure ranged from 23% (Cambodia) to 54% (Malawi), while formal disclosure or help seeking ranged from less than 1% (Cambodia) to 25% (Tanzania). Finally, across countries, receipt of formal help was low, ranging from 1% (Nigeria) to 11% (Tanzania) (question not asked in Cambodia and Haiti).

There is a gap in the existing literature related to determinants of help-seeking behaviors among adolescents exposed to violence other than dating violence. The scarce data available show that being female is a factor associated with seeking help among 10-to-17-year-olds who suffered physical, emotional, and/or sexual abuse (Meinck et al., 2017) and living without the biological father is a factor associated with seeking help among adolescents (13-17 years) exposed to physical and/or sexual violence, while being male is associated with reduced help-seeking behaviors (Pereira et al., 2020). In an Australian study involving 652 adolescents (11-17 years) who experienced bullying victimization, factors associated with not seeking help included having poorer prosocial skills and lower perceived social support (Matuschka et al., 2021). Grinstein-Weiss, Fishman & Eisikovits (2005) examined the willingness of Jewish and Arab Israeli adolescents (N = 6017, 14-18 years) to look for help in times of distress (living in a very stressful environment with a constant threat of terror). The authors found that satisfaction with the school and overall anxiety and fear of violence were positively related to formal help seeking, while satisfaction with family and friends were negatively related to formal help-seeking. Regarding informal sources of help, satisfaction with the school, family and friends were all positively related to help seeking from the family, while satisfaction with friends, older age and overall anxiety were positively associated with seeking help from friends. Family income was negatively associated with willingness to seek help from the family, while satisfaction with school was negatively related to the willingness to seek help from friends.

In Brazil, as in other low- and middle-income countries, there is a need to investigate professional and informal help-seeking behavior specifically related to violence exposure among low-income adolescents since a great number of adolescents live in poverty and are exposed to high rates of violence, including homicide. According to the United Nations Children's Fund (2018), 18 million Brazilian young people up to the age of 17 years (34.3% of the total) face financial poverty and 12 million of these youngsters have no access to one or

more of their basic rights: education, information, water, sanitation, shelter, and protection from child labor. In Brazil, homicides are the main cause of death among 15-to-29-year-olds. From 2008 to 2018, homicide rates in this age group reached 96.5 per 100,000 in the State of Rio de Janeiro (where this study was conducted) compared to the country rate of 60.4 per 100,000 (IPEA, 2020).

To the best of our knowledge, no other published study in Brazil had investigated professional and informal help-seeking behaviors related to adolescent violence exposure in different environments. To fill this gap in the literature, the current study provides evidence to answer four important research questions: (1) What is the prevalence of violence exposure in the community and at school among adolescents living in Itaboraí, a median-size low-income city in the State of Rio de Janeiro? (2) Do adolescents exposed and not exposed to violence differ in terms of sex, age, chronic physical health problems, mental health problems, social support, maternal education, maternal anxiety/depression and father absent from the household? (3) What proportion of adolescents receive assistance from different professionals and what proportion receive informal help from different sources in relation to exposure to violence in the community and at school? (4) Did the adolescent's sex and age, chronic physical health problems, mental health problems, lack of a supporting person and family factors (maternal education, maternal anxiety/depression, no father residing in the home) affect the odds of receiving professional assistance or informal help in the past 12 months among adolescents exposed to each of the two types of violence investigated?

Regarding the theoretical foundation for the current study, the behavioral theory of health service use developed by Andersen (1995) can be useful for understanding the factors that influence adolescents' help-seeking behavior. According to this theoretical model, health services use is determined by individual factors, health services system factors (resources, organization), and societal factors (technology, norms). Individual factors include the perception of need (perceived functional capacity, symptoms, and general state of health),

enabling factors (family and community resources and accessibility of those resources), and predisposing factors (age, sex, education, race/ethnicity, and health beliefs such as attitudes, values, and knowledge about health and health services that may influence the perception of need and use of health services). Health services use also depends on the type of health services organizations in the community, the kinds of health care providers available in the areas where people live, cost of services, access to health insurance, travel and waiting times to get an appointment, and availability and cost of transportation (Andersen, 1995, Andersen & Newman, 2005). Regarding the perception of need as an individual factor that influences the use of services, whether or not the individuals judge their problems to be of sufficient importance and magnitude to seek professional help interferes with service use (Andersen, 1995). For instance, the severity of a problem such as violence victimization or a mental health problem experienced by the adolescent determines the likelihood that he or she will seek help (Adu-Mensa, 2019). Regarding an example of gender as a predisposing factor that may influence the adolescent help-seeking behavior, Hunter, Boyle, & Warden (2004) found that girls were more likely to seek help for bullying victimization than boys.

Based on the literature, the authors of the current paper hypothesize that the great majority of victims will not have received any professional assistance or informal help in respect of exposure to violence, and that receiving informal help will be more frequent than receiving professional help. Because certain characteristics of adolescents exposed to violence (e.g., mental health problems, lack of social support) may influence their help-seeking behaviors, we expect that adolescents exposed to violence at school or in the community will have a greater need of formal and informal help due to higher rates of mental health problems compared to non-exposed ones. Among adolescents exposed to violence, we also expect to find sociodemographic (e.g., being female, not living with the father) and psychosocial factors (e.g., perceived lack of social support) associated with receiving professional assistance and informal help in relation to violence exposure.

2. Methods

2.1. Study design and sampling

This is a cross-sectional study nested in a longitudinal study (a Brazilian-Norwegian collaboration entitled the Itaboraí Youth Study) that was conducted in Itaboraí, a low-income medium-size city (218,008 inhabitants, 98% urban) (IBGE, 2010) in the State of Rio de Janeiro, Southeast Brazil, characterized not only by poverty, but also by inequality and violence (Bordin et al., 2018). At baseline, a probabilistic community-based sample of 1,409 6-to-15-year-olds (response rate = 87.8%) was selected based on a three-stage sampling procedure that involved a random sample of census units (107/420), eligible households (15 in each selected census unit) and a target child randomly selected among all eligible children in each participant household. The eligibility criteria were boys and girls aged 6-15 years residing with his/her biological, step or adoptive mother. The exclusion criteria were intellectual disabilities and the mother being younger than 18 years. More detailed information on the Itaboraí Youth Study methods can be found elsewhere (Bordin et al., 2018).

The baseline sample of the Itaboraí Youth Study (N = 1,409) included 720 adolescents (11-15 years), and 94.4% of them were individually interviewed (N = 680). The current paper analyzes data reported by 669 adolescents who had been attending school in the previous 6 months and by their mothers.

2.2. Procedures and measures

Between February and December 2014, trained lay interviewers individually applied semi-structured questionnaires to the adolescents and their mothers at home under confidential

conditions. The use of interviews (60 to 90 minutes long) to collect data was an effort to avoid inaccurate responses since a significant proportion of participants could have had difficulty reading a self-administered questionnaire (Bordin et al., 2018).

Study variables of interest include adolescent-reported study outcomes (professional assistance, informal help); the main associated factors (exposure to violence in the community and at school); and other potential correlates (chronic physical health problems, clinical emotional problems, clinical conduct problems, lack of a supporting person); and mother-reported potential correlates (maternal education, maternal anxiety/depression, no father residing in the home). The sex of the participant was given by the adolescent, and his/her age (on the day of the mother's interview) was given by the mother.

2.2.1. Adolescent-reported variables

Professional assistance in the past 12 months Receiving professional assistance from a psychologist, psychiatrist, pediatrician, general practitioner, neurologist, nurse, community health worker or social worker specifically due to violence exposure (in the community, at school) was investigated based on yes or no responses.

Informal help in the past 12 months Receiving informal help from family members, friends or neighbors, teachers or other school staff, church or priest or pastor, traditional healer, spiritist center or guardianship council (i.e., the public agency set up in Brazil to be responsible for protecting children and adolescents' rights) specifically due to violence exposure (in the community, at school) was investigated based on yes or no responses.

Exposure to violence in the community in the past 12 months (experiencing or witnessing at least one of 11 events that occurred outside the school and home environments) Eight topics

(beatings and muggings, forced entry, being chased, arrests, threats, knife attacks, shootings, sexual molestation) were investigated. These topics were selected from the Survey of Exposure to Community Violence – Self Report Version, developed at the National Institute of Mental Health (Richters & Saltzman, 1990). Unlike the original Self Report Version, beatings and muggings were treated as two separate items, and two new items were added by our research team (being around a shoot-out and suffering death threats). Yes or no responses were obtained in relation to experiencing each of the 11 events and witnessing each of the 11 events.

Exposure to violence at school in the past 6 months Violence at school was defined as having been exposed to peer aggression events (physical aggression, verbal harassment, social manipulation) or bullying or cyberbullying in the past 6 months. Regarding peer aggression victimization, a 15-item scale previously used in a Norwegian study with schoolchildren (Rønning, Handegaard, & Sourander, 2004) was used which included selected and modified items from the Arora's "My Life in School" checklist (Arora, 1994). This scale included three types of peer aggression events occurring once or more than once in the past 6 months: physical aggression (4 items: kicking, threatening, being tripped up, hitting), verbal harassment (5 items: name calling, teasing, teasing about family, teasing because he/she was different, hurting feelings) and social manipulation (6 items: ganging up on him/her, making him/her hurt other people, getting him/her into trouble, making him/her do something he/she didn't want to, threatening to tell on him/her, lying about him/her). Possible answers for these items were: "not at all" (0), "once" (1), "more than once" (2). In this study, victimization by any peer aggression event corresponds to at least one of these15 events occurring once or more than once in the past 6 months. After being asked about peer harassment events, the adolescents were then given the following definition of bullying: "When one or more school peers are repeatedly doing bad things to you such as name-calling, threatening, hitting, spreading rumors about you, excluding you from the group or teasing you to hurt your feelings". One question investigating

bullying victimization was then asked: ‘‘How often have you been bullied in the past 6 months?’’ Possible answers for this question were: “not at all” (0), “less than once a week” (1), “more than once a week” (2), “most days” (3). In this study, bullying victimization in the past 6 months corresponds to answers (1), (2) or (3). Regarding cyberbullying victimization, 9 items were considered (being ignored, being disrespected, being called names, being threatened, being e-mail bombed, being picked on, being ridiculed, being scared for safety, and being the target of rumors) based on previous work by Hinduja and Patchin (2009). Possible answers for all items were: “never” (0), “less than once a week” (1), “more than once a week” (2), “almost every day” (3). In this study, any cyberbullying victimization in the past 6 months corresponds to suffering at least one of these 9 events that occurred less than once a week or more frequently in the past 6 months.

Presence of chronic physical health problems Investigated based on the following question with a yes or no response: “Do you have any chronic physical health problem such as those that need frequent medical assistance?”

Clinical emotional problems and conduct problems These two mental health problems were measured by two scales of the Brazilian version of the self-rated Strengths and Difficulties Questionnaire (SDQ) for 11-to-17-year-olds, which is a screening instrument to identify children and adolescents at risk for mental disorders (the psychometric properties of the Brazilian version of the SDQ are discussed by Woerner et al. (2004) based on reported findings of previous studies conducted with different samples of Brazilian children and adolescents). The SDQ is a widely used measure of child mental health. Scale scores are classified in three categories: clinical, borderline and normal. The greater the scale scores, the higher the odds of presenting a clinical disorder (Goodman & Goodman, 2009). In the current study, the clinical range of scale scores was determined according to pre-established cut-off points based on

normative data from large population-based studies conducted in the United Kingdom (details at www.sdqinfo.com) since Brazilian cut-offs are not available.

Lack of a supporting person (any adult, teacher, or friend the adolescent can count on) This was assessed based on three questions with yes or no responses: (1) Do you have an adult you can count on if you really need help? (2) Do you have a teacher you trust in, who you can ask for help or advice? (3) In your group of friends, do you have anyone you can count on if you really need help? These three variables entered logistic regression models individually.

2.2.2. Mother-reported variables

Maternal education Mothers were asked to choose one of five categories for years of schooling: 0-3 years, 4-7 years, 8-10 years, complete high school or incomplete college, and complete college. In this article, maternal education was dichotomized as 0-7 years (basic education not completed) and 8 or more years of schooling.

Maternal anxiety/depression Investigated by the Self-Reporting Questionnaire (SRQ-20), a screening measure developed by the World Health Organization (1994) including 20 items with the answers yes (1) or no (0). The SRQ-20 total score ranges from 0 to 20, and it has been validated for use with the Brazilian female population aged 15 years and over based on a cut-off point > 7 (Mari & Williams, 1986).

No father residing in the home Identified by the mother's negative response to the following question: "Do you live with a husband or partner?"

2.3. Statistical analysis

In this paper, absolute numbers of subjects are unweighted (refer to the sample), while percentages are weighted (refer to the city population). Weighting was not used in the statistical analyses. No missing data was registered during the interviews with the study participants with respect to the variables of interest for the current study. Chi-square tests were used to identify differences between adolescents exposed and non-exposed to violence (Table 1). Table 1 also shows the characteristics of the total sample of in-school adolescents. Table 2 shows the frequency of different types of professional assistance and informal help received by in-school adolescents exposed to violence in the community and at school. The association between help-seeking and a comprehensive range of independent variables was studied using multivariable logistic regression analysis in four different situations depending on type of violence (community or school) and type of help-seeking (professional or informal) (Tables 3 and 4). Prior to the multivariable analyses, univariable logistic regressions were computed. Independent variables with $p < 0.25$ in the univariable analyses entered the multivariable models (Hosmer & Lemeshow, 2000). SPSS 26 was used for all analyses. Statistical significance was evaluated with a significance level of .05.

3. Results

The current study investigated 669 in-school adolescents (11-15-years; mean age ± SE: 13.01 ± 0.07 years; 51.7% girls). In Itaboraí city, 53.9% (95% CI: 48.2%-59.4%) of in-school adolescents were exposed to at least one type of violence exposure (in the community, at school) based on the adopted definitions of these variables by the current study. When considering each type of violence exposure separately, the study showed that 25.2% (95% CI: 20.0%-31.3%) of adolescents were exposed to community violence (being a victim or witnessing at least one of 11 events in the past 12 months); and 47.1% (95% CI: 41.9-52.4)

were exposed to violence at school, including a combination of peer aggression victimization (suffering at least one of 15 events that occurred once or more in the past 6 months), bullying victimization (less than once a week or more frequent in the past 6 months) and cyberbullying victimization (suffering at least one of 9 events that occurred less than once a week or more frequently in the past 6 months). However, 26.8% (95% CI: 19.9-35.0) of those exposed to community violence did not suffer school violence and 60.8% (95% CI: 52.7-68.3) of those exposed to school violence did not suffer community violence. In addition, being exposed to violence was not by itself a reason for looking for professional assistance or informal help. Even in the group exposed to both types of violence [18.5% (95% CI: 14.5-23.3)], the type of violence exposure that motivated seeking help differed among the individuals. In this group, 82.3% (95% CI: 71.3-89.7) did not receive any professional assistance, 8.3% (95% CI: 3.5-18.3) received it only due to community violence exposure, 3.2% (95% CI: 1.1-9.3) received it only due to school violence exposure, and 6.2% (95% CI: 3.0-12.4) received it due to both types of violence exposure. In the group exposed to both types of violence, 60.8% (95% CI: 50.8-70.0) did not receive any informal help, 10.7% (95% CI: 6.7-16.5) received it only due to community violence exposure, 12.1% (95% CI: 7.7-18.6) received it only due to school violence exposure, and 16.4% (95% CI: 9.6-26.5) received it due to both types of violence exposure. Therefore, the question is what factors in a person that identified determined type of violence exposure as a reason to seek help may influence their help-seeking behaviors?

Regarding other characteristics of the adolescents, 8.9% (95% CI: 6.7%-11.8%) had chronic physical health problems, 11.5% (95% CI: 8.6%-15.2%) had clinical emotional problems and 13.8% (95% CI: 10.5%-18.0%) had clinical conduct problems. Regarding social support, 8.3% (95% CI: 5.9%-11.7%) of adolescents reported having no adult to count on when in need of help, 25.1% (95% CI: 20.8%-30.0%) had no teacher to ask for help or advice and 9.3% (95% CI: 7.0%-12.4%) had no friend to count on when in need of help. Regarding mothers, 51.8% (95% CI: 45.6%-58.0%) had less than eight years of schooling (basic

education not completed), 25.0% (95% CI: 21.1%-29.3%) had anxiety/depression and 27.7% (95% CI: 23.4%-32.4%) had no husband or partner residing in the home (Table 1).

3.1. Differences between exposed and non-exposed adolescents

Adolescents exposed to community violence differed from non-exposed ones in terms of clinical emotional problems (18.4% vs. 9.2%, $p < 0.001$), clinical conduct problems (22.9% vs. 10.8%, $p < 0.001$) and not having a teacher to ask for help or advice (39.5% vs. 20.2%, $p < 0.001$) (Table 1). Adolescents exposed to school violence differed from non-exposed ones in terms of clinical emotional problems (16.0% vs. 7.5%, $p < 0.001$), clinical conduct problems (19.8% vs. 8.6%, $p < 0.001$), not having an adult to count on when in need of help (10.9% vs. 6.1%, $p = 0.02$), not having a teacher to ask for help or advice (29.1% vs. 21.5%, $p = 0.009$) and not having a friend to count on when in need of help (13.7% vs. 5.5%, $p = 0.001$) (Table 1).

INSERT TABLE 1

3.2. Received professional assistance and informal help

The great majority of adolescents exposed to violence either in the community or at school did not receive any professional assistance (85.9% and 92.0% respectively) or informal help (73.8% and 77.0% respectively) in the past 12 months. Those exposed to violence in the community received professional assistance mainly from psychologists (6.5% from school psychologists and 5.5% from other psychologists) and pediatricians (4.3%). They received informal help mainly from family members (19.3%), friends or neighbors (9.8%) and teachers or other school staff (6.8%). Those exposed to violence at school received professional

assistance mainly from psychologists (5.5% from school psychologists and 2.9% from other psychologists). They received informal help mainly from family members (14.5%), teachers or other school staff (11.1%) and friends or neighbors (5.8%) (Table 2).

INSERT TABLE 2

3.3. Multivariable logistic regression models

When considering the study outcome "receiving any professional assistance in the past 12 months" (Table 3), multivariable logistic regression analysis showed that among adolescents exposed to community violence (Model 1), only the absence of the father was a significant correlate. Adolescents exposed to community violence with no father residing in the home were six times more likely to receive any professional assistance compared to adolescents with a present father (OR = 6.1, 95% CI: 2.3-16.1, $p < 0.001$). Among adolescents exposed to school violence (Model 2), three factors increased the odds of receiving any professional assistance in the past 12 months: having clinical emotional problems (OR = 4.9, 95% CI: 1.9-12.8, $p = 0.001$), not having an adult to count on when in need of help (OR = 3.6, 95% CI: 1.2-11.3, $p = 0.03$), and not having the father residing in the home (OR = 2.7, 95% CI: 1.1-6.8, $p = 0.04$) (Table 3).

INSERT TABLE 3

When considering the study outcome "receiving any informal help in the past 12 months" (Table 4), multivariable logistic regression analysis showed that among adolescents exposed to community violence (Model 3), three factors were significant correlates: being a girl, having a mother with anxiety/depression and not having the father residing in the home.

Girls exposed to community violence were three times more likely to receive any informal help than exposed boys (OR = 2.9, 95% CI: 1.3-6.3, p = 0.007). Adolescents exposed to community violence whose mother had anxiety/depression were 2.5 times more likely to receive any informal help than exposed adolescents with a mother without anxiety/depression (OR = 2.5, 95% CI: 1.1-5.4, p = 0.03). Adolescents exposed to community violence with an absent father were 2.8 times more likely to receive any informal help compared to exposed adolescents with a present father (OR = 2.8, 95% CI: 1.3-5.9, p = 0.01). Among adolescents exposed to school violence (Model 4), two factors increased the odds of receiving any professional assistance in the past 12 months: being younger and having a mother with eight or more years of schooling. When inverting the odds ratio, we found that for each year less in adolescent age, victims of school violence were 1.2 times more likely to receive any informal help (OR = 1.2, 95% CI: 1.01-1.5, p = 0.047). Victims of school violence with a mother that completed eight or more years of schooling were 2.2 times more likely to receive any informal help than victims with a mother with less than eight years of schooling (OR = 2.2, 95% CI: 1.3-3.9, p = 0.006) (Table 4).

INSERT TABLE 4

4. Discussion

It is of concern that 53.9% of in-school adolescents from Itaboraí city had been recently exposed to at least one type of violence (in the community, at school). When considering each type of violence exposure separately, 25.2% of adolescents were victims of community violence in the past 12 months, and 47.1% suffered violence at school in the past 6 months. However, the great majority of adolescents exposed to violence in the community or at school did not receive any professional assistance (85.9% and 92.0% respectively) or any informal

help (73.8% and 77.0% respectively) in the past 12 months. This is in accordance with the literature which indicates that adolescents are reluctant to seek help when exposed to community violence (Guterman, Haj-Yahia, Vorhies, Ismayilova, & Leshem, 2010) or school violence (Eliot, Cornell, Gregory, & Fan, 2010; Boulton, Boulton, Down, Sanders, & Craddock, 2017; Yablon, 2018). In respect of the current study, receiving any informal help was more common than receiving any professional assistance for the victims of the two types of violence investigated, suggesting that victimized adolescents in the process of help-seeking prefer to contact the people they already know such as family, friends, and teachers than unknown professionals from formal services. Help-seeking from informal sources was also much more common than help-seeking from formal sources among adolescents (13-17 years) exposed to physical and/or sexual violence in Cambodia, Haiti, Kenya, Malawi, Nigeria and Tanzania (Pereira et al., 2020). Other explanations based on studies that investigated the help-seeking behavior of adolescents with mental health needs may apply to victims of violence such as difficulty accessing services due to location, transportation costs and long waiting times to get an appointment, and even not knowing where to go or how to seek help (Reardon et al., 2017; Martinez, Lau, & Brown, 2020).

In our study, in-school adolescents exposed to each type of violence (in the community, at school) had increased levels of psychopathology compared to non-exposed adolescents, but rates of received professional assistance and informal help were very low. This finding is in line with the observation that individuals with mental health needs often delay or avoid seeking help for mental health problems (Xu et al., 2018). For instance, Costello, He, Sampson, Kessler, & Merikangas (2014) examined rates of service use for mental, emotional, and behavioral disorders among adolescents (N = 10,148, 13–17 years) and found that more than half of adolescents with a psychiatric disorder in the past 12 months did not receive any mental health care from any source within that time. In our study, having mental health problems at a clinical level, as cause or consequence of violence exposure, may explain the professional

assistance received predominantly from psychologists among victims of violence in the community and at school compared to assistance received from other health professionals. In fact, the perceived severity of mental illness facilitates formal psychological help-seeking behavior, i.e., seeking help from recognized mental health care providers (Martinez et al., 2020). In Brazil, the Unified National Health System [*Sistema Único de Saúde* (SUS)] provides free access to health services for the entire Brazilian population, but services are unequally distributed across the regions of the country (Mateus et al., 2008; Paula, Lauridsen-Ribeiro, Wissow, Bordin, & Evans-Lacko, 2012), and the users of the public health system are mainly individuals with a low educational level and income (Ribeiro, Barata, Almeida, & Silva, 2006) who rarely have access to a private health plan. Most primary health care services have at least one physician on site or available for referrals, but despite the majority of the population having good access to primary care, psychiatrists are scarce in the public health system - with, for example, only 5 per 100,000 inhabitants in the Southeast and less than 1 per 100,000 inhabitants in the Northeast, while psychologists are more available and outnumber other mental health professionals in all regions of the country (Mateus et al., 2008; Paula et al., 2012). In our study, the rates of chronic physical health problems among victims of the two types of violence investigated did not differ from the rates observed among non-exposed adolescents, what may justify the low or null rates of assistance received from non-mental health care providers such as pediatricians, general practitioners, neurologists, nurses, community health workers and social workers specifically due to violence exposure.

The literature about help-seeking behavior after suffering violence is limited when compared to help-seeking behavior due to mental health problems, and it is highly concentrated on victims of peer aggression and bullying at school, and less concentrated on victims of violence in the community. In our opinion, findings related to exposure to violence in one setting may be applicable to victims of violence in the other setting. For instance, the fact that most victims of school violence do not report it and do not seek help for dealing with this

violence (Boulton et al., 2013) may apply to violence exposure in the community. There is evidence that bullied children, especially frequent victims, have poorer relationships with their parents and teachers compared to non-victims, and may withhold disclosure of victimization due to distrust of adults (Bjereld, Daneback, & Petzold, 2017). In fact, distrust of adults may be one of the reasons why the great majority of adolescents exposed to violence do not seek professional assistance or informal help as suggested by Reardon et al. (2017) when reviewing studies about barriers to accessing psychological treatment among children and adolescents. Other obstacles that might explain the lack of seeking help to cope with community violence exposure include the cognitive minimization of the event, deliberately maintaining the secrecy of the event, and failing to believe in the efficacy or usefulness of seeking help from others (Guterman et al., 2010). Common and powerful reasons why adolescents choose not to disclose bullying to their teachers are apprehensions about peer disapproval, feelings of being weak and a preference for autonomy (Boulton et al., 2017). Reasons for not seeking help among victims of physical and/or sexual violence include self-blame, shame, stigma, being afraid of repercussions, not knowing where to seek formal help, and not needing or wanting services (Pereira et al., 2020). Another example refers to gender differences in help-seeking behavior. The literature shows that girls are more likely to seek help for bullying victimization than boys (Hunter, Boyle, & Warden, 2004) who may be hesitant to admit that they are being bullied because they might associate bullying victimization with weakness what would jeopardize their ideal of masculinity (Rosen & Nofziger, 2018). In our study, girls exposed to community violence were three times more likely to receive any informal help than exposed boys, probably due to their reduced reluctancy to disclose information. Disclosure is a fundamental part of help-seeking behavior, and the intention to disclose also depends on positive or negative previous experiences of disclosing (Boulton et al., 2013). In a study conducted with 1,930 Palestinian junior and high school students exposed to community violence, a positive help experience was associated with being listened to and receiving advice, while confronting the

help seeker led to the most adverse experience (Leshem, Haj-Yahia, & Guterman, 2015). Also, previous positive experiences with mental health professionals encourage formal help-seeking (Martinez et al., 2020). In addition, students who perceived their teachers and other school staff to be supportive are more likely to endorse positive attitudes toward seeking help for bullying and threats of violence (Eliot et al., 2010). In fact, students' willingness to seek help at school involves confidentiality, trust and a strong and positive relationship with teachers (Yablon, 2017). In our study, teachers and other school staff were a source of informal help used not only by victims of school violence but also by victims of community violence. On the other hand, family members were the greatest source of help for adolescents exposed to community and school violence compared to other sources of informal or formal help, suggesting that seeking help from family members is a preliminary step in the help-seeking process that precedes seeking help from formal services due to violence exposure. However, although families can be sources of support and bridges to other forms of help, they can also be barriers to receiving help (Barker, Olukoya, & Aggleton, 2005).

4.1. Factors associated with receiving professional assistance and informal help

When investigating factors associated with receiving professional assistance, the current study found that the absence of the father in the household was a major indicator of vulnerability for adolescents exposed to violence in the community and at school, which probably stimulated their and their mother's attitudes toward seeking professional help. This finding is in line with results from a previous study conducted with public-school students from four out of five Brazilian regions (N = 1,721; 6-16 years) which found that students with any psychiatric disorder were more likely to have seen a psychologist, psychiatrist, or neurologist in the previous 12 months when their mother was not living with a husband or partner (Paula et al., 2014). The absence of a husband in the household may represent an

increased burden for the mother to deal with her son or daughter's distress due to violence exposure. This hypothesis is in agreement with a systematic review that found that parental burden was one of the family factors associated with service use among young people with mental health problems (Reardon et al., 2017). As mentioned above, the presence of clinical emotional problems among victims of school violence may indicate a greater severity of victimization situations and a greater impact on the adolescent mental health, which increases the need of assistance from the available mental health care providers such as psychologists. Another factor associated with receiving professional assistance among victims of school violence was not having an adult to count on when in need of help, since lack of social support may propel victimized adolescents to seek help from formal services. The absence of the father in the household was also an important reason to seek informal help in case of adolescent exposure to community violence, since mothers would be alone to deal with their son or daughter's distress confirming the influence of parental burden on the help-seeking process. Children exposed to community violence whose mother had anxiety/depression were more likely to have received any informal help, what may be explained by the fact that low parent psychological availability and support stimulates young people to seek psychological support from other sources (Ryan, Jorm, Toumbourou, & Lubman, 2015). As mentioned before, girls exposed to community violence were more likely to receive any informal help than exposed boys probably due to less reluctancy to disclose. In the case of adolescents exposed to school violence, having a mother with eight or more years of education favored the victims' accessing any informal help, which may be explained by the greater awareness among these mothers about the seriousness of bullying situations and its negative effects on the mental health of victimized boys and girls. On the other hand, because a low level of maternal education can be an indicator of a family's low socioeconomic status, and poverty usually involves multiple stressors, low-educated mothers may recognize peer harassment as a stressor but may be more likely to interpret it as a natural and common part of growing up, ignoring its deleterious

consequences (Vieira et al., 2020). In our study, as already mentioned, younger adolescents exposed to school violence were more likely to receive any informal help than older ones. Compared to older adolescents, the younger ones may be less reluctant to disclose victimization events since they may have lower levels of social and emotional competencies to deal with peer harassment situations by themselves (Zych, Beltrán-Catalán, Ortega-Ruiz, & Llorent, 2018), while older adolescents may avoid disclosure due to their attempts to establish personal autonomy and self-reliance, feeling that bullying victimization is something they can handle themselves (DeLara, 2012).

The disadvantaged context of poverty, inequality and high levels of violence exposure in which adolescents from the current study live may be similar to other deprived environments in other countries. Therefore, it was not a surprise to find similarities regarding the identified determinants of help-seeking (e.g., female sex, absent father). However, what is unique and should be considered about the context of Brazilian cities is the free access to psychologists guaranteed by the Unified National Health System in all regions of the country. This fact explains why psychologists were the first choice of victims of violence who decided to seek professional help.

4.2. Study strengths and limitations

The strengths of the current study include the rigorous methods used to select a probabilistic community-based sample of adolescents; the high participation rate among the eligible individuals; the use of interviews to collect data given that a significant proportion of participants could have had difficulty reading a self-administered questionnaire; and using separate multivariable logistic regression models to identify factors associated with the help-seeking behavior of adolescents exposed to violence in two different settings (in the community, at school). Regarding the study limitations, we recognize that the logistic regression analyses on help-seeking behavior may not be very powerful since the number of

adolescents seeking help due to violence exposure in the community and/or at school is relatively low. Furthermore, the cross-sectional design of the study cannot guarantee that independent variables such as adolescent mental health problems, lack of a supporting person, maternal anxiety/depression and absent father preceded professional assistance and informal help in the past 12 months due to its limited use in inferential or predictive studies.

4.3. Conclusions and recommendations

Violence exposure in different settings is frequent among Brazilian low-income adolescents but the great majority of victims do not receive any professional assistance or informal help. Therefore, besides efforts to minimize the occurrence of violence exposure, there is a need to provide more support for victimized adolescents from formal and informal sources. The fact that adolescents exposed to violence in the community and at school have higher rates of clinical emotional and conduct problems compared to non-exposed adolescents suggests that mental health needs are involved in the process of seeking professional assistance by victims of violence. Therefore, it was not a surprise that the most available mental health care providers in the Brazilian public system (i.e., psychologists) were the first choice of victims of violence who decided to seek professional help. Since seeking help can be viewed as a coping behavior, interventions to increase professional help-seeking behavior among adolescents exposed to violence, while training the existing health professionals to properly assist them, will help victimized adolescents to alleviate the distress aroused by victimization situations and to further develop effective coping strategies.

The association between violence exposure and mental health problems deserves greater attention in the public health system since violence victimization continues to be overlooked and under-addressed, despite its deleterious consequences. It is important that parents, educators, and health professionals recognize the need for professional mental health

support for adolescents exposed to violence, additionally to the support they may have received from family, friends, teachers, religious leaders, or other informal sources of help. A broader set of public health strategies to better support and assist adolescent victims of violence should include national campaigns to raise awareness about violence exposure and its consequences; initiatives to increase the identification, evaluation and follow-up of victims; training programs for the existing professionals to prepare them to assist the victims in an age-appropriate manner; the dissemination of information about the location of available services; and the development of effective interventions to promote the health and well-being of victimized adolescents at the local level including schools. Finally, study conclusions and recommendations are generalizable to the adolescent population of other low-income cities in Brazil and abroad due to similar disadvantaged living conditions.

Declaration of competing interest

The authors report no conflict of interest.

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Table 1

Characteristics of the Total Sample of In-School Adolescents and Differences Between Exposed and Non-Exposed Adolescents When Considering Exposure to Violence in the Community and at School.

		Community violence[a]		Violence at school[b]	
	Total sample	Exposed	Non-exposed	Exposed	Non-exposed
	N = 669	N = 186	N = 483	N = 318	N = 351
CHARACTERISTICS	N (%)	N (%)	N (%)	N (%)	N (%)
Sex					
Girls	342 (51.7)	92 (48.7)	250 (52.8)	151 (42.9)	191 (59.6)
Boys (ref)	327 (48.3)	94 (51.3)	233 (47.2)	167 (57.1)	160 (40.4)
Age					
13-15 years	410 (62.0)	125 (68.6)	285 (59.9)	202 (62.7)	208 (61.4)
11-12 years (ref)	259 (38.0)	61 (31.4)	198 (40.1)	116 (37.3)	143 (38.6)
Chronic physical health problems					
Yes	58 (8.9)	15 (8.9)	43 (8.9)	32 (10.2)	26 (7.7)
No (ref)	611 (91.1)	171 (91.1)	440 (91.1)	286 (89.8)	325 (92.3)
SDQ - adolescent-reported emotional problems					
Clinical	70 (11.5)	**32 (18.4)*** **	**38 (9.2)**	**48 (16.0)*** **	**22 (7.5)**
Borderline/normal (ref)	599 (88.5)	154 (81.6)	445 (90.8)	270 (84.0)	329 (92.5)
SDQ - adolescent-reported conduct problems					
Clinical	91 (13.8)	**40 (22.9)*** **	**51 (10.8)**	**63 (19.8)*** **	**28 (8.6)**
Borderline/normal (ref)	578 (86.2)	146 (77.1)	432 (89.2)	255 (80.2)	323 (91.4)
Counting on an adult when in need of help					
No	51 (8.3)	18 (11.1)	33 (7.4)	**32 (10.9)***	**19 (6.1)**
Yes (ref)	618 (91.7)	168 (88.9)	450 (92.6)	286 (89.1)	332 (93.9)
Counting on a teacher to ask for help or advice					
No	173 (25.1)	**67 (39.5)*** **	**106 (20.2)**	**97 (29.1)****	**76 (21.5)**
Yes (ref)	496 (74.9)	119 (60.5)	377 (79.8)	221 (70.9)	275 (78.5)
Counting on a friend when in need of help					
No	61 (9.3)	16 (10.9)	45 (8.8)	**41 (13.7)*** **	**20 (5.5)**
Yes (ref)	608 (90.7)	170 (89.1)	438 (91.2)	277 (86.3)	331 (94.5)
Maternal education					
8+ years	356 (48.2)	99 (50.8)	257 (47.3)	157 (43.1)	199 (52.7)

0-7 years (ref)	313 (51.8)	87 (49.2)	226 (52.7)	161 (56.9)	152 (47.3)
Maternal anxiety/depression (SRQ total score)					
Yes (> 7)	157 (25.0)	53 (28.4)	104 (23.8)	82 (27.2)	75 (23.0)
No (0-7) (ref)	512 (75.0)	133 (71.6)	379 (76.2)	236 (72.8)	276 (77.0)
Father absent[c]					
Yes	189 (27.7)	52 (30.0)	137 (26.9)	91 (28.1)	98 (27.2)
No (ref)	480 (72.3)	134 (70.0)	346 (73.1)	227 (71.9)	253 (72.8)

Note: N = absolute numbers (refer to the sample); % = weighted percentages (refer to the city population); ref = reference category; SDQ = Strengths and Difficulties Questionnaire; SRQ = Self-Reporting Questionnaire; Chi-square tests identify differences between exposed and non-exposed adolescents: * $p \leq 0.05$, ** $p \leq 0.01$, *** $p \leq 0.001$. [a] Victimization or witnessing events in the past 12 months; [b] Exposure to peer aggression events (physical aggression, verbal harassment, social manipulation) or being bullied or cyberbullied in the past 6 months; [c] Mother's husband or partner not residing in the home.

Table 2
Professional assistance and informal help received by in-school adolescents exposed to violence in the community and at school.

	Exposure to community violence[a] N = 186[c]		Exposure to violence at school[b] N = 318[c]	
PROFESSIONAL/INFORMAL	N	% (95% CI)	N	% (95% CI)
PROFESSIONAL ASSISTANCE				
Psychologist at school	12	**6.5 (3.6-11.6)**	15	**5.5 (2.7-10.9)**
Psychologist not at school	7	**5.5 (2.3-12.8)**	8	**2.9 (1.1-7.3)**
Psychiatrist	2	0.8 (0.2-3.6)	0	0
Pediatrician	6	**4.3 (1.5-11.6)**	0	0
General Practitioner	1	1.1 (0.1-7.5)	0	0
Neurologist	0	0	0	0
Nurse	2	2.1 (0.5-8.3)	0	0
Community health worker	3	1.4 (0.4-4.3)	1	0.2 (0.0-1.7)
Social worker	0	0	1	0.5 (0.1-3.5)
ANY PROFESSIONAL	**22**	**14.1(8.9-21.7)**	**22**	**8.0 (4.6-13.7)**
INFORMAL HELP				
Family members	31	**19.3 (13.9-26.3)**	43	**14.5 (10.2-20.3)**
Friends or neighbors	19	**9.8 (5.6-16.6)**	19	**5.8 (3.4-9.6)**
Teachers or other school staff	9	**6.8 (3.2-13.9)**	34	**11.1 (7.3-16.5)**
Church or priest or pastor	7	3.3 (1.4-7.5)	5	1.4 (0.6-3.3)
Traditional healer	0	0	1	0.3 (0.0-2.3)
Spiritist center	0	0	0	0
Guardianship council	1	0.3 (0.0-2.1)	1	0.2 (0.0-1.3)
ANY INFORMAL HELP	**44**	**26.2 (19.3-34.4)**	**70**	**23.0 (17.6-29.3)**

Note: N = absolute numbers (refer to the sample); % = weighted percentages (refer to the city population); 95% CI = 95% confidence interval. [a] Victimization or witnessing events in the past 12 months; [b] Exposure to peer aggression events (physical aggression, verbal harassment, social manipulation) or being bullied or cyberbullied in the past 6 months; [c] Exposed in-school adolescents.

Table 3

Factors associated with receiving any professional assistance in the past 12 months among in-school adolescents exposed to violence in the community and at school.

	Receiving any professional assistance[a]					
	Univariable logistic regression[b]			Multivariable logistic regression		
MODELS 1 and 2 (INDEPENDENT VARIABLES)	OR	(95% CI)	p	Adjusted OR	(95% CI)	p
EXPOSURE TO COMMUNITY VIOLENCE[c] (N = 186) – Model 1						
Sex (girls vs. boys)	0.83	(0.34-2.04)	0.69	----	----	----
Age (years)	0.82	(0.58-1.14)	0.23	0.81	(0.57-1.15)	0.23
Chronic physical health problems (yes vs. no)	1.16	(0.24-5.53)	0.85	----	----	----
SDQ emotional problems[e] (clinical vs. border/normal)	1.08	(0.34-3.43)	0.90	----	----	----
SDQ conduct problems[e] (clinical vs. border/normal)	1.08	(0.37-3.14)	0.88	----	----	----
Counting on an adult when in need of help (no vs. yes)	1.57	(0.42-5.92)	0.51	----	----	----
Counting on a teacher to ask for help or advice (no vs. yes)	1.27	(0.51-3.14)	0.61	----	----	----
Counting on a friend when in need of help (no vs. yes)	2.82	(0.82-9.66)	0.10	1.98	(0.52-7.55)	0.32
Maternal education (8+ vs. 0-7 years)	0.86	(0.36-2.10)	0.75	----	----	----
Maternal anxiety/depression (SRQ[g] total score > 7 vs. 0-7)	1.89	(0.75-4.73)	0.18	2.31	(0.44-6.31)	0.10
Father absent[f] (yes vs, no)	5.80	(2.26-14.88)	< 0.001	**6.05**	**(2.27-16.09)**	**< 0.001**
EXPOSURE TO SCHOOL VIOLENCE[d] (N = 318) – Model 2						
Sex (girls vs. boys)	1.36	(0.57-3.23)	0.49	----	----	----
Age (years)	0.84	(0.61-1.17)	0.31	----	----	----
Chronic physical health problems (yes vs. no)	1.45	(0.41-5.21)	0.57	----	----	----
SDQ emotional problems[e] (clinical vs. border/normal)	4.56	(1.83-11.38)	0.001	**4.88**	**(1.86-12.81)**	**0.001**
SDQ conduct problems[e] (clinical vs. border/normal)	1.57	(0.59-4.20)	0.37	----	----	----
Counting on an adult when in need of help (no vs. yes)	2.93	(1.002-8.57)	0.05	**3.61**	**(1.16-11.27)**	**0.03**
Counting on a teacher to ask for help or advice (no vs. yes)	1.33	(0.54-3.28)	0.54	----	----	----
Counting on a friend when in need of help (no vs. yes)	1.56	(0.50-4.85)	0.45	----	----	----
Maternal education (8+ vs. 0-7 years)	0.56	(0.23-1.38)	0.21	0.66	(0.25-1.69)	0.38
Maternal anxiety/depression (SRQ[g] total score > 7 vs. 0-7)	1.38	(0.54-3.50)	0.50	----	----	----
Father absent[f] (yes vs, no)	2.21	(0.92-5.32)	0.08	**2.71**	**(1.07-6.84)**	**0.04**

Note: OR = odds ratio; 95% CI = 95% confidence interval; SDQ = Strengths and Difficulties Questionnaire; SRQ = Self-Reporting Questionnaire.

[a] Professional assistance received from a psychologist, psychiatrist, pediatrician, general practitioner, neurologist, nurse, community health worker or social worker (the Unified National Health System provides free access to health services for the entire Brazilian population); [b] Independent variables with $p < 0.25$ entered multivariable models; [c] Victimization or witnessing events in the past 12 months; [d] Exposure to peer aggression events (physical aggression, verbal harassment, social manipulation) or being bullied/cyberbullied in the past 6 months; [e] Adolescent-reported problems; [f] Mother's husband or partner not residing in the home.

Table 4

Factors associated with receiving any informal help in the past 12 months among in-school adolescents exposed to violence in the community and at school.

	Receiving any informal help[a]					
	Univariable logistic regression[b]			Multivariable logistic regression		
MODELS 3 and 4 (INDEPENDENT VARIABLES)	OR	(95% CI)	p	Adjusted OR	(95% CI)	p
EXPOSURE TO COMMUNITY VIOLENCE[c] (N = 186) – Model 3						
Sex (girls vs. boys)	2.42	(1.20-4.91)	0.01	**2.91**	**(1.34-6.34)**	**0.007**
Age (years)	0.97	(0.75-1.25)	0.79	----	----	----
Chronic physical health problems (yes vs. no)	1.69	(0.55-5.25)	0.36	----	----	----
SDQ emotional problems[e] (clinical vs. border/normal)	1.92	(0.84-4.38)	0.12	1.21	(0.49-2.99)	0.68
SDQ conduct problems[e] (clinical vs. border/normal)	0.92	(0.40-2.12)	0.85	----	----	----
Counting on an adult when in need of help (no vs. yes)	0.38	(0.08-1.70)	0.20	0.44	(0.09-2.14)	0.31
Counting on a teacher to ask for help or advice (no vs. yes)	1.16	(0.58-2.33)	0.68	----	----	----
Counting on a friend when in need of help (no vs. yes)	0.44	(0.10-1.10)	0.28	----	----	----
Maternal education (8+ vs. 0-7 years)	1.07	(0.54-2.11)	0.84	----	----	----
Maternal anxiety/depression (SRQ total score > 7 vs. 0-7)	2.12	(1.04-4.31)	0.04	**2.45**	**(1.11-5.41)**	**0.03**
Father absent[f] (yes vs, no)	2.20	(1.08-4.49)	0.03	**2.75**	**(1.28-5.93)**	**0.01**
EXPOSURE TO SCHOOL VIOLENCE[d] (N = 318) – Model 4						
Sex (girls vs. boys)	1.23	(0.72-2.08)	0.46	----	----	----
Age (years)	0.78	(0.64-0.96)	0.02	**0.81**	**(0.66-0.99)**	**0.047**
Chronic physical health problems (yes vs. no)	0.48	(0.16-1.41)	0.18	0.49	(0.16-1.48)	0.20
SDQ emotional problems[e] (clinical vs. border/normal)	1.38	(0.69-2.80)	0.36	----	----	----
SDQ conduct problems[e] (clinical vs. border/normal)	0.70	(0.35-1.43)	0.33	----	----	----
Counting on an adult when in need of help (no vs. yes)	1.44	(0.64-3.28)	0.38	----	----	----
Counting on a teacher to ask for help or advice (no vs. yes)	1.25	(0.71-2.20)	0.44	----	----	----
Counting on a friend when in need of help (no vs. yes)	1.17	(0.54-2.52)	0.69	----	----	----
Maternal education (8+ vs. 0-7 years)	2.37	(1.36-4.11)	0.002	**2.20**	**(1.26-3.86)**	**0.006**
Maternal anxiety/depression (SRQ total score > 7 vs. 0-7)	1.09	(0.60-1.99)	0.77	----	----	----
Father absent[f] (yes vs, no)	1.66	(0.95-2.92)	0.08	1.56	(0.88-2.77)	0.13

Note: OR = odds ratio; 95% CI = 95% confidence interval; SDQ = Strengths and Difficulties Questionnaire; SRQ = Self-Reporting Questionnaire.
[a] Informal help received from family members, friends/neighbors, teachers/other school staff , church/priest/pastor, traditional healer, spiritist center or guardianship council; [b] Independent variables with $p < 0.25$ entered multivariable models; [c] Victimization or witnessing events in the past 12 months; [d] Exposure to peer aggression events (physical aggression, verbal harassment, social manipulation) or being bullied/cyberbullied in the past 6 months; [e] Adolescent-reported problems; [f] Mother's husband or partner not residing in the home.