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# Cyberbullying Victimization among High School and University Students in Ghana

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## ABSTRACT

This study sought to establish the extent of cyberbullying among students in Ghana, its consequences on the victims, and the characteristics of the victims. The study found that nearly all participants had experienced one form of cyberbullying before. Victims of cyberbullying were not very different from non-victims in psychological wellbeing. The effect of cyberbullying on psychological wellbeing was small, and no clear profile characterizing victims emerged. The present findings should be an eye-opener for Ghanaian parents, educators and health professionals and set the stage for further studies to understand the Ghanaian situation.

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Ghana; cyberbullying;  
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## Introduction

Bullying among young people is no new phenomenon, and Ghanaian adolescents are no exception. Whereas systematic studies of the phenomenon have been going on for about 50 years in Western countries (Hymel and Swearer 2015; Olweus 2013), studies in Africa, with few exceptions (e.g., Herring, Siziya, Pasupulati, Rudatsikira, Adamson, and Muula 2013) are rare. Ghanaian studies, albeit with some notable exceptions (e.g., Owusu et al. 2011) are even harder to find. Many of the African studies, including that of Owusu et al. (2011) however, form a minor part of a larger research project, such as the Global-school-based student health survey (see CDC 2016). African studies devoted entirely to bullying are uncommon. Anecdotally, and in the case of Ghana, one reason for the lack of research into bullying may be due to its perception within the society. Bullying in Ghanaian schools is perceived as a *rites de passage* into life in a boarding school. This is particularly the case for adolescents when they enter into high school. Much of the bully is viewed as some form of entertainment for the amusement of the older students (Antiri 2016).

Notwithstanding the perceived role of bullying in Ghana, it deserves research attention especially as researchers seek to understand cross-cultural similarities and differences in human behavior (Berry et al. 2011). Ghana may be one cultural society to undertake such a study, particularly as bullying takes on a new form globally (i.e., cyberbullying), and is becoming more insidious. Bullying is major public health problem, but the health implications in Ghana are yet to be explored. This study examines the extent of cyberbullying among young people in Ghana, and the consequences of being a victim of cyberbullying. Although bullying in Ghana is noted mostly among high school students, we extend this study to include university students. This is in response to the general lack of cyberbullying studies on young adults (Rafferty and Vander Ven 2014). Considering the socio-cultural context of Ghana, a society where religiosity and values of embeddedness are central to the everyday lives of the people, will the extent of cyberbullying be different from that reported elsewhere? To what extent will cyberbullying leave

psychological scars on its victims in view of the ubiquity of physical punishment and verbal abuse in children's socialization?

Young people of today are utilizing the technologies of our day to expand the reach and harm associated with bullying. Cyberbullying has become one of the "side-effects" of the information technological developments of this century (Holt and Bossler 2014; Pelfrey and Weber 2013). Cyberbullying is an individual's willful and repeated harm inflicted on another individual through the use of computers, cellphones, and other electronic devices (Hinduja and Patchin 2015). It is characterized by offensive e-mails or text messages; insults through chatrooms or instant messaging; photos or videos on mobile or on the web; exclusion from social networks or appropriation of others' credentials and identity information (Menesini and Spiel 2012).

Traditional bullying (also known as school bullying, or simply as bullying) is more common than cyberbullying (Lenhart 2007), however, much as the two have a lot in common, they also differ in several ways (Pelfrey and Weber 2013; Smith et al. 2008). At the core of bullying are acts of aggression designed to cause psychological harm to an individual or individuals, and both forms of bullying are interested in causing (repeated) pain and suffering on their victims. There is power imbalance between bully-perpetrator and a bully-victim, in which the balance of power invariably favors the bully-perpetrator (Hinduja and Patchin 2015). A distinctive feature of cyberbullying is the degree of anonymity it affords the perpetrators, making it potentially more harmful than traditional bullying. Not knowing who is behind their harassment makes it difficult for cyberbully victims to cope with the harassment. Sadly, the anonymity the internet offers cyberbullies emboldens them to continue antagonizing their victims. This tendency may be exacerbated by the fact that the victim and the perpetrator may be separated in time and space depriving bullies from witnessing the consequences of their actions. In such situations, the perpetrators are spared of guilt-feelings from their actions. The absence of guilt often pushes cyberbullies to be even more aggressive (GALE 2013).

A review of studies on cyberbullying suggests that one out of every four teens in the West has experienced cyberbullying, and about one out of every six teens has done it to others. Adolescent girls are just as likely, if not more likely than boys to be involved in cyberbullying (either as a victim and/or an offender) (Hinduja and Patchin 2007; Schneider, O'Donnell, Stueve, and Coulter 2012). Females are more likely to be cyberbullies rather than a traditional bully because females are less confrontational in normal every day encounters, but can be more assertive when they are online (Ybarra and Mitchell 2004). Li (2006, 2007) nevertheless found more females victims of cyberbullying than males. Almost 60% of the cyber victims are females, while over 52% of cyber-bully perpetrators are males. Majority of the cyber-bully victims and bystanders did not report the incidents to an adult.

The effects of cyberbullying can be long lasting and have been shown to have traumatic effects on the victims including serious psychological damage, such as anxiety, depression, and other serious stress and emotional-related disorders (Hinduja and Patchin 2012, 2015; Olweus 2013). Cyberbullying has been found to be related to low self-esteem, suicidal ideation, anger, frustration, and a variety of other emotional and psychological problems (Brighi et al. 2012; Hinduja and Patchin 2010; Patchin and Hinduja 2010). It has been suggested that cyberbullying quite often is related to other issues in the 'real world', including school problems, anti-social behavior, substance use, delinquency, and low self-control (Hinduja and Patchin 2007; Kowalski and Limber 2013; Li et al. 2016).

Although Owusu et al. (2011) found that bullying in Ghana was associated with a number of psychological problems, including depressive symptoms and suicidal ideations, it is also reasonable to question these findings, on the grounds that the psychological measures used in this study consisted of single items with unknown psychometric properties. The general abusive nature of child socialization in Ghana, from a Western point of view, and the positive perception of punishment among Ghanaian children possibly make them less vulnerable to the negative effects of bullying. For instance, Imoh (2013) found that Ghanaian children welcome parental punishment, and this was viewed by the children as a way of ensuring that they grow up into well-behaved and responsible adults. Ghanaian children are also known to punish and abuse younger siblings when called upon to take care of younger siblings. Imoh

(2013) speculates that children punishing younger siblings are done for the same reasons as their parents', namely, disobedience, disrespect, and misbehavior should be punished to instill good behavior in younger siblings. The "abusive" nature of child socialization in Ghana is different from that found in most Western societies (see e.g., Durrant and Ensom 2012; Sossou and Yogtiba 2008), where authoritative child upbringing is preferred. Is it possible that in environments where child upbringing is characterized by physical punishment and verbal abuse as is in Ghana, the expected negative consequences of punishment are lower, especially when the punishment is not viewed as rejection (Rohner, Bourque, and Elordi 1996)?

Theoretical explanations for bullying abound, and this is perhaps not surprising considering the complexity of the phenomenon. Bullying is an aggressive act that takes different forms and serves different purposes (Hymel and Swearer 2015). The phenomenon has a complex set of promoting, sustaining, and suppressing factors (e.g., Olweus 2001; Rodkin and Hodges 2003), making it difficult to fully differentiate the roles of perpetrators and victims across situations and over time. Adolescents have been found to move from one role to another (from being a bystander, to being victim, or a perpetrator); and also across settings/contexts with time (see Barker et al. 2008; Ryoo, Wang, and Swearer 2014).

Researchers, such as Sekol and Farrington (2010) identify four different groups of adolescents when it comes to bullying: pure bullies (i.e., bully-perpetrators); pure victims (i.e., bully-victims); bully/victims (i.e., those who are victims at some time, and bully others themselves); and the non-involved individuals. Moreover, these two researchers also point out that there may be as many bully-victims as bullies. Thus, while this paper is primarily interested in profiling victims of cyberbullying, it does so by delving into the literature on the perpetrators as well. Indeed, research suggests that bullies and their victims share personality traits that are more typically attributed to the perpetrators (Mishna et al. 2012). Victims have been found to possess bully-typifying traits, such as disagreeableness, dominance, and aggression (Archer, Ireland, and Power 2007; Glasø et al. 2007; Olweus 1993). Bullies and victims appear to share personality traits because many individuals are both perpetrators and victims of negative acts (see Lee and Brotheridge 2006). Moreover, a number of researchers (e.g., Andersson and Pearson 1999; Matthiesen and Einarsen 2007; Olweus 1993) have found that some individuals have provocative personality traits (e.g., aggressiveness, annoying, or socially undesirable behaviors) that make them targets for bullying. While bully-typifying trait, such as verbal aggression may be directly associated with bullying of others (Parkins, Fishbein, and Neal Ritchey 2006), it has been associated with argumentativeness (Diamond, Wang, and Buffington-Vollum 2005), a possible "annoying" factor that may provoke others to bully those who score highly on the trait.

As the above discussion may suggest, the intersection between the personalities of bullies and bully-victims are not always easy to make, and for that reason, we decided to broadly examine the extent to which the different Big-5 personality traits: neuroticism, extraversion, openness, agreeableness, and conscientiousness may be related to cyberbully victims in Ghana. Bollmer, Harris, and Milich (2006) posit that the role of personality on bullying and victimization is through the way individuals respond cognitively during peer conflict situations. Stated in another way, individual differences in personality determine how individuals interpret, respond and subsequently become either a bully or a victim.

Young people high on extraversion may be viewed by some of their peers as too outgoing and may incur the displeasure of their mates, and victimize them by way of putting a check on them. While Mynard and Joseph (1997) found bully-victims to be low on extraversion, Connolly and O'Moore (2003) together with Tani et al. (2003) found extraversion to be positively associated with bullying. Adolescents high on agreeableness and/or conscientiousness may invite displeasure to themselves from their peers who see them as very popular, caring, hardworking and/or law-abiding, and become victims of bully. Bollmer, Harris, and Milich (2006), and Tani et al. (2003) found agreeableness to be negatively related to bully, namely that individuals high on agreeableness are less likely to be bully-perpetrators. Tani et al. (2003) also found that victimization was negatively related to conscientiousness. In a mediational analysis, Bollmer, Harris, and Milich (2006) found that children low on conscientiousness and high on neuroticism were more likely to experience negative

affect during peer conflict, and the negative affect made them vulnerable to victimization. Both Slee and Rigby (1993) and Mynard and Joseph (1997) found bully-victims to be low on neuroticism. In their review of the Big-5 and bullying, Sekol and Farrington (2016) could not find any association between openness and bullying.

According to Win-Gallup International (2012), Ghana is the most religious country in the world, out of 57 countries in their survey. The survey found that 96% of Ghanaians identified themselves as religious, with only 2% describing themselves as non-religious. Gyekye (1996) notes that religion permeates the entire Ghanaian society and impacts on the daily lives of Ghanaians. Gyasi-Gyamerah (2014) also notes that religious beliefs in Ghana are not just an individual private matter. In Ghana, religious beliefs and practices can be witnessed in several public activities, including politics, the economy, health, and education, to the extent that many public events begin with a prayer. The names of many private businesses in Ghana have a Christian name, such as “Thank U Jesus Chemical Shop” in their names (Dzokoto and Okazaki 2006). Indeed, religiosity in Ghana is a way of life, and individuals’ religious beliefs serve as a moral compass in their daily life. Considering the ubiquity of religion in Ghana, a study on bullying without exploring its role on the behavior will be incomplete.

Closely linked to religiosity and morality is the notion of personal values. Values are “concepts or beliefs about desirable end states or behaviors that transcend specific situations, guide selection or evaluation of behavior and events, and are ordered by relative importance” (Schwartz and Bilsky 1987: 551). Values may influence how individuals perceive their environment, and the behavioral choices they make, and are likely to influence people’s decisions (Bardi and Schwartz 2003) to bully others or not.

Schwartz’s value theory organizes values into 10 motivationally distinct domains, namely *Power*, *Achievement*, *Hedonism*, *Stimulation*, *Self-Direction*, *Universalism*, *Benevolence*, *Tradition*, *Conformity* and *Security*. The model also posits that the 10-value types are organized in a circular structure of value relations, where adjacent values share common goals, and opposite values have divergent goals. The circular structure is further conceptualized into two orthogonal dimensions: *self-enhancement* vs. *self-transcendence*, and *openness-to-change* vs. *conservation*. The former dimension – self-enhancement – is composed of *power* and *achievement* on the one hand, and *universalism* and *benevolence* on the other hand, the latter representing self-transcendence. This dimension represents values that motivate people to enhance their own personal interests (self-enhancement) in contrast to values that transcend selfish concerns and seek to promote the welfare of others (self-transcendence) (Schwartz and Boehnke 2004). The “openness-to-change vs. conservation” dimension is composed of *self-direction* and *stimulation* on the one hand, and is in opposition to the values of *security*, *conformity*, and *tradition*. This dimension represents the extent to which people are motivated to follow their own emotional and intellectual interests in unpredictable and uncertain directions (openness-to-change) in contrast to preserving the status-quo and the certainty it provides (conservation). Hedonism shares elements of both openness and self-enhancement (Schwartz and Boehnke 2004).

## Research question and hypotheses

The study set out to answer the following: (a) what is the extent of cyberbullying among high school and university students in Ghana? (b) What are the characteristics of the Ghanaian cyberbully victim? And (c) to what extent does cyberbullying affect the psychological wellbeing of the victims? Based on previous studies and general observations in Ghana, we expected that:

- (i) Cyberbullying will be highest among senior high students (SHS), and lowest among junior high students (JHS).
- (ii) More females will be victims of cyberbullying than males.
- (iii) Compared with non-victims, cyber-bully victims will report lower self-esteem and higher psychological symptoms of anxiety, somatic complaints, and depressive symptoms.

- However, because of the welcoming nature of punishment among Ghanaian children, the effect of cyberbullying on psychological wellbeing will be small.
- (iv) The odds of being a victim of cyberbullying will be higher for individuals high on neuroticism and conscientiousness, low on extraversion and agreeableness. No prediction is made for openness.
  - (v) Religiosity will not be a significant predictor of cyberbully victimization because of the pervasiveness of religion in Ghana.
  - (vi) Victims of cyberbullying will be low on *self-enhancement* and *openness-to-change*. This is because individuals with these values may not be interested in “controlling” others by means of electronic devices in order to attain power over them (Menesini, Nocentini, and Camodeca 2013). Smith et al. (2008) regard the virtual context of cyberbullying to be an arena with unlimited opportunities for novelty, stimulation, excitement, and for entertainment and amusement. In this virtual reality, individuals valuing openness may find it thrilling to harass others. Individuals low on openness-to-change may easily be seen as targets for victimization.

## Method

### Participants

Eight-hundred-and-seventy-eight students took part in this study, of which 844 reported that they are Ghanaians. As we were primarily interested in Ghanaians, we excluded 34 participants who were of other nationality, such as Nigeria and Ivory Coast. The 844 Ghanaians were made up of 140 JHS; 224 SHS and 476 University students. Four students did not indicate their level of education. There was uneven sex distribution (57.1% being male). The major sex imbalance was with the SHS, where 82.6% of them were males. There was a 52.9% vs. 47.1% sex split in favor of males in JHS, and 53.6% females among the university students. The mean age of the participants was 18.63 (sd = 4.09) years. There was a significant age difference in the sample ( $F_{(2, 837)} = 177.19; p < .001; \eta^2 = .42$ ). The three groups differed among themselves with the university students being the oldest ( $M = 20.37, sd = 4.14$ ); and the JHS as the youngest ( $M = 14.41, sd = 1.70$ ). The mean age of the SHS was 17.58 (sd = 2.42) years.

Although the sample for the study was drawn for the Greater Accra region of Ghana, there were participants from all the 10 regions of the country. The sample sizes from the different regions varied greatly, with the largest single sample drawn from the Volta region ( $n = 171$ ) and the smallest sample group ( $n = 9$ ) from Upper West. Nearly all the participants (99.8%) reported that they belonged to a religion. The majority of the participants ( $n = 387$ –45.9%) described themselves as Christians, in addition 262 (31.0%) and 143 (16.9%) respectively described themselves as Charismatic and Orthodox Christians. Only 49 (5.8%) of the participants described themselves as Muslim.

### Measures

A questionnaire containing a battery of scales was developed for the study. Scales were drawn and adapted from previous studies on cyberbullying and other related studies on values, and psychological well-being. Scales used included the following.

*Cyber-bullying victims* was assessed using a scale adapted from Menesini, Nocentini, and Calussi (2011). Participants were to report how frequently they had experienced seven different behaviors in the course of the past 6 months. The behaviors they were to respond to included “Received a nasty text message from someone without knowing who sent it”; “Received a nasty email from someone without knowing who sent it”; and “being insulted by someone in the chat room”. Response categories ranged from “Never” coded 1 to “Most of the time” coded 5.

*Religiosity* was assessed using the 10-item Spiritual Perspective Scale (Reed 1987), an instrument that addresses various dimensions, such as spirituality, public and private religious practices, and religious coping. The Scale assesses participants' perceptions of the extent to which they hold certain spiritual views and engage in spiritually-related interactions, such as "In talking with family and friends, how often do you mention spiritual matters Responses were scored on a 5-point Likert-type scale that was anchored at "Strongly disagree" (coded 1) and "Strongly agree" (coded 5).

*Personality*: The 60-item NEO-FFI (Costa and McCrae 1992) was used to assess the five personality traits of Neuroticism (e.g., I am not a worrier – Reversed coded); Extraversion (e.g., I like to have a lot of people around me); Agreeableness (e.g., I try to be courteous to everyone I meet); Openness (e.g., I don't like to waste my time daydreaming – Reversed coded); and Conscientiousness (e.g., I often get into arguments with my family and friends. Items were rated on a 5-point scale ranging from 1 (*Strongly disagree*) to 5 (*Strongly agree*).

*Values*: the 40-item Portrait Value Questionnaire (PVQ) by Schwartz (1992) was used to assess individual personal values. Each of the 40-PVQ-item describes the person's goals, aspirations, or wishes, and points to the importance of a single broad value, such as Hedonism – "Enjoying life's pleasures is important to him. He likes to 'spoil' himself"; Power – "He always wants to be the one who makes the decisions. He likes to be the leader" and Achievement – "It's very important to him to show his abilities. He wants people to admire what he does". On a 6-point scale, the response categories were: "very much like me"; "like me"; "somewhat like me"; "a little like me"; "not like me" and "not like me at all". On the basis of the two orthogonal dimensions, self-enhancement vs. self-transcendence and openness to change vs. conservation, four summated scores were computed in line with Schwartz's recommendation (Schwartz 2009)

*Self-esteem* was measured using Rosenberg's (1965) 10-item self-esteem inventory. A sample item is "On the whole I am satisfied with myself.", and was responded to on a 5-point Likert type scale "strongly agree" to "strongly disagreed"

*Psychological wellbeing* was assessed using a 15-item scale taken from a study on the psychological wellbeing of young people (Berry et al. 2006). The scale included five items each assessing *depressive symptoms* (e.g., I lose interest and pleasure in things which I usually enjoy); *anxiety reactions* (e.g., I am worried about something bad happening to me)" and *psychosomatic symptoms* (e.g., "I feel weak all over"). Respondents were to indicate the extent to which they had experienced any of the described symptom in the course of the last 6 months. The response categories ranged from 1 (never) to 5 (very often).

Principal component analysis (PCA) was performed on all the different scales, and sub-scales to ascertain whether the items loaded uni-factorially. The PVQ was excluded from the PCA as Schwartz (2009) recommends against it. For lack of space, the factor loadings from the PCA have not been included in this paper. These can be obtained from the first author by request. Except for the Big-5 sub-scales, all the scales showed very good uni-factorial loadings, including the symptoms scale. The poor factor loadings on the Big-5, was also reflected in the reliability of the scales. Indeed, only one sub-scale of the Big-5 showed good internal consistency. Other than that, all the scales showed good internal consistencies for both the entire sample, and for the different student sub-groups (i.e., JHS, SHS and University). See Table 1 for the Cronbach alphas of the scales.

## **Procedure**

Participants were recruited from two Junior High Schools (1 private), three public Senior High Schools, and three universities (two public). All the institutions are based in the Greater-Accra region of Ghana. Research assistants visited these institutions and secured the appropriate permissions to undertake the data collections with the use of a questionnaire. Data collection was administered in groups (in lecture rooms/classrooms). Instructions on the first page of the questionnaire assured participants of the confidentiality and anonymity of their responses. They were also informed that their participation was voluntary, and that they could withdraw from the

**Table 1.** Means, SD, and Reliability (alpha) of the scales.

	Entire group			Junior High Sch.			Senior High Sch..			University		
	Mean	SD	$\alpha$	Mean	SD	$\alpha$	Mean	SD	$\alpha$	Mean	SD	$\alpha$
Cyberbullying	1.88	.68	.76	1.56	.67	.78	1.56	.67	.81	1.96	.74	.71
Religiosity	4.27	.81	.88	3.85	.96	.85	3.85	.96	.88	4.36	.73	.88
Self-esteem	3.91	.75	.79	3.55	.77	.67	3.55	.73	.82	4.05	.73	.79
Symptoms	2.28	.59	.88	2.36	.61	.82	2.37	.61	.89	2.23	.58	.89
Somatic symptoms	2.21	.59	.63	2.30	.69	.63	2.30	.69	.53	2.11	.47	.68
Anxiety	2.35	.76	.80	2.40	.77	.66	2.40	.77	.85	2.34	.78	.93
Depression	2.29	.79	.83	2.40	.89	.79	2.40	.89	.86	2.24	.79	.83
Neuroticism	33.82	7.66	.70	32.76	8.30	.69	32.76	8.39	.75	34.09	8.08	.69
Extraversion	26.18	4.99	.16	26.93	5.43	.22	26.93	5.43	.26	26.40	5.20	.09
Openness	26.35	5.65	.38	26.59	5.74	.37	26.59	5.74	.41	25.53	5.51	.38
Agreeableness	23.09	6.67	.48	24.90	7.44	.56	24.90	7.44	.46	23.03	6.52	.45
Conscientious	23.71	5.41	.31	24.52	6.26	.48	24.52	6.26	.34	23.63	5.52	.23
Self-enhancement	4.32	.90	.74	3.97	1.06	.70	4.38	.80	.71	4.39	.87	.77
Self-transcendence	4.88	.71	.72	4.59	.91	.75	4.96	.64	.71	4.92	.84	.69
Openness to change	4.44	.66	.62	4.15	.87	.70	4.58	.62	.60	4.46	.57	.55
Conservation	4.80	.67	.80	4.56	.88	.85	4.92	.62	.83	4.81	.61	.75

study at any time without any repercussions. Answering the questionnaire took between 15 minutes (at universities) to about 30 minutes (at the JHS institutions). The overall response rate to the study was almost 80%.

The ethical committee for humanities of the University of Ghana reviewed and approved the study, and before data collection was undertaken, a pilot study was undertaken to ensure that the questions were clear enough.

## Results

### *Extent of cyberbullying*

To determine the extent of cyberbullying, we first looked at participants' responses to the individual items constituting the cyberbullying scale. Here the focus was on the percentage of the participants who had encountered the situation at least once. Subsequently, we looked at the scale as an index. As can be seen in Table 2, the most common form of cyberbullying is "receiving a nasty text message". Over two-thirds (73.2%) of all the participants had received such a message at least one in the course of the last 6 months, with as many as 83% of the university students having experienced it at least once. The least common form of cyberbullying is nasty emails; about one out of three (31.3%) of the students has experienced it at least once in the course of 6 months. The relative low occurrence of sending "nasty email" is because of the "cumbersome" nature of emailing compared with texting.

Because of the skewness of the of the cyberbullying index (skewness = .94; kurtosis = 1.60), for the rest of the analyses in the paper, the index was dichotomized into "Never before" vs. "at least once". Using this as our dependent variable, a cross-tabulation of cyberbullying by educational level indicated that 69.3% of the JHS, 92.0% of SHS and 93.3% of University students had encountered cyberbullying at least once.; and this was more than a chance occurrence ( $\chi^2_{(2)} = 70.85$ ;  $p < .001$ ; Cramer's  $V = .29$ ). As to whether being a cyberbully victim is related to gender, cross-tabulation indicated that for the entire sample, there is no difference between the genders ( $\chi^2_{(1)} = 2.10$ ;  $p > .05$ ). However, splitting the sample to educational level, a border line significant difference was found between males and female university students ( $\chi^2_{(1)} = 3.64$ ;  $p = .056$ ). Because there was no gender difference, gender was not controlled for in subsequent analyses.

**Table 2.** Percentage of participants who have experienced the different cyberbullying at least once in the course of the last 6 months.

	All participants		Junior High		Senior High		University	
	N	%	N	%	N	%	N	%
Nasty text message	618	73.2	48	43.3	172	76.8	395	83.0
Nasty Email	267	31.6	24	17.1	82	36.6	160	33.6
Being insulted online	317	37.6	51	36.4	84	37.5	181	38.0
Nasty Instant message	357	42.3	33	23.6	106	47.3	217	45.6
Nasty text without knowing who sent it	380	45.0	40	28.6	110	49.1	228	47.9
Prank call	487	57.7	54	38.6	135	60.3	297	62.4
Excluded from group (eg., Facebook)	357	42.3	37	26.4	108	48.2	211	44.3

### Consequences of cyberbullying

To examine effect of being a victim of cyberbullying on psychological wellbeing, we compared victims and non-victims on self-esteem, somatic complaints, anxiety, and depressive symptoms, in addition to the composite score of somatic complaints, anxiety, and depressive symptoms (as psychological symptoms). We compared the entire sample on these outcomes, and also separately for the three educational levels. As can be seen in Table 3, the general trend is that students who had been victims of cyberbullying generally did not differ from their counterparts who had never been victims on the examined psychological wellbeing indicators. The general lack of difference was particularly so among the JHS. Among university students, however, there was a significant difference between victims and non-victims on the overall psychological symptoms scale [ $M = 2.30$  ( $sd = .59$ ) vs.  $M = 1.99$  ( $sd = .52$ ),  $t_{(474)} = 2.74$ ,  $p < .01$ , Cohen's  $d = .56$ ] and on the somatic complaints subscale [ $M = 2.25$  ( $sd = .59$ ) vs.  $M = 1.86$  ( $sd = .55$ ),  $t_{(474)} = 3.41$ ,  $p < .01$ , Cohen's  $d = .68$ ], and in both cases, the victims reported more problems. The effect sizes are also medium. Looking at all the students as a group, significant differences could be found between victims and non-victims on the overall psychological symptoms scale [ $M = 2.30$  ( $sd = .59$ ) vs.  $2.15$  ( $sd = .64$ ),  $t_{(841)} = 2.22$ ,  $p < .05$ , Cohen's  $d = .24$ ], on somatic complaints [ $M = 2.22$  ( $sd = .57$ ) vs.  $M = 2.08$  ( $sd = .68$ ),  $t_{(841)} = 2.16$ ,  $p < .05$ , Cohen's  $d = .22$ ], and on anxiety [ $M = 2.37$  (.76) vs.  $M = 2.17$  ( $sd = .72$ ),  $t_{(841)} = 2.37$ ,  $p < .05$ , Cohen's  $d = .27$ ]. In all three instances, victims reported more problems than their non-victimized peers. The effect of cyberbullying on the psychological wellbeing was generally small.

**Table 3.** Cross-tabulation of extent of cyberbullying by educational level and gender.

	Never	At least once	Statistics♣
	N (%)	N (%)	
<b>Educational level</b>			
Junior High	43 (30.7)	97 (69.3)	$\chi^2 = 70.85$ ; $df = 2$ $p < .001$ ; Effect size Cramer's $V = .29$
Senior High	18 (8.0)	206 (92.0)	
University	29 (6.1)	447 (93.9)	
<b>Gender</b>			
Male	45 (9.3)	437 (90.7)	$\chi^2 = 2.10$ ; $df = 1$ $P > .06$
Female	46 (12.7)	316 (87.3)	
<b>Gender and Educational level</b>			
<b>Junior High School</b>			
Male	20 (27.0)	54 (73.0)	$\chi^2 = .669$ ; $df = 1$ ; $P > .05$
Female	23 (34.8)	43 (65.2)	
<b>Senior High School</b>			
Male	16 (8.6)	169 (91.4)	$\chi^2 = .169$ ; $df = 1$ $P > .05$
Female	2 (3.1)	37 (94.9)	
<b>University</b>			
Male	8 (3.6)	213 (96.4)	$\chi^2 = 3.638$ ; $p = .06$ $df = 1$
Female	21 (8.2)	234 (91.8)	

Note: ♣ In the  $2 \times 2$  contingency table, the Yates Correction for Continuity is reported.

**Table 4.** Cyberbullying and its consequences: Victims vs. non-victims on psychological outcomes.

	Psychological symptoms	Somatic complaints	Anxiety	Depressive symptoms	Self-esteem
	Mean (sd)	Mean (sd)	Mean (sd)	Mean (sd)	Mean (sd)
<b>Junior High school students</b>					
Victim	2.40 (.58)	2.30 (.66)	2.45 (.74)	2.46 (.85)	3.52 (.76)
Non-victim	2.27 (.68)	2.29 (.77)	2.28 (.81)	2.26 (.96)	3.58 (.68)
t-test	1.12	.07	1.23	1.21	.42
df/p	137/P > .05	137/p > .05	137/p > .05	137/p > .05	138/P > .05
<b>Senior High school students</b>					
Victim	2.24 (.58)	2.13 (.47)	2.36 (.78)	2.24 (.77)	4.04 (.73)
Non-victim	2.12 (.68)	1.96 (.50)	2.09 (.68)	2.33 (1.02)	4.07 (.71)
t-test	.81	1.47	1.45	.48	.16
df/p	222/p > .05	222/p > .05	222/p > .05	222/p > .05	222/p > .05
<b>University students</b>					
Victim	2.30 (.59)	2.25 (.59)	2.36 (.76)	2.29 (.77)	3.96 (.73)
Non-victim	1.99 (.53)	1.86 (.55)	2.08 (.61)	2.03 (.66)	3.90 (.84)
t-test	2.74	3.41	1.93	1.81	.42
df/p	474/p < .01	474/p < .01	474/p = .053	474/p > .05	474/p > .05
<b>All participants</b>					
Victim	2.30 (.59)	2.22 (.57)	2.37 (.76)	2.30 (.78)	3.92 (.75)
Non-victim	2.15 (.64)	2.08 (.68)	2.17 (.72)	2.20 (.68)	3.79 (.75)
t-test	2.22	2.16	2.37	1.14	1.60
df/p	841/p < .05	841/p < .05	841/p < .05	841/> .05	842/p > .05

### Characteristics of cyber-bullied victim

To characterize victims of cyberbullying, logistic regression was used to predict the likelihood of being a victim vs. being a non-victim. The following variables were used as predictors: religiosity, neuroticism, and the four personal values of Self-enhancement, Self-transcendence, Openness-to-change and Conservation. In the area of personality, only neuroticism was used. We did not control for sex in our analysis, because no sex differences were observed. Once again, we ran separate analysis for the three sub-groups of students, and also for the entire student sample.

Generally, the individual predictors made very little significant contribution to the prediction of being a victim or being a non-victim. A (See Table 4) test of the full model against a constant only model was statistically significant, in the JHS and the university samples. Furthermore, for the entire study sample, a significant full model was obtained. These significant models indicated that in the case of the JHS sample, the predictors could reliably distinguish between cyberbully-victims and non-victims ( $\chi^2_{(6)} = 13.67$ ,  $p < .05$ ; Nagelkerke's  $R^2 = 13$ ). The overall prediction success was 74.8% (26.2% for non-victims and 95.9% for victims). Wald statistics indicated that only Self-enhancement made a significant contribution to the prediction ( $p < .01$ ). The other predictors made no significant contribution. The Exp (B) of 1.8, suggests that a unit increase in self-enhancement increased the odds of a JHS by 80% to be a victim of cyberbullying compared with being a non-victim.

Among university students, the predictors could distinguish between the two groups ( $\chi^2_{(6)} = 19.87$ ,  $p < .01$ ; Nagelkerke's  $R^2 = 11$ ). The overall prediction success was 93.9% (0% for non-victims and 100% for victims). Here too, only one of the predictors – Openness-to-change – made a significant contribution to the prediction ( $p < .01$ ). The other predictors made no significant contribution. A unit increase in Openness-to-change increased the odds ratio by 4.18 times, suggesting that Openness-to-change made individuals 4 times likely to be a victim of cyberbullying compared to being non-victim.

In the prediction of being a victim of cyberbullying, for the entire sample, a hierarchical model was used, where educational level was entered in step 1, as a control variable. In this model, university students were the reference group. This model was significant [ $\chi^2_{(2)} = 53.47$ ,  $p < .001$ ; Nagelkerke's  $R^2 = 13$ ]. The Odds ratio of being a victim of cyberbullying in JHS compared to being a University student was reduced substantially ( $B = -1.90$ ; Wald = 50.87,  $p < .001$ , Exp (B) = .15).

Statistics (not shown in Table 5) indicated that JHS had 85% decrease in the odds of being a victim. There was no such effect comparing SHS with university students. For the overall model,  $\chi^2_{(8)} = 69.64$ ,  $p < .01$ ; Nagelkerke's  $R^2 = .16$ . The overall prediction success was 90.2% (7.9% for non-victims and 100% for victims). Other than the educational level between JHS and university student, where there was a significant contribution, Openness-to-change was the only significant contributor to the model, where a unit increase in Openness-to-change increased the Odds of being a cyber bully victim by over 60%, [Exp ( $B$ ) = 1.66].

## Discussion

This study sought to answer three questions regarding cyberbullying in Ghana: the extent of the phenomenon, the consequences of cyberbullying on the victims and the profile of the victims. A number of hypotheses were put forward with respect to the questions. Whereas answers to the broad questions are somewhat clear, these answers to a large extent did not support the hypotheses formulated. Many of the hypotheses were either rejected, or partially supported.

The large majority of Ghanaian high school and university students have experienced some form of cyberbullying on at least one occasion in the course of the last 6 months. The extent of the cyberbullying is much higher in Ghana than what has been reported in studies carried out in the UK and in the US (see Smith et al. 2013; O'Moore 2012). Although Ghana is highly ranked among African countries when it comes to access to, and the use of the internet (Sam et al. Forthcoming), it is relatively low when compared with many western countries. It is therefore surprising that cyberbullying should be much more widespread in Ghana than in Western countries. We believe this is both unique and should be of concern to Ghanaian health professionals, educators and parents alike. It will be good to examine the extent of cyberbullying

**Table 5.** Logistic regression in the prediction likelihood of being a cyber victim.

Predictor variable	<i>B</i>	Wald	Exp ( <i>B</i> )/Odds ratio
Junior High School Students			
Religiosity	.05	.06	1.05
Neuroticism	-.02	.88	.98
Self-enhancement	.61	6.87**	1.84
Self-transcendence	-.18	.25	.84
Conservation	.10	.07	1.1
Openness to change	.18	.32	1.20
Senior High School Students			
Religiosity	.17	.19	1.19
Neuroticism	.01	.06	1.01
Self-enhancement	.21	.34	1.23
Self-transcendence	-.41	.59	.67
Conservation	.05	.60	1.05
Openness to change	-.53	.86	.59
University Students			
Religiosity	-.61	2.01	.55
Neuroticism	-.05	2.39	.95
Self-enhancement	-.20	.81	.82
Self-transcendence	-.56	1.56	.57
Conservation	.78	2.84	2.19
Openness to change	1.43	8.42**	4.18
All the participants			
Educ. I JSS	-1.74	37.57***	.17
Educ. II SHS	-.37	1.30	.69
Religiosity	-.07	2.16	.98
Neuroticism	-.02	2.16	.14
Self-enhancement	.22	2.43	1.25
Self-transcendence	-.26	1.23	.77
Conservation	.17	.53	1.20
Openness to change	.49	4.69*	1.63

in other African countries taking into consideration the accessibility of the internet and mobile devices in these countries. Answers to these questions will help shed light on whether cyberbullying is unique in Ghana or not.

The fact that the largest majority of the participants are cyberbullying victims does not mean that the perpetrators constitute a minority few. While we do not have information on the perpetrators, we speculate that what we are observing in this Ghanaian sample is that the children are both victims and perpetrators, as has been suggested to be the case in studies from the West (Sekol and Farrington 2010b).

The hypothesis that cyberbullying would be highest among senior high school students was not supported, although it was higher among the older students (senior high and university students) than the younger group of students. This partial support is probably not surprising because students in Ghanaian junior and senior high schools have limited access to mobile phones and to the internet. Indeed, the Ghana education service regulations forbid the possession and use of mobile phones in school (Agyemang 2014). However, because junior high schools in Ghana are predominantly non-residential, cyberbullying among the JHS students take place off school premises. Ghanaian parents who can afford to give their JHS-children mobile phone most likely also supervise its use, and very likely also explains the low prevalence of this problem among the children. A high proportion of SHS in Ghana are enrolled in boarding schools; supervision quite often is less stringent in the evenings after classes and in the dormitories. This offers SHS students ample opportunity to use their mobile devices, and the possibility of bullying others.

No difference was found between the senior high and the university students. It is nevertheless possible that were there no restrictions at the junior and senior high schools, students in SHS in particular would probably report more cyberbullying than their university counterparts. Traditional bullying in Ghanaian high schools is transient, and anecdotal evidence suggests that it is most common in boarding schools, in SHS, and during the first two years of the three-year cycle. To assert seniority and power or dominance, 2nd year students in SHS bully the 1st years. Some 1st years may bully other 1st years, but hardly do 1st years bully 2nd years. Final year students at SHS rarely engage in bullying. Thus, our expectation was that bullying would have stopped by the time the students entered university. Students at the university level are seen as adults, have more freedom, and mature enough to not resort to punitive corrective action for misdeeds. Of course, we do not rule out the possibility that cyberbullying may be a new form of bullying and does not follow the transient pattern of traditional bullying.

No sex differences were found in this study: boys were equally likely to be a victim as girls. Previous research suggested that females were more likely to be victims of cyberbullying victims (see Li 2007; Ybarra and Mitchell 2004). Some studies have also suggested that females are also likely to engage in more cyberbullying than males. Barlett and Coyne (2014) have for instance suggested that females as more cyberbullying perpetrators depends on the nature of the cyberbullying: girls tend to gossip more as part of their cyberbullying, and boys are more likely to engage in provocative and taunting behavior during cyberbullying. In a meta-analysis, Barlett and Coyne (2014) concluded that boys are slightly more likely to cyberbully than females. However, they also found an age effect where females are more likely to cyberbully during early and mid-adolescence than boys; boys on the other hand cyberbully more in late adolescence. In our study, the items used to ascertain cyberbullying were gender neutral and possibly accounts for the lack of gender differences in the study.

The ubiquity of cyberbullying among Ghanaian students may seem to suggest that this may be an acceptable everyday behavior. This view may be underscored by the fact that the victims of cyberbullying on the whole did not differ very much from their non-victim counterparts on psychological wellbeing. In the few instances where differences were noted, the effects were small to moderate. While these findings in a way support our expectation, they are in stark contrast to the studies from Western countries (see Fahy et al. 2016; Hinduja and Patchin 2007, 2015). We believe that the general lack of association between cyberbullying and psychological wellbeing can be attributed to the perceived normality of the behavior. On the one hand, Ghanaian children accept

physical punishment (such as the use of the cane, or the pulling of the ear) as a corrective measure, and it is possible that when older adolescents (cyber) bully younger adolescents, the victims view it as correcting them of their “bad” behavior. Similarly, many Ghanaian females (both adults and the youth) fail to react negatively when sexual and lewd comments are directed at them in daily social interactions (see Wage Indicator 2016). It is possible that children find these derogatory remarks and physical abuse as a normal part of everyday interaction and conversation. These forms of abuse have very likely toughened the kids against any psychological distress these may bring. When asked (as part of this study) what they did when cyberbullied, a large majority of the participants (ca. 75%), did not report it, but rather retaliated and regarded the behavior as normal.

None of the hypotheses put forward to help profile the victim of cyber bullying in Ghana was supported. The profiling consisted of three sets of indicators: personality, values, and religiosity. Only one of the Big-5 personality traits, neuroticism was used in this study because of the poor internal consistency of the four other traits. However, this personality trait was not a significant predictor of being a victim. In this study, we could not find support to studies, such as those of Bollmer, Harris, and Milich (2006), and Mynard and Joseph (1997) that neuroticism is related to cyberbullying. One reason why this personality trait, and possibly the other predictors, such as religiosity did not make a significant effect on victimization is that the large majority of the study’s participants have been victimized before. With very few non-victims in our sample, we probably lacked the statistical power to distinguish between the two groups – victims and non-victims. As our logistics regression analyses indicated, the classification on the non-victims was generally very poor.

Similarly, religiosity did not come out as a significant predictor of cyber-victimization. We expected highly religious students to be victimized, but this was not the case. One possible reason is that Ghanaians are highly religious, and this resulted in low variability on the variable, and subsequently as a poor predictor.

Values on the whole also turned out to be poor predictor of victimization. Two of the four higher level values examined showed some significant effect. These two values however also did not show systematic effect in the different examinations performed here. Moreover, these significant effects were also contrary to what we hypothesized. Among JHS, individuals high on self-enhancement were more likely to be cyberbullied. This finding is similar to the findings among university students, where students high on openness-to-change were more likely to become victims of cyberbullying. These findings generally suggest that assertive Ghanaian students who may be interested in exciting are more likely to be bullied. According to Schwartz (2006), at the cultural level, Ghanaians are high on embeddedness as opposed to autonomy. This cultural level characterization of Ghanaians suggests that Ghanaians see themselves and each other as parts of the larger collective. It also suggests that good and harmonious social relationships are very important to Ghanaians, and there is an emphasis on restraining actions that may disrupt in-group solidarity or the social order (Bye et al. 2011). It is therefore reasonable to assume that individuals high on self-enhancement and also high on openness-to-change were victimized as a way of bringing them back into, or keeping them in, the fold. If this assumption is correct, then, cyberbullying in Ghana may be nothing more than an extension of “punishing” erring and disobedient individuals in order to correct their blundering ways. This may add further credence to the finding that cyberbullied students in Ghana did not differ from their non-bullied peers on the psychological wellbeing indicators examined. We are fully aware that such a conclusion may be a hasty one considering that this is just a single study.

From a methodological point of view, this study is not without its limitations. One methodological issue is not using the term “cyberbullying” in the study. Other than in the application for ethical clearance, the term “cyberbullying” was not used anywhere in the study. Did our failure to do so affect our results, by way of inflating the extent of cyberbullying in Ghana? Cyberbullying is not a new concept in Ghana, but to date has received very little media and research. While this study clearly demonstrates cyberbullying exists in Ghana, we believe many Ghanaians lack an understanding of what constitutes cyberbullying, plus traditional social orientation makes it difficult to distinguish between acts of cyberbullying, traditional bullying, and normal play. Back to our methodological concern, what is uncertain from this study is whether participants would have

responded differently had they been told what cyberbullying is, and be given a definition. Future studies in Ghana would do well to inform participants of what the study is about etc.

Collecting data from different high schools and universities should normally be included in the statistical models in order to control for any level 2 effects. Unfortunately, the data-entry performed by the research assistants did not give room for the possibility of performing these control checks.

The poor reliability of four of the Big-5 personality traits raises question about the culturally appropriateness of the instrument for use among the study's sample. Previous studies in Ghana where the Big-5 personality traits have been assessed (see e.g., Erica., Agyemang, and Afful 2014; Sarfo 2015), used a shortened version of the scale. The internal consistencies of most of the sub-scales were below 0.60 in these studies. In our opinion, the 60-item scale included a number of idiomatic expressions that the younger group of students probably did not understand. Moreover, the contents of the statements were culturally alien to the Ghanaian school pupils. Future studies will do well to validate this instrument for the Ghanaian context.

The majority of the participants are themselves victims of cyberbullying, making it making it difficult to clearly distinguish between victims and non-victims with a small sample. Future studies will do well to get large sample of non-victims, as well as individuals who are both victims and bullies profile the three groups.

These notwithstanding, the present study present one of the most positive attempts to study cyberbullying among Ghanaian participants. The cyberbullying is widespread, but it does not appear to affect the victims' psychological wellbeing. This makes us to speculate that cyberbullying, just like traditional bullying, is seen as a normal behavior among Ghanaian youth, and as a way of disciplining errant behaviors of younger peers, or for the amusement of older youth. It is unclear what characterizes the victims of cyberbullying in Ghana. More studies are needed in order to get clear answers to several questions this study raises.

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