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Examining the impact of bullying on West African adolescents' mental health: The role of peers and parental support

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ABSTRACT

Bullying presents a substantial threat to adolescents' mental health. Yet, despite its status as a major global health issue, research in this area has largely been limited to Western cultures. This is unfortunate since approximately 90% of children and adolescents live in nations classified as low- and middle-income. To increase global representation, the current study utilized cross-sectional data from the Global School-based Student Health Survey (GSHS) and examined the relationship between being bullied, number of friends, and the association with vulnerability to mental health issues. Additionally, the moderating effect of parental support on the relationship between peer help and vulnerability to mental health issues was assessed. The participants were 2,536 adolescents from Benin, West Africa. The results of structural equation modeling suggested that being bullied was associated with increased vulnerability to mental health problems, whereas having more friends was associated with less vulnerability. Furthermore, the model depicting the buffering effect of parental support explained a significant portion of variability in vulnerability to mental health issues. Such that, at low levels of peer help, parental support was associated with a decrease in vulnerability to mental health issues. The discussion section offers future directions.

Keywords: Adolescents, bullying, parental support, mental health, peers.

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1. Introduction

The implications of peer relationships on adolescents' social and psychological development have a dual nature: On one side, engaging with peers nurtures identity development and social responsibility by helping adolescents achieve emotional independence from their parents. On the other hand, negative interactions with peers lead to anxiety, tension, stress, and feelings of insecurity,

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increasing the likelihood of developing serious mental health issues (Dijkstra & Veenstra, 2011). In the context of negative interactions with peers, bullying has been identified as a global public health issue that requires comprehensive intervention strategies to mitigate its potential long-lasting harmful effects (Aboagye et al., 2021; Nakamoto & Schwartz, 2010; Takizawa et al., 2014).

The existing literature demonstrates that every year, about 20% of students report being bullied at school (National Center for Educational Statistics, 2022). According to Olweus (1993), bullying is characterized by repetitive and intentional harmful behavior from an individual or group who possesses real or perceived power over their victim(s). These actions may include physical, verbal, or psychological harassment, as well as relational aggression, such as spreading rumors and social exclusion (Crick & Grotpeter, 1995; van Geel et al., 2018). Such physical or emotional maltreatment by peers has been linked to poor mental health, depression, and suicide (Hamilton et al., 2013; Koyanagi et al., 2019). Furthermore, bullied individuals have a higher tendency to engage in risky behaviors such as unsafe sexual practices and drug and alcohol misuse (Patel et al., 2007). Hence, it is crucial to apply theories and models to understand bullying dynamics and identify factors that alleviate its impact on adolescents' adjustment.

According to Bronfenbrenner's ecological framework (1977, 1986), interconnected systems interact and impact development. Within this perspective, the individual is embedded in various contextual levels, including parents, peers, schools, and communities. Unfortunately, limited research has utilized this framework in low- and middle-income countries regarding the impact of bullying and interpersonal violence (Aboagye et al., 2021). Additionally, given that about 90% of children and adolescents live in low-and middle-income countries (Zhou et al., 2020), it is unfortunate that bullying has predominantly been studied in high-income nations (Biswas et al., 2020). Drawing conclusions from such limited samples ignores human diversity and makes it challenging to generalize the results (Cesi et al., 2010). In addition, for adolescents in low- and middle-income countries (LMICs) like those in West Africa, the effects of bullying may be exacerbated by limited access to mental health resources, compounded by cultural stigmas surrounding mental illness (Cortina et al., 2012).

Therefore, to address these gaps, the current study drew on the tenets of Bronfenbrenner's ecological framework and the stress-buffering hypothesis (Cohen & Wills, 1985), positing that social support reduces emotional stress by helping individuals regulate their emotional reactions to difficult situations. In this study, we utilized the Global School-based Health Survey (GSHS) cross-sectional data and used Structural Equation Modeling (SEM) to examine the relationship between number of friends, bullying, and their association to vulnerability to mental health issues among 2,536 adolescents from West Africa. Additionally, we assessed the indirect effect of peer support on the association between being bullied, number of friends and vulnerability to mental health issues. Furthermore, the moderating effect of parental support on the association between peer support and mental health issues was investigated. The results of studies like this in collectivist cultures, where community and interdependence are valued, may have the potential to serve as a foundation for policy formulation (Zhou et al., 2020).

1.1 The effects of bullying on adolescents' mental health

Bullying victimization has been identified as a serious global health issue, affecting approximately 30% of adolescents every year (Biswas et al., 2020; Modecki et al., 2014). For example, in the United States alone, roughly 10-30% of adolescents disclose experiencing repeated aggressive behavior from their peers (Grills & Ollendick, 2002). This aligns with the percentage reported across European countries (Rigby, 2000). Additionally, the limited research suggests that the incidence of interpersonal violence among adolescents in Africa is similar, with rates ranging from 26% in Nigeria (Nguyen et al., 2021) to 55.7% in Ghana (Aboagye et al., 2021).

Not surprisingly, the ramifications of such experiences on adolescents' mental health and well-being are significant. Being a victim of bullying has been associated with negative social and emotional outcomes such as lower self-esteem, aggressive behavior (Bass et al., 2018; Santo et al., 2018), lower academic achievement, school absenteeism (Lopez & DuBois, 2005; Nakamoto & Schwartz, 2010), and poor overall mental health (Gini et al., 2018). Research also supports that the consequence of being a victim of childhood bullying extends into adulthood, such that these individuals earn lower wages later

in life (Wolke et al., 2013). Given the significance of adjustment problems that bullied adolescents face, it is critical to identify factors that mitigate the impact of these harmful behaviors.

1.2 Friends as protective factors

During the period of adolescence, the influence of peer relationships becomes even more salient (Brown & Larson, 2009), and negative interactions (e.g., being bullied by peers) can be traumatic with severe consequences on the individual's mental health and overall well-being (Rueger & Jenkins, 2014). Therefore, exploring the effect of potential buffers, such as social support, merits special attention during this critical developmental stage. Additionally, previous research suggests that adolescents use social support as a coping mechanism (Paul et al., 2012). In a study, Hodges et al. (1999) demonstrated that the presence of a best friend acted as a buffer, mitigating the association between internalizing problems and peer victimization among adolescents. Additionally, the quality and intimacy of friendships have been demonstrated as critical factors in mitigating the impact of bullying on internalizing problems (Ttofi et al., 2014).

1.3 Parents as protective factor

The view that parental support promotes mental well-being and overall health has a long history. Almost 80 years ago, Spitz (1946) noted that institutionalized infants who did not have contact with their mothers experienced a significant impact on their nervous system. As a result, their social, emotional, and psychological development was hindered. In contemporary research, parental support embraces acceptance, involvement, warmth, and praise, all reflecting an overall positive regard for the child (Gittins & Hunt, 2019). Strong evidence suggests the positive effects of such behaviors on adolescents' self-perceptions and self-confidence (Doyle & Markiewicz, 2005; Garber & Flynn, 2001; Han & Grogan-Kaylor, 2013). Conversely, lower parental support has been linked to greater self-criticism in adolescents (Thompson, Zuroff, & Hindi, 2012). Research also demonstrates that parental support has the potential to alleviate the effects of negative experiences on mental health (Cobb, 1976; Stadler et al., 2010).

1.4 The WEIRD Versus the Majority World

The field of Psychology is notorious for its reliance on empirical data and scientific rigor (Thalmayer et al., 2021). However, in 2008, Arnett highlighted a major flaw concerning the field's models, measures, and theories. He demonstrated that over 70% of samples and authors represent the United States' cultural context. He then outlined a demographic overview of the world's population and emphasized that the United States is home to only 5%. Since then, the term "the majority world" has been used to draw attention to the fact that the majority of the world lives in Asia, Africa, and Latin America (Thalmayer et al., 2021). Additionally, the acronym WEIRD was proposed to underscore that the participants of most psychological studies are mainly from Western, Educated, Industrialized, Rich, and Democratic countries (Henrich et al., 2010; Kağıtçıbaşı, 1996).

2. The current study

To contribute to efforts aimed at enhancing global representativeness in peer relations literature and to guide the future development of prevention and intervention strategies in low- and middle-income countries, the current study used structural equation modeling and analyzed data collected from the World Health Organization's Global School-based Student Health Survey (GSHS) conducted in Benin, West Africa. Consistent with previous literature, it was predicted that a significant positive relationship between being bullied and vulnerability to mental health issues would be observed, and peer and parental support would act as buffers in mitigating the relationship. Drawing from Bronfenbrenner's Ecological Model and *stress buffering hypothesis*, the following hypotheses were tested

H1. Being bullied would be positively associated with vulnerability to mental health issues, such that greater exposure to bullying corresponds with more mental health issues among adolescents.

H2. Number of friends would be negatively associated with vulnerability to mental health issues, such that adolescents with more friends would be less vulnerable to mental health issues.

H3. Peer support would have a mediating effect on the association between number of friends and being bullied on vulnerability to mental health issues.

H4. Parental support would be a negative predictor of vulnerability to mental health issues.

H5. The relationship between peer support and vulnerability to mental health issues would be moderated by parental support. Specifically, adolescents who receive less help from their peers would experience fewer mental health issues if they have supportive parents.

(See Figure 2 for a conceptual model, depicting the hypotheses.)

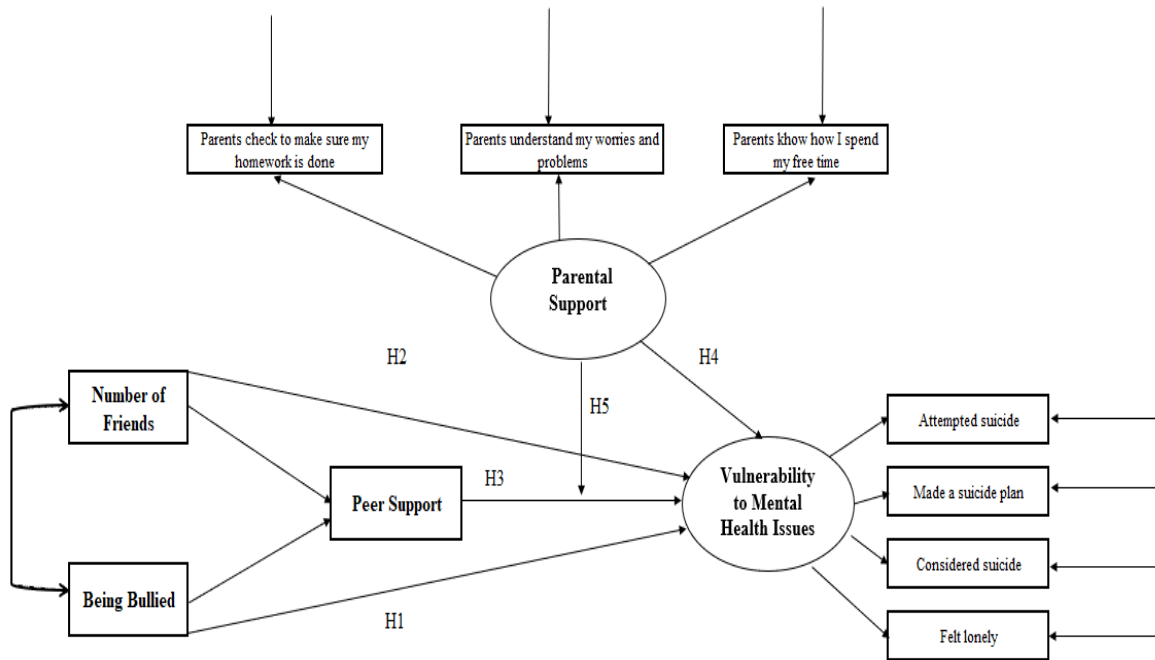


Figure 2. The conceptual hybrid model depicting the associations between the variables of the study.

3. Method

3.1 Participants and procedures

Publicly available cross-sectional data conducted by the World Health Organization's Global School-based Health Survey were used. The survey aimed to evaluate adolescents' health risk behaviors and protective factors in low- and middle-income countries using a structured self-reported questionnaire. Guidelines from the World Medical Association Declaration of Helsinki regarding the ethical conduct of research involving human participants were followed.

Although the survey consisted of multiple measures, only the items relevant to the current study are described in this section. The sample included 2,536 adolescents from Benin, West Africa. Of the participants, 28.6% were between the ages of 11 and 15, 34.2% were 16 and 17, and 37.2% reported as 18 years or older. The survey results indicated that 53.9% of participants identified themselves as males, 45.4% as females, and 0.7% did not answer.

3.2 Measures

Being Bullied

Being bullied was measured using the item ("During the past 30 days, how many days were you bullied?"). The definition of bullying was explained to the participants, and adolescents were reminded that arguing, fighting, or teasing in a friendly way among students of the same power or strength is not

considered bullying. Responses were anchored by 1 (0 day), 2 (1 to 2 days), 3 (3 to 5 days), 4 (6 to 9 days), 5 (10 to 19 days), 6 (20 to 29 days), 7 (all 30 days).

Number of Friends

Having close friends was assessed using one item (i.e., “How many close friends do you have?”). The participants responded to this question using a Likert scale anchored by 1 (0), 2 (1), 3 (2) and 4 (3 or more) with higher numbers indicating having more friends.

Vulnerability to Mental Health Issues

Vulnerability to Mental health issues was measured by creating a latent factor utilizing the best four items from the existing survey to capture this construct (i.e., “Felt lonely”, “Considered suicide”, “Made a suicide plan”, “Attempted suicide”). The responses to the question regarding feeling lonely ranged from 1 (Never) to 5 (Always), with higher scores indicating more loneliness. For the questions asking about considering suicide and making a suicide plan, the options were “Yes” and “No”. Finally, the question of attempted suicide was anchored by 1 (0 times), 2 (1 time), 3 (2 or 3 times), 4 (4 or 5 times), and 5 (6 or more times).

Parental Support

Parental support was measured using three items (i.e., “Parents check to make sure homework is done,” “Parents understand my worries and problems,” and “Parents know how I spend my free time.” Participants responded to each item based on a 5-point Likert scale ranging from 1 (Never) to 5 (Always).

Peer Support (Helpful Friends)

To assess the degree to which adolescents perceived their friends as supportive and helpful, the following question was asked (i.e., “During the past 30 days, how often were most of the students in your school kind and helpful?”). The responses ranged from 1 (Never) to 5 (always), with higher scores reflecting higher levels of peer support.

3.3 Analytic strategy

Prior to conducting the primary analyses, data screening was performed, and the distributional characteristics of the variables were assessed. This allowed us to identify potential outliers, check for any missing data, and ensure that the assumptions of linearity and homoscedasticity were not violated. Descriptive statistics were then computed using SPSS. Additionally, mean gender and age differences were examined using independent samples t-test, one-way ANOVA and post-hoc tests. Hypothesis testing was performed using Structural Equation Modeling (M-Plus, ver. 7.00; Muthén & Muthén, 2015). The models were estimated using Maximum Likelihood Estimation with Robust Standard Errors (MLR) to handle data effectively.

To build the hybrid model, the latent factors of vulnerability to mental health issues and parental support were created, and confirmatory factor analysis (CFA) was conducted to ensure that the observed indicators adequately captured the latent constructs. All the factor loadings of the indicators were acceptable, and the overall factor structures were reliable. Being bullied and number of friends were then added as observed predictors of vulnerability to mental health issues. The potential mediating role of peer support was then estimated and finally, the moderating effect of parental support on the association between peer support and vulnerability to mental health issues was examined. It is also important to note that models' fit was assessed following Hu and Bentler's (1999) guidelines using the following criteria: root mean square error of approximation (RMSEA) less than 0.08, confirmatory fit index (CFI) above 0.90, and standardized root mean square residual (SRMR) less than 0.08.

4. Results

Table 1.

Descriptive statistics and zero-order correlations for the study variables.

Variable	M	SD	1	2	3	4	5	6	7	8	9	10
1. Sex	2.21	0.77	–									
2. Q1R	2.09	0.81	-.16**	–								

3. Being Bullied	2.06	1.84	.65**	-.06**	–							
4. Number of Friends	3.08	1.08	-.14**	-.01	-.02	–						
5. Peer Support	2.74	1.28	-.02	.02	-.05*	.09**	–					
6. Parental Support	2.93	1.19	.07**	-.14**	-.05*	.02	.15**	–				
7. Felt lonely	2.17	1.26	.02	.12**	.13**	-.03	.01	-.08**	–			
8. Considered suicide	1.59	1.42	.08**	.04	.11**	-.04*	-.03	-.04	.15**	–		
9. Made a suicide plan	1.64	1.47	.04	-.06**	.08**	-.05*	-.01	-.05**	.14**	.58**	–	
10. Attempted suicide	1.27	0.76	-.06**	.08**	.09**	-.03	-.02	-.02	.13**	.40**	.41**	–

Note. $N = 2,536$. M and SD indicate mean and standard deviation, respectively. * $p < .05$. ** $p < .01$. Considered suicide, made a suicide plan, and attempted suicide reflect poor mental health in this table.

Descriptive statistics and zero-order correlations are presented in Table 1. Among the participants, 58.3% reported not being bullied at all, and 9.9% reported being bullied every day during the past 30 days. On average, girls ($M = 2.19$, $SD = 1.97$) reported significantly more days having been bullied, $t(2,115.64) = -3.11$, $p < .05$, than boys ($M = 1.95$, $SD = 1.72$). Number of close friends was significantly higher, $t(2,366.72) = 7.10$, $p < .05$ for boys ($M = 3.22$, $SD = 1.04$) than girls ($M = 2.91$, $SD = 1.11$). Overall, girls ($M = 3.03$, $SD = 1.21$), reported more parental support, $t(2,510) = -3.72$, $p < .05$ than boys ($M = 2.85$, $SD = 1.18$). No other significant gender differences emerged. In terms of age differences, the number of days bullied varied across groups, $F(2, 2,334) = 4.47$, $p < .05$. Based on the Scheffé post-hoc test, the youngest participants (ages 11 to 15, $M = 2.24$, $SD = 1.91$) revealed being bullied significantly more days than the oldest participants (18 and older, $M = 1.97$, $SD = 1.81$). Additionally, in regards to parental support, significant age group differences emerged, $F(2, 2,527) = 24.20$, $p < .01$. To explain, the youngest participants ($M = 3.15$, $SD = 1.19$) reported more parental support than those slightly older (ages 16 and 17, $M = 2.95$, $SD = 1.16$) and even more parental support than the oldest group ($M = 2.74$, $SD = 1.20$).

In regard to hypothesis testing, the first and second hypotheses aimed to examine the association between experiencing bullying and vulnerability to mental health issues, as well as the relationship between the number of friends and vulnerability to mental health issues. To accomplish this, the latent factor of vulnerability to mental health issues was created and the factor structure was reliable ($\omega = .67$). Additionally, the resulting model was a good fit to the data, ($\chi^2_{(2)} = 1.91$, $p < .05$, CFI = 1.00, RMSEA = .02, 90% CI [.00, .04], SRMR = .01). Both peer variables (i.e., days bullied and number of friends) were then included in the model. The results indicated that days bullied, ($b = 0.02$, $SE = .01$, $\beta = .14$, $p < .05$) and number of friends, ($b = -0.01$, $SE = .01$, $\beta = -.06$, $p < .05$) were both significant predictors of vulnerability to mental health issues. To explain, being bullied was associated with more mental health issues, whereas having more friends was associated with fewer mental health issues among the West African adolescents in this sample. Thus, hypotheses 1 and 2 were supported. Both predictors accounted for 2.20% of the variability in criterion with an acceptable model fit, ($\chi^2_{(8)} = 26.85$, $p < .05$, CFI = .98; RMSEA = .03, 90%CI [.02, .04]; SRMR = .02).

To test hypothesis 3, the mediating role of peer support on the association between being bullied and number of friends and vulnerability to mental health issues was evaluated. Although the resulting model was a good fit to the data, ($\chi^2_{(11)} = 29.45$, $p < .05$, CFI = 1.00, RMSEA = .03, 90% CI [.02,

.04], SRMR = .02), the results did not support the hypothesis. Peer support was not a significant predictor of vulnerability to mental health issues above and beyond the effect of having friends and being bullied ($\Delta R^2 = .00\%$). However, it is important to note that this variable was negatively related to being bullied ($b = -0.04$, $SE = .01$, $\beta = -.05$, $p < .05$), such that adolescents who reported being bullied also indicated receiving less support from their peers. Additionally, the association between number of friends and peer support was also significant ($b = 0.11$, $SE = .02$, $\beta = .09$, $p < .05$) such that having more friends was positively related to reports of having received more support from peers.

The relationship between parental support and vulnerability to mental health issues was examined next. To do so, the latent factor of parental support was added to the model ($\omega = .66$) and was a good fit to the data, ($\chi^2_{(29)} = 123.15$, $p < .05$, CFI = 0.96, RMSEA = .04, 90% CI [.03, .04], SRMR = .03). As predicted in hypothesis 4, parental support was a significant negative predictor of vulnerability to mental health issues ($b = -0.02$, $SE = .01$, $\beta = -.07$, $p < .05$) meaning that those who reported more support from their parents, experienced less mental health problems. This updated model explained an additional .40% of the variability in vulnerability to mental health issues.

Next, the potential moderating effect of parental support on the association between peer support and vulnerability to mental health issues was examined. This updated model explained an additional 3.90% of the variability in vulnerability to mental health issues, which was a significant improvement ($\Delta BIC = -302.85$). It is important to mention that this moderating effect should be interpreted with caution, as it was weak under conventional criteria. However, since in SEM, the view of the entire model takes precedence over individual effects the results of statistical significance testing may play a smaller role in the interpretation of the results (Kline & Santor, 1999). Therefore, although the observed pattern suggests a potential protective role of parental support at low levels of peer help, this finding requires replication before stronger conclusions can be drawn.

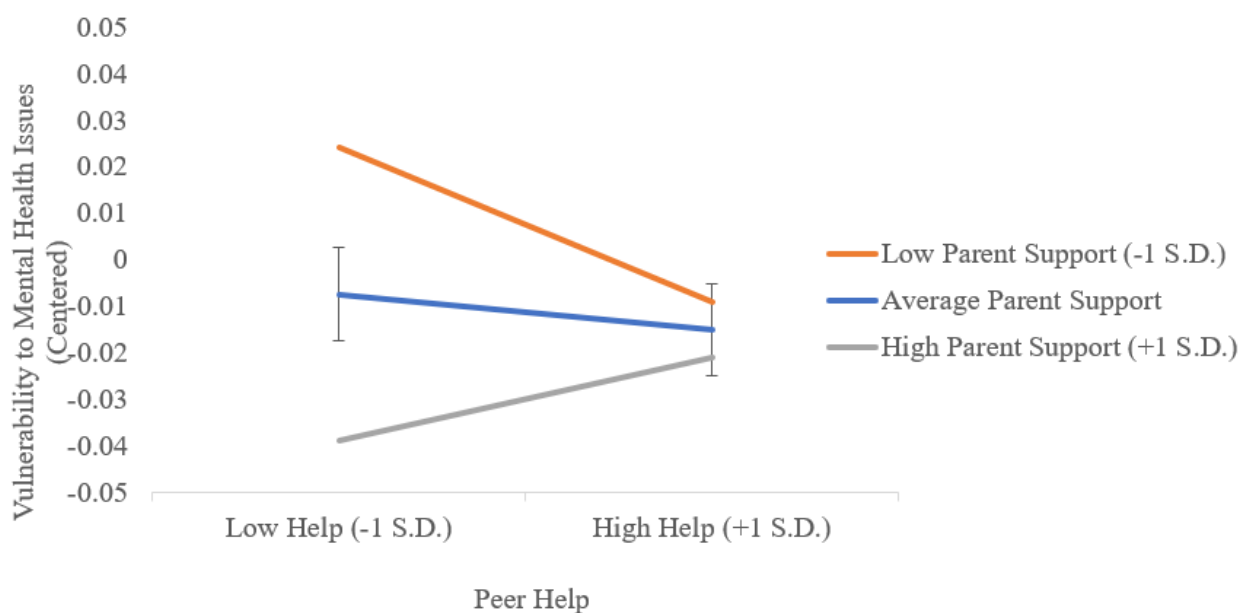


Figure 1. The nature of moderation between parental support and peer support on vulnerability to mental health issues

Note. Zero in the model represents the average for Vulnerability to Mental Health Issues. The range of values in the y-axis reflects the variance in the latent factor mean. Error bars illustrate the 95% confidence interval around the average scores. The moderation plot suggests that at low levels of peer help, parental support is associated with a significant decrease in vulnerability to mental health issues.

Finally, exploratory analyses of the associations based on gender and age were evaluated. To do so, each path of the model was constrained to be the same across groups. Only one difference emerged, specifically in the relationship between being bullied and number of friends. Among 11 to 15-year-olds, there was a negative correlation between the two variables ($r = -.11$, $p < .05$). In contrast, the

relationship was not significant for the other two age groups ($r = .02, p > .05$). In other words, the youngest participants were less likely to report being bullied if they had more close friends, but this relationship was not significant for the older adolescents.

5. Discussion

The current study examined the relationship between number of friends, bullying, and their association to vulnerability to mental health issues among West African Adolescents. Additionally, the indirect effect of peer support on the association between being bullied, number of friends and vulnerability to mental health issues was examined. The moderating effect of parental support on the relationship between peer support and mental health issues was also investigated. The results indicated that both number of friends and being bullied were significant predictors of vulnerability to mental health issues. Specifically, being bullied was associated with increased vulnerability to mental health problems, whereas having more friends was associated with less vulnerability, supporting hypotheses 1 and 2. These findings are in line with previous literature collectively suggesting that all forms of bullying and peer victimization put adolescents at a greater risk for developing loneliness, depressive symptoms, psychological distress, depressive affect, mental health issues, suicidality, diminished self-esteem and poor overall mental health (Bonanno & Hymel, 2013; Elledge et al., 2019; Geoffroy et al., 2016; Hawker & Boulton, 2000; Källmén & Hallgren, 2021; Kim et al., 2022). This, in part, can be explained by the notion that such experiences undermine the victim's self-perception, leading to feelings of shame, inadequacy, and self-blame (Hawker & Boulton, 2000).

Another goal of this study was to examine the mediating effect of peer support on the association between being bullied and number of friends on vulnerability to mental health issues. The results did not support this prediction which can be at least partially explained by how this construct was operationalized. The question asked ("During the past 30 days, how often were most of the students in your school kind and helpful?" It may be that the adolescents only considered reporting peer support for the past 30 days and not in general. Another possible explanation could be that peer support was assessed using a single school climate item, which threatens construct validity as it may reflect general helpfulness rather than the actual direct experience of peer support. This mismatch may have limited our ability to detect a mediation effect. Future research should employ multidimensional measures of peer support to better capture its protective role in the context of bullying.

In addition, it is also important to note that although the mediating role of peer support was not significant, the result may have important contextual meaning. In this case, the absence of a mediating role for peer support may reflect unique social patterns within Benin, where cultural expectations and interpersonal hierarchies influence how adolescents perceive and utilize different forms of social support. Benin, like many West African societies, tends to emphasize collectivist and family-centered values. In such settings, adolescents' emotional well-being and behavioral regulation are often more directly shaped by parental involvement than by peer relationships (Quattlebaum et al., 2025; Meca et al., 2022). Parental guidance, monitoring, and emotional support are culturally reinforced as primary sources of protection, which may reduce the relative salience of peer support in buffering the impacts of bullying on mental health outcomes (Meca et al., 2022). This is also in line with studies from Ghana and other West African contexts, which support this interpretation, showing that family cohesion and parental support predict adolescent adjustment more consistently than peer influence (Quattlebaum et al., 2025). Taken together, the non-significant mediation should not be seen as a weakness but rather as a culturally informative finding.

Furthermore, as predicted in hypothesis 4, parental support was a significant negative predictor of vulnerability to mental health issues, meaning that the participants who reported more support from their parents experienced fewer mental health problems. In addition, based on the updated model and as predicted in hypothesis 5, at low levels of peer help, parental support was associated with a decrease in vulnerability to mental health issues, supporting this hypothesis in a one-tailed test.

Overall, the results align closely with Bronfenbrenner's ecological model and Cohen & Wills' stress-buffering hypothesis. According to Bronfenbrenner (1994), adolescent development occurs through dynamic interactions between individuals and their multilayered environmental systems, with the microsystem, comprising family, peers, and school, serving as the most immediate context. Within this framework, the relative influence of these systems depends heavily on sociocultural norms and

structures (Bronfenbrenner, 1994). In collectivist societies such as Benin, the family represents the most enduring and authoritative microsystem, shaping adolescents' values, coping styles, and emotional regulation more profoundly than peer relationships (Quattlebaum et al., 2025). The buffering role of parental support, therefore, can be interpreted as an ecologically grounded outcome, reflecting the salience of familial interactions in collectivist contexts. Cohen and Wills' (1985) stress-buffering hypothesis also provides an additional explanatory layer by proposing that the psychological impact of stressors is mitigated by social support that offers informational, instrumental, and emotional resources. In Benin's sociocultural context, parental figures likely serve as more credible and accessible sources of these resources than peers, thereby fulfilling the buffering function more effectively (Gbordzoe et al., 2024; Aboagye et al., 2022).

5.1 Implications and strengths

Although research indicates that almost 33% of adolescents worldwide experience bullying and peer victimization, this global issue has primarily been focused on in high-income countries (Biswas et al., 2020). The current study expanded previous research by using GSHS data conducted in West Africa. According to the World Health Organization's World Mental Health, the lifetime prevalence of one or more mental health issues ranges from 12.0% in Africa to 47.4% in the United States (Kessler et al., 2007b). These discrepancies could be due to the stigma against mental health in low and middle-income countries, the shortage of mental health-trained professionals, service facilities, funding, and poor public awareness (Zhou et al., 2020). Additionally, in low- and middle-income countries, adolescents' mental health needs are not distinguished from those of adults and are often neglected. Therefore, from a socioemotional development standpoint, conducting research and analyzing data collected from such nations has significant value. The results of such studies elucidate factors affecting adolescents' mental health and help identify buffers that can alleviate the impact of negative experiences such as bullying. Ultimately, the results hold practical implications as culturally appropriate studies can lay the groundwork for policy formulation in low- and middle-income countries (Zhou et al., 2020).

For example, in collectivist cultures, individuals define themselves primarily through their relationships and responsibilities to family and community rather than personal autonomy or peer affiliation (Hofstede, 2001; Triandis, 1995). This orientation positions parents and extended family as central figures in shaping adolescents' emotional regulation, social behavior, and coping strategies (Quattlebaum et al., 2025; Meca et al., 2022). Parental support is particularly protective in these contexts because it aligns with social expectations that emphasize obedience, respect for elders, and reliance on family during times of stress (Kagitçibasi, 2017; Bornstein, 2013). Adolescents in Benin may perceive parental guidance not merely as advice but as a moral and emotional anchor, reinforcing their sense of belonging and stability amid challenges such as bullying (Gbordzoe et al., 2024; Aboagye et al., 2022). Peer relationships, although important, may be secondary to familial relationships in predicting well-being, especially where intergenerational hierarchy is deeply embedded (Bornstein 2013; Hofstede, 2001; Triandis, 1995). School-based anti-bullying policies should therefore consider family involvement, recognizing that sustainable change requires coordination between educational institutions and the home environment (Gbordzoe et al., 2024; Meca et al., 2022).

Another notable strength of this study was utilizing structural equation modeling to analyze data. Although regression analyses are simple to interpret, there have been concerns regarding the reliability of the variables and the results (Sechrest, 1963; Shear & Zumbo, 2013). In instances where predictors and/or outcome variables are subject to random errors (which is anticipated in any psychological research), regression parameter estimates may exhibit biases (Westfall & Yarkoni, 2016), and the correlations may be attenuated by measurement errors (Feng & Hancock, 2022). In contrast, SEM accounts for measurement error without relying on the assumption of perfect measurement or the need for manual attenuation correction (Feng & Hancock, 2021). Furthermore, in this study, we treated parental support and vulnerability to mental health as latent factors. This approach enabled us to measure these theoretical constructs using multiple indicators, thereby reducing measurement error (Judd et al., 2014).

5.2 Limitations and future directions

As in any study, some limitations need to be addressed. To begin, a key limitation of this study is its cross-sectional design, which restricts the ability to draw causal inferences from the observed associations. Although our findings highlight important correlations between bullying, parental support, and mental health outcomes, temporal precedence, which is crucial for inferring causality, could not be established. For example, in this study, it is unclear whether bullying leads to poorer mental health or whether adolescents with preexisting mental health difficulties are more vulnerable to being targeted by peers. Longitudinal research is therefore needed to clarify the directionality of such associations.

Additionally, the current study did not consider family dynamics as no information was available on whether adolescents lived with both parents, one parent, relatives, or in foster homes. According to a study by Låftman et al. (2017), children raised in single-parent households have a higher likelihood of experiencing bullying compared to those in homes with both parents. Additionally, previous research has demonstrated that adolescents living in single-parent households may receive less support from their parents due to fewer resources available to such families compared to dual-parent homes (Jonsson & Östberg 2010). Furthermore, there is evidence that foster children are exposed to multiple risk factors and experience significantly higher levels of mental health issues (Oswald et al., 2010). Obtaining such information could enhance the clarity of future research.

As mentioned, the interpretation of the results is bounded by the limitations arising from the utilization of a secondary dataset. In the survey, bullying was assessed using a single item, and although the definition of bullying was explained to the participants before taking the survey, using a single item to capture such experiences may not be sufficient as it may weaken construct validity. Still, some researchers argue that single-item measures may prevent non-responses in cases when participants may not wish to engage with the question (Matthews et al., 2022). Acknowledging this, it is still important to consider using a single item as a limitation. Therefore, future studies should use multidimensional measures to examine relational, verbal, and physical forms of bullying separately as they may be related to different socio-emotional outcomes. Furthermore, this study relied only on self-reported incidences of bullying, which may be subject to common method bias, as adolescents' self-perceptions are often influenced by social desirability, leading to possible underreporting of bullying due to shame (Branson & Cornell, 2009). To address this limitation, future studies should incorporate collateral reports, such as peer nominations and teacher reports. Given the complexity of bullying and adolescents' reluctance to disclose involvement as either perpetrators or victims, integrating multiple perspectives would result in a more compelling result (Branson & Cornell, 2009).

Furthermore, due to the secondary nature of data, an important construct was not assessed: ego-resiliency. Ego resiliency represents the ability to adapt to changing situational demands and adjust one's level of control (Block & Block, 1980; Block & Kremen, 1996) and has been acknowledged as a key contributor to how stressors affect adjustment (Overbeek et al., 2010). Future research would benefit from examining ego-resiliency as a potential buffering mechanism in the context of adolescent mental health.

6. Conclusion

Studying peer relationships warrants special attention during adolescence, a developmental period characterized by the growing importance of social connections. Also, from a socioemotional perspective, understanding adolescent mental health is especially critical, given the profound impact these relationships can have on well-being. In addition, as young individuals undergo a phase of transformation characterized by physical, cognitive, and emotional changes, they may become vulnerable to mental health issues impacting their overall well-being. This study contributes to the limited but growing body of research focused on adolescents in West Africa by exploring the associations between bullying, peer and parent support and number of friends with vulnerability to mental health problems. The findings carry important implications. First, they emphasize the need for culturally sensitive, school-based mental health initiatives in low- and middle-income countries. Second, they highlight the importance of national frameworks that promote legal accountability and facilitate safe reporting mechanisms for victims, which are currently lacking in many West African nations.

Ethical Statement

“This paper uses data from the Global School-Based Student Health Survey (GSHS). GSHS is supported by the World Health Organization and the US Centers for Disease Control and Prevention”. Before data collection, the study obtained approval from Benin’s Ministry of Education (MoE) and Ministry of Health (MOH). In addition, child assent was obtained for participants under the age of 18. The parents also provided informed consent after receiving comprehensive details about the study. Additionally, “The World Medical Association Declaration of Helsinki regarding the ethical conduct of research involving human subjects was followed.”

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Conflict of Interest Disclosure

None.

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