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Bullying Victimisation Among Deaf Adolescents: A School-Based Self-Report Survey in Ghana

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ABSTRACT

Regional and national level data on bullying victimisation and its associated factors among deaf adolescents are still lacking, particularly, in Africa. We conducted a cross-sectional self-report anonymous survey involving a nationally representative random sample of 450 school-going deaf adolescents in Ghana. Bivariate and multivariate analyses of the data showed the overall 12-month prevalence estimate of bullying victimisation to be 55 · 1% (95% confidence interval [CI]: 50% – 60%), but the estimates were comparable between females (52 · 0%) and males (57 · 0%). Whereas deaf adolescents with schoolwork problems were likely to report bullying victimisation, most of the key factors associated with bullying victimisation were adverse social events – break-up, conflict with friends, and parental divorce. These findings underscore the need for further studies, and school-based intervention and prevention efforts.

KEYWORDS

bullying victimisation; bullying; deaf adolescents; Ghana

Introduction

Bullying is the 'repeated and intentional targeting of harm to a person who has less power or has difficulty defending themselves' (Owusu, Hart, Oliver, & Kang, 2011, p. 231). Bullying is the most prevalent form of school-based violence among adolescents in schools (Bauman & Pero, 2011; Owusu et al., 2011). Existing studies on bullying reveal that between 10 and 30% of adolescents are victims of bullying whilst in school (Cook, Williams, Guerra, Kim, & Sadek, 2010; Pinquart & Pfeiffer, 2015), and that bullying is commonplace among students with disabilities (Blake et al., 2016). However, there is a dearth of empirical studies examining bullying among deaf adolescents, particularly, in low- and middle-income countries (LMICs).

Studies on bullying have mostly focused on adolescents in regular classrooms (Bauman, Toomey, & Walker, 2013; Owusu et al., 2011), or on a composite of students with disabilities (Blake et al., 2016), with few studies concentrating specifically on deaf students only (Bauman & Pero, 2011; Broekhof, Bos, Camodeca, & Rieffe, 2018; Cheng, Li,

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Silva, Hall, & Liu, 2019; Hadjikakou & Panayiotis, 2012; Pinquart & Pfeiffer, 2015; Thompson-Ochoa & Hodgdon, 2019) and the Global South (Baiden et al., 2019; Koyanagi et al., 2019; Owusu et al., 2011). However, we are not aware of any published studies on bullying victimisation (and perpetration) among deaf adolescents in countries within sub-Saharan Africa, including Ghana.

Studies from Ghana have estimated that bullying victimisation in the previous 12 months is reported among about 40% of regular (hearing) students in senior high schools (Baiden et al., 2019; Owusu et al., 2011). Adolescent victims of bullying are more likely to report negative mental health outcomes, including self-harm, suicidal ideation, suicide attempt, worrying and sleeplessness, and loneliness (Baiden et al., 2019; Asante, Kugbey, Osafo, Quarshie, & Sarfo, 2017; Owusu et al., 2011; Quarshie & Andoh-Arthur, 2020; Quarshie, Shuweihdi, Waterman, & House, 2021a).

It is estimated that there are 150,000 deaf children in Ghana (Denkyirah, Offei, & Acheampong, 2019; Fobi & Oppong, 2019). Deaf children may present many mental health challenges, including depression, loneliness, self-esteem issues, and academic challenges (Barker et al., 2009; Kuppler, Lewis, & Evans, 2013). Importantly, low self-esteem, loneliness and anxiety have been associated with bullying victims (Ma, 2002). It is therefore important to examine the prevalence of bullying victimisation and ascertain if it has any impact on this young population. However, hitherto no published evidence on bullying victimisation among school-going deaf adolescents is available from Ghana.

Studies from high-income countries have indicated that more deaf students than hearing students in mainstream classrooms are bullied or victimised by both hearing and deaf students (McCrone, 2004; Sullivan, 2006; Tresh, 2004; Weiner & Miller, 2006). This is often attributed to deaf students' hearing loss, and the bullies' belief that deaf students cannot report what has occurred to them due to communication problems (Tresh, 2004). For example, in the United Kingdom, available data indicate that more deaf students experience bullying victimisation in schools (Dixon, Smith, & Jenks, 2004; Whitney, Rivers, Smith, & Sharp, 1994); deaf students' inadequate social and communication skills often put them in a disadvantaged position for being bullied (Wiener & Mak, 2009). For the majority of deaf students (about 90%) who grow up in hearing families (Napier & Leeson, 2016; Wang & Napier, 2013), they often come into schools (both mainstream and special schools) with inadequate understanding of either the deaf culture (deaf culture is the set of social beliefs, traditions, behaviours, values, and shared institutions of communities that are influenced by deafness and which use sign languages as the main means of communication) or hearing people, thereby falling victim to bullying by both deaf and hearing students, because they are unable to easily identify with both their hearing and deaf colleagues. Hearing students have the advantage of hearing incidental learning (learning as a result of overhearing other people's conversations, which may not necessarily involve them), therefore they acquire social information without making conscious efforts (Convertino, Borgna, Marschark, & Durkin, 2014). Deaf students, on the other hand, are disadvantaged in this domain because most of them come from hearing families and communities where spoken language is commonly used.

Bullying victimisation occurs both among deaf students in mainstream classrooms and in special schools (McCrone, 2004; Sullivan, 2006; Tresh, 2004; Weiner & Miller, 2006). In the Ghanaian context, the majority of deaf students are educated in special schools (Fobi & Oppong, 2019; Oppong & Fobi, 2019). There are 1030 deaf students across all Junior High

Schools (JHS) in the 16 regions of Ghana. There are 22 schools that admit deaf students at the basic and secondary school levels: five mainstream, two integrated schools, and 15 special schools (Fobi & Oppong, 2019; Oppong & Fobi, 2019). Nonetheless, bullying victimisation among deaf students in these schools are not known. We suspect that in these special schools, deaf adolescents have different personal, family, school, and interpersonal experiences that could contribute to bullying victimisation. These could be the basis for the students to be bullied in special schools, particularly, students who became deaf later in life and are less likely to be familiar with the deaf culture and sign language.

Therefore, this study aims at estimating the 12-month prevalence of bullying victimisation among school-going deaf adolescents, and to ascertain the contributing factors of bullying victimisation. To do this, we set to address the following research questions:

What is the prevalence of bullying victimisation among school-going deaf adolescents in Ghana?

What are the factors associated with bullying victimisation among school-going deaf adolescents in Ghana?

Data and Methods

Design, Setting, and Participants

This is a cross-sectional study. A cross-sectional survey design is appropriate for the assessment of prevalence estimates of health and behavioural outcomes, and for the identification of associations between exposure and outcome variables (Lavrakas, 2008). Given that this study is part of a larger study, details of the methods are reported elsewhere (Quarshie et al., 2021b). In summary, at the time of designing this study in August 2019, there were 1030 students across all the 13 JHS for the deaf in Ghana. The Yamane's (1967) formula for proportions, with 0 · 05 level of precision, was applied to predetermine a minimum sample size of 288. We applied a two-stage cluster sampling approach to obtain study sample of deaf adolescents attending JHS in Ghana (notably, 'deaf' is written in lower case within the Ghanaian context to represent individuals with hearing loss ranging from moderate to profound). Typically, schools for the deaf in Ghana are attended by young people with moderate to profound bilateral hearing loss. Based on the chronological definition of adolescence provided by Sawyer, Azzopardi, Wickremarathne, and Patton (2018), we used the term adolescents to mean individuals aged between 10 and 24 years. In stage 1, we randomly selected seven JHS for the deaf, with probability proportional to enrolment size, across the 16 administrative regions of Ghana. In stage 2, classes were randomly selected with all students in each class having an equal chance to participate in the survey. In other words, we selected all our participants from junior high schools in Ghana for the deaf only. Across the seven selected schools, we approached and invited 468 students across the selected classes; however, 450 opted to participate in the study, representing a response rate of 96.1% (171 females and 279 males; aged 13–24 years; mean age = 18.4; standard deviation = 2.60).

Measures

Outcome Variable

Bullying victimisation, a single-item measure adopted from the 2012 Ghana World Health Organisation Global School-based health Survey (WHO, 2019), was the outcome variable of the current study. Bullying victimisation was measured with the item, 'During the past 12 months, on how many days were you bullied at school? Bullying occurs when a student or a group of students teases, threatens, spreads rumours about, hits, shoves, or hurts another student over and over again. It is not bullying when two students of about the same strength or power argue or fight or tease each other in a friendly and fun way'. The responses were 0 days (scored 1), 1 or 2 days (scored 2), 3 to 5 days (scored 3), 6 to 9 days (scored 4), 10 to 19 days (scored 5), 20 to 29 days (scored 6), and All days at school (scored 7). However, for ease of data interpretation, we recoded this into a binary variable 'No' (0 days = 0) and 'Yes' (1 to all days at school = 1).

Sociodemographic Variables

As shown in Tables 1 and 2, we included eight variables assessing the social and demographic characteristics of the participants: gender (female or male), age, deafness status (postnatal or congenital), school grade, family structure, living arrangement, romantic relationship status, and religious group. Specific items asking about the sociodemographic variables are shown in the Supplementary Material.

Exposure Variables

This study involved 13 presumed exposure variables categorised under *personal and lifestyle* (religious participation, and weekly alcohol use), *family factors* (parental divorce, conflict with parents, parental checking of homework, parental understanding, parental monitoring, and parental intrusion of privacy), *school factors* (schoolwork problems, and truancy), and *interpersonal adversities* (conflict with friends, break-up, and sexual abuse victimisation) were included in this study – see Tables 1 and 2. We adopted the religious participation item from the 5-item Duke University Religion Index (Koenig & Büssing, 2010): 'How often do you attend church or other religious meetings?' with response options from 'never' (scored 1) to 'more than once per week' (scored 6). Most of the exposure variables were adopted from the 2012 Ghana WHO-GSHS questionnaire (WHO, 2019); they were binary response (No/Yes). For example, alcohol use – 'in a typical week, how many alcoholic drinks do you drink?' (never drink alcohol or ≥ 1 drinks); parental divorce – 'have your parents divorced during the past 12 months?' (No/Yes), and break-up – 'have you had a breakup with your boyfriend or girlfriend during the past 12 months?' (No/Yes). Specific items used to assess the exposure variables are shown in the Supplementary Material.

Procedure

The survey was administered between October 2019 and January 2020 to participants in their classrooms, with sitting arrangement spaced reasonably to allow for privacy in responding. Three authors with high proficiency in the Ghanaian Sign Language (GSL)

addressed the concerns and queries of the participants during the survey. GSL is used for educating deaf students at all levels of education in Ghana. Prior to administration, the questionnaire was reviewed by a deaf education researcher and a primary school for the deaf English language teacher in Ghana – to pitch the readability and comprehension of the items appropriately for the participants. The completion of the questionnaire lasted between 55 and 75 minutes. Each student enclosed their answered questionnaire in an envelope and placed it in an opaque box near the exiting door.

Data Analysis

We performed all statistical analyses using the Statistical Package for Social Sciences (SPSS version 26.0). Missing responses were excluded completely from the data analysis. We first performed a descriptive analysis by applying frequencies, proportions and the Pearson's Chi-square tests (χ) and point-biserial correlation (r_{pb}) tests to examine the bivariate relationships between bullying victimisation and the exposure variables and socio-demographic factors. Secondly, taken the socio-demographic variables as covariates, we performed both unadjusted and adjusted multivariable logistic regression analyses, examining the possible associations between bullying victimisation and the specified exposure variables. We reported the results of the logistic regression as odds ratios with 95% confidence intervals (CI) and p-values. Statistically significant results were also determined using $p < 0 \cdot 05$.

Ethics

The Department of Psychology Research Ethics Committee, University of Ghana, Accra, approved this study. Additionally, we adhered to the required ethical procedures of the Ghana Education Service (GES) for conducting research involving students in special schools in Ghana; we sought written permissions from the heads of participating schools and The Special Education Unit of GES. Each participant signed a written consent form prior to responding to the survey.

Results

Sample Characteristics, Prevalence Estimates, and Bivariate Associations

450 participants provided complete data included in the final analysis (age range = 13–24; mean age = 18 · 2; standard deviation = 2 · 6; modal age = 18). As shown in Table 1, there were more males (n = 279 [62%]) than females (n = 171 [38%]); most of the participants (62 · 7%) identified their deafness as congenital, 72 · 6% self-identified their family as monogamous – their father had one wife, 74 · 5% self-identified as Christian, and 54 · 4% reported that they lived with both parents.

Of the 450 participants, 55 · 1% (n = 248; 95% CI: 50% – 60%) reported bullying victimisation during the previous 12 months. Although the difference did not reach statistical significance, more males (57 · 0%; 95% CI: 51% – 63%) than females (52 · 0%; 95% CI: 44% – 60%) reported having been bullied in the previous 12 months ($\chi^2_{(1)} = 1 \cdot 05$, $p = \cdot 306$) – see Table 1.

Table 1. Bivariate associations.

Variable	Total sample	Bullying victimisation in the previous 12 months			
		No	Yes		
	n (%)	n (%)	n (%)	χ	p-value
Socio-demographic variables:					
Gender				1 ·047	·306
Female	171 (38 ·0)	82 (48 ·0)	89 (52 ·0)		
Male	279 (62 ·0)	120 (43 ·0)	159 (57 ·0)		
Deafness status				4 ·303	·038
Postnatal	168 (37 ·3)	86 (51 ·2)	82 (48 ·8)		
Congenital	282 (62 ·7)	116 (41 ·1)	166 (58 ·9)		
School grade:				1 ·834	·400
JHS 1	216 (48 ·0)	90 (41 ·7)	126 (58 ·3)		
JHS 2	73 (16 ·2)	36 (49 ·3)	37 (50 ·7)		
JHS 3	161 (35 ·8)	76 (47 ·2)	85 (52 ·8)		
Family structure				1 ·276	·259
Father has 1 wife	318 (72 ·6)	149 (46 ·9)	169 (53 ·1)		
Father has > 1 wife	120 (27 ·4)	49 (40 ·8)	71 (59 ·2)		
Living arrangement:				7 ·356	·025
Live with both parents	240 (54 ·4)	119 (49 ·6)	121 (50 ·4)		
Live with one parent	124 (28 ·1)	52 (41 ·9)	72 (58 ·1)		
Live with no parents	77 (17 ·5)	25 (32 ·5)	52 (67 ·5)		
In romantic relationship				30 ·124	< ·001
No	250 (56 ·3)	140 (56 ·0)	110 (44 ·0)		
Yes	194 (43 ·7)	48 (29 ·9)	136 (70 ·1)		
Religious group				3 ·053	·081
Christian	333 (74 ·5)	157 (47 ·1)	176 (52 ·9)		
Muslim	114 (25 ·5)	43 (37 ·7)	71 (62 ·3)		
Personal and lifestyle variable:					
Weekly alcohol use				7 ·878	·005
Never drink alcohol	341 (77 ·0)	164 (48 ·1)	177 (51 ·9)		
≥ 1 drink	102 (23 ·0)	33 (32 ·4)	69 (67 ·6)		
Family factors:					
Parental divorce				18 ·829	< ·001
No	296 (66 ·8)	153 (51 ·7)	143 (48 ·3)		
Yes	147 (33 ·2)	44 (29 ·9)	103 (70 ·1)		
Conflict with parents				11 ·188	·001
No	277 (62 ·7)	141 (50 ·9)	136 (49 ·1)		

(*Continued*)

Table 1. (Continued).

Variable	Total sample	Bullying victimisation in the previous 12 months			
		No	Yes		
	n (%)	n (%)	n (%)	χ	p-value
Yes	165 (37 ·3)	57 (34 ·5)	108 (65 ·5)		
School factors:					
Schoolwork problems				24 ·739	< ·001
No	129 (29 ·1)	81 (62 ·8)	48 (37 ·2)		
Yes	314 (70 ·9)	116 (36 ·9)	198 (63 ·1)		
Truancy				2 ·300	·129
≤ 5 days	360 (80 ·0)	168 (46 ·7)	192 (53 ·3)		
> 5 days	90 (20 ·0)	34 (37 ·8)	56 (62 ·2)		
Variable	Total sample	Bullying victimisation in the previous 12 months			
		No	Yes		
	n (%)	n (%)	n (%)	χ	p-value
Conflict with friends				28 ·581	< ·001
No	261 (58 ·0)	145 (55 ·6)	116 (44 ·4)		
Yes	198 (42 ·0)	57 (30 ·2)	132 (69 ·8)		
Break-Up				32 ·006	< ·001
No	298 (66 ·2)	162 (54 ·4)	136 (45 ·6)		
Yes	152 (33 ·8)	40 (26 ·3)	112 (73 ·7)		
Sexual abuse victimisation				5 ·731	·017
No	365 (82 ·6)	173 (47 ·4)	192 (52 ·6)		
Yes	77 (17 ·4)	25 (32 ·5)	52 (67 ·5)		

Note: χ = Chi square

Participants who had a break-up during the previous 12 months ($\chi^2_{(1)} = 32 \cdot 01$, $p <$ ·001), those who were in a romantic relationship ($\chi^2_{(1)} = 30 \cdot 12$, $p <$ ·001), those who had conflicts with friends ($\chi^2_{(1)} = 28 \cdot 58$, $p <$ ·001), participants who had schoolwork problems ($\chi^2_{(1)} = 24 \cdot 74$, $p <$ ·001), and participants whose parents divorced in the past 12 months ($\chi^2_{(1)} = 18 \cdot 83$, $p <$ ·001) were more likely to report bullying victimisation during the previous 12 months (see Table 1). The point biserial correlation tests showed a statistically significant positive relationship between parental intrusion of privacy and bullying victimisation ($r_{pb} = 0 \cdot 137$, n = 446, $p =$ ·004), while age, religious participation, parental checking of homework, parental understanding, and parental monitoring showed no statistically significant relationship with bullying victimisation.

Table 2. Multivariate associations.

	Unadjusted model				Adjusted model			
Variables in model	β	OR	95% CI	p-value	β	aOR	95% CI	p-value
Socio-demographic variables:								
Gender	·118	1 ·125	·731, 1 ·731	·593	·074	1 ·077	·658, 1 ·762	·768
Age	– ·117	·890	·815, ·971	·009	-·093	·911	·823, 1 ·009	·074
Deafness status	·263	1 ·301	·842, 2 ·010	·236	·168	1 ·183	·716, 1 ·956	·511
School grade:								
JHS 1	Reference				Reference			
JHS 2	·020	1 ·020	·560, 1 ·858	·948	·285	1 ·330	·676, 2 ·617	·409
JHS 3	·148	1 ·159	·715, 1 ·880	·549	·232	1 ·261	·724, 2 ·194	·412
Family structure	·172	1 ·188	·748, 1 ·887	·466	·292	1 ·339	·790, 2 ·270	·279
Living arrangement:								
Live with both parents	Reference				Reference			
Live with one parent	·325	1 ·385	·856, 2 ·240	·185	·163	1 ·177	·683, 2 ·029	·556
Live with no parents	·581	1 ·788	·988, 3 ·234	·055	·420	1 ·523	·785, 2 ·954	·214
In romantic relationship	1 ·188	3 ·2812	·112, 5 ·098	·000	·521	1 ·684	·996, 2 ·848	·052
Religious group	·596	1 ·8151	·109, 2 ·970	·018	·411	1 ·508	·839, 2 ·708	·170
Personal and lifestyle variables:								
Religious participation	·104	1 ·109	·984, 1 ·251	·089	·103	1 ·108	·976, 1 ·259	·114
Weekly alcohol use	·212	1 ·236	·704, 2 ·172	·461	·205	1 ·227	·661, 2 ·279	·517
	Unadjusted model				Adjusted model			
Variables in model	β	OR	95% CI	p-value	β	aOR	95% CI	p-value
Family factors:								
Parental divorce	·647	1 ·910	1 ·164, 3 ·135	·010	·558	1 ·747	1 ·029, 2 ·965	·039
Conflict with parents	·092	1 ·097	·667, 1 ·803	·716	·096	1 ·101	·651, 1 ·863	·720
Parental checking of homework	-·065	·937	·780, 1 ·125	·486	-·037	·964	·792, 1 ·173	·714
Parental understanding	·177	1 ·194	·989, 1 ·441	·064	·129	1 ·137	·931, 1 ·389	·207
Parental monitoring	-·019	·982	·818, 1 ·178	·841	-·064	·938	·769, 1 ·144	·529
Parental intrusion of privacy	·118	1 ·125	·950, 1 ·333	·172	·116	1 ·123	·934, 1 ·350	·216
School factors:								
Schoolwork problems	·623	1 ·865	1 ·143, 3 ·044	·013	·609	1 ·838	1 ·081, 3 ·126	·025
Truancy	·432	1 ·540	·863, 2 ·747	·144	·398	1 ·489	·785, 2 ·826	·223
Interpersonal adversities:								
Conflict with friends	·607	1 ·835	1 ·157, 2 ·911	·010	·561	1 ·753	1 ·074, 2 ·860	·025
Break-Up	·990	2 ·692	1 ·630, 4 ·447	·000	·839	2 ·314	1 ·340, 3 ·997	·003
Sexual abuse victimisation	·022	1 ·022	·547, 1 ·910	·945	-·133	·876	·448, 1 ·713	·698

Note: β = beta value; OR = unadjusted odds ratio; aOR = adjusted odds ratios; CI = Confidence Interval; statistically significant results are in bold face

Multivariate Logistic Regression Of Factors Associated With Bullying Victimisation

Table 2 shows the unadjusted and adjusted multivariable associations between bullying victimisation, and socio-demographic variables, personal and lifestyle variables, family factors, school factors, and interpersonal adversities. In the unadjusted model, three socio-demographic factors (age, in romantic relationship, and religious group) showed statistically significant associations with bullying victimisation; however, in the adjusted model, no statistically significant associations were observed between those and bullying victimisation. In the adjusted model, break-up (aOR = 2 · 31; 95% CI = 1 · 34, 3 · 99, p = ·003), schoolwork problems (aOR = 1 · 84; 95% CI = 1 · 08, 3 · 13, p = ·025), conflict with friends (aOR = 1 · 75; 95% CI = 1 · 07, 2 · 86, p = ·025), and parental divorce (aOR = 1 · 75; 95% CI = 1 · 03, 2 · 96, p = ·039) showed statistically significant associations with bullying victimisation.

Discussion

Prevalence of Bullying Victimisation Among Deaf Adolescents

Our findings indicated that about 5 out of 10 deaf adolescents reported bullying victimisation during the previous 12 months, but the estimates were comparable between females (52 · 0%) and males (57 · 0%). This supports findings from studies by (Kouwenberg, Rieffe, Theunissen, de Rooij, & Scott, 2012; Lund & Ross, 2016) which reported no gender differences between deaf male and deaf female adolescents. Whereas deaf adolescents with schoolwork problems were likely to report bullying victimisation, most of the key factors associated with bullying victimisation in our study were adverse social events – break-up, conflict with friends, and parental divorce.

Data on bullying victimisation from Africa among hearing children aged 12–15 years reported an overall 30-day prevalence of 62.8% for Ghana but failed to report a year prevalence (Koyanagi et al., 2020). Meanwhile, another study has reported a year prevalence of bullying victimisation to be 40.1% among hearing Ghanaian adolescent (Baiden et al., 2019; Owusu et al., 2011). A review by reported that deaf children were at a higher risk of suffering bullying victimisation than their hearing peers (Bouldin et al., 2021). Our findings, thus, also support this review report as our estimates are higher than what has been reported for hearing young adolescents in Ghana.

This current study reports that bullying victimisation is high among young deaf adults because a possible target for bullying may be any young adolescent who feels insecure or vulnerable due to deafness and changing family circumstances in the case of separation of parents or divorce. (Størksen, Røysamb, Holmen, & Tambs, 2006) have reported that the effect of divorce peaks at age 17 and stronger in mid-adolescence than in late adolescence. The age range for young deaf adolescents in junior high school in Ghana is 10–24 and this explains the outcome of this study. Increased parental participation and support for adolescents can contribute to the early recognition of negative social experiences, helping parents to recognise and assist adolescents with appropriate solutions which could potentially minimise bullying victimisation. A recent cross-national study has reported a higher prevalence estimate of bullying victimisation among school-going adolescents in LMICs who indicated lower levels of parental support which could be due to divorce or separation (Biswas et al., 2020).

Furthermore, perpetrators of bullying are more likely to select the withdrawn or timid students as victims, because deafness has been associated with withdrawal and anxiety disorders (Shoham, Lewis, Favarato, & Cooper, 2019). Another key factor that was associated with bullying victimisation in the current study is break-up. Effects of a break-up subside over time among some young adolescents, but may persist for several years for others (Shulman, Seiffge-Krenke, Scharf, Lev-Ari, & Levy, 2017). Break-Up may lead to the feeling of substantial interpersonal loss, increased feelings of worthlessness and abandonment, making the young deaf adolescent prone to more bullying victimisation at school (Connolly & McIsaac, 2009; Shulman et al., 2017). In this study, conflict with peers was associated with increased odds of bullying victimisation. Boys have been generally associated with peer aggression (Espelage & Swearer, 2004), while deaf students have also been linked to verbal or physical aggression during play and off-play activities – which may involve bullying (Nezamipour, Abdolmanfi, Etemadinia, & Ezadinia, 2015). This is supported by reports from meta-analyses by (Cook et al., 2010; Demaray & Malecki, 2003) and evidence of primary cross-sectional studies (Biswas et al., 2020) that suggests that peer relationship is associated with lower frequency of reporting bullying victimisation among adolescents. Supportive peer relationships empower students to self-defend, which can discourage bullying perpetration (Olweus & Limber, 2007).

Implications and Recommendations

This current study has shown that the prevalence estimates bullying victimisation among school-going deaf adolescents are higher, compared to those identified among non-deaf adolescents in Ghana (Baiden et al., 2019; Owusu et al., 2011). Clearly, this evidence underscores the need for anti-bullying policies across schools for the deaf in Ghana, to help prevent bullying perpetration among students. Since bullying has been linked to negative mental health outcomes among young people, results of this study highlights a need for universal and targeted prevention efforts to help educators of deaf adolescents to focus on improving the mental wellbeing of deaf adolescents in Ghana. Although further studies are needed to investigate the experiences and meanings of bullying victimisation among deaf adolescents in Ghana, taken the evidence from current study and findings on bullying victimisation from previous studies involving non-deaf together, it stands to suggest that both hearing and deaf adolescents may be faced with many challenges related to family and peer relationships, education, health, and other interpersonal relationships outside the school and family contexts. We recommend that individual counselling or group psycho-educational counselling can be given to deaf adolescents, while social skills instruction that focus on anti-bullying practises and a coping strategy to overcome the detrimental consequences of bullying would be useful for this population of students.

Strengths

Drawing on a nationally representative sample, this student represents the first attempt at providing evidence from Ghana on bullying victimisation and its associated factors among school-going deaf adolescents: this is the first study to report evidence on bullying victimisation among school-going deaf adolescents in Ghana. Generally, studies that

report bullying victimisation have been conducted with sample sizes not exceeding 100, and researchers often combine multiple types of disabilities, either by grouping all students into one general category or by developing a small number of distinct categories that are assumed to share similar features (Bear et al., 2015; Rose, Monda-Amaya, & Espelage, 2011). This approach unduly masks the useful unique and shared evidence within and across distinct categories of adolescents with physical disabilities. Thus, the comparatively larger sample size and unique focus of the current study on school-going deaf adolescents provides a relatively generalisable and nuanced evidence on bullying victimisation among this young population in Ghana – and could serve as a potentially useful basis to peer into the situation pertaining in other (Western) Sub-Saharan African countries.

Limitations

The cross-sectional design used prevented causal inferences; future studies could employ more robust designs, including case-control or longitudinal approaches to help clarify the associations between the exposure variables and bullying victimisation among school-going deaf adolescents. Relatedly, qualitative approaches may be useful in exploring the lived experiences and first-hand accounts of the personalised meanings of bullying victimisation. Potentially, evidence from such qualitative studies could facilitate the determination of the support needs of bullied adolescents and inform targeted prevention strategies to protect school-going deaf adolescent at risk of bullying victimisation. Also, it is possible that some participants in the current study might have provided socially desirable responses, leading to an underestimation of the prevalence of bullying victimisation. Lastly, the use of a single-item measure to assess bullying victimisation in this study might have been less elaborate in capturing the full nuances of bullying victimisation, although the single-item measure might have facilitated the screening of a relatively large number of participants at a time. Future studies may consider applying a more nuanced multi-item measure with satisfactory validated psychometric properties and contextual relevance.

Conclusions

The prevalence estimates of bullying victimisation among deaf adolescents in this study are higher, relative to the known estimates of the phenomenon among in-school hearing adolescents in Ghana and other countries in the global south, but also highlight the need for multi-level universal and targeted prevention efforts to individual deaf students, school staff, and families, to mitigate both the victimisation and perpetration of bullying among school-going deaf adolescents in Ghana.

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