AN EXPLORATORY STUDY OF BULLYING AND CYBERBULLYING BEHAVIORS AMONG ECONOMICALLY/EDUCATIONALLY DISADVANTAGED MIDDLE SCHOOL STUDENTS

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Abstract: This exploratory study investigated influential factors associated with bullying and cyberbullying and identifying possible correlations. A sample of 106 middle school students was surveyed utilizing the Cyberbullying and Online Aggression Survey Instrument and the Bullying Survey measuring physical, verbal, social, and cyberbullying behaviors. Results indicated significant correlations among grade level and location of bullying, types of bullying behaviors, frequency of bullying, bullying behaviors observed, observing cyberbullying and types of cyberbullying. Significant relationships were also found between gender and grade level when independently correlated to outlets of cyberbullying. Results may assist in preventative methods to reduce and eliminate bullying in middle schools.

INTRODUCTION

DEFINING BULLYING

The definition of bullying behaviors includes a power differential, the intent to inflict harm and repeated harmful acts (Olweus, 1993). There is an understanding and labeling that has occurred as bullying attempts to be systematically understood, in which there are four different types or facets of bullying. According to Olweus (1993), these facets are "forms of aggression" and more recently considered different types of bullying (e.g. physical bullying, verbal bullying). These types of bullying are physical (e.g. hitting, kicking, and pushing), verbal (e.g. name calling, abusive language), relational/social (e.g. spreading rumors, social exclusion) (Olweus, 1993).

Technological advances and the rapid growth of communication technology, especially among adolescents, assisted in the transition to a newer version of bullying – cyberbullying (Belsey, 2007). Cyberbullying is defined as willful and repeated harm inflicted through the medium of electronic communication tools (Beran & Li, 2005). Forms of cyberbullying can include: sending harassing emails and instant messages, posting negative messages on social networking sites, blogs, or other websites, verbally berating in chat rooms, and sending harassing and/or incriminating text messages, photos or videos via mobile phones (Belsey, 2007; Bhat, 2008; Patchin & Hinduja, 2006).

DEMOGRAPHICS OF BULLYING

Gender.

It is commonly thought and stereotyped that boys are more often the bullies, as opposed to girls, which Olweus (2003) and Pellegrini and Long (2002) confirmed. Olweus (2003) found a large percentage of girls report being bullied typically by boys, however the opposite resulted from Pellegrini and Long (2002) when they stated: "boys least frequently aimed their aggression at girls" (p. 275). The main focus of the bullying was among the boys in an attempt to decide the social order after the transition to middle school had taken place (typically in sixth grade) (Pellegrini & Long, 2002). There is agreement on the statistic that boys are more often the victims of bullying (Carney & Merrell, 2001; Olweus, 2003; Pellegrini & Long, 2002) and girls most frequently were targeted by other girls (Pellegrini & Long, 2002).

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Grade level.

When analyzing differences among grade levels, findings from Wang, Iannotti and Nansel (2009) state there is no difference between sixth graders and seventh/eighth graders on bullying perpetrations (bullies or bully-victims) in any of the four types. Research indicates that the typical middle school grade levels have equal number of bullies in each grade level (Wang et al., 2009). However, one finding asserts that younger students usually end up being the targets of older bullies (Carney & Merrell, 2001).

Physical bullying.

Demographics connected with physical bullying as far as grade levels are concerned; typically sixth graders are more likely to be victims of physical bullying than seventh or eighth graders (Pellegrini & Long, 2002; Wang et al., 2009). The main reason for this surge in bullying is the occurrence of the restructuring of the social hierarchy from the transition from elementary to middle school (Pellegrini & Long, 2002). Boys are more involved in physical bullying than girls (National Association of Health Education Centers, 2004; Pellegrini & Long, 2002; Varjas, Henrich, & Meyers, 2009; Wang et al., 2009). One study performed in 2005 by Wang et al. (2009) found quite a few demographic distinctions: African-American students are more involved in physical bullying; Hispanic adolescents are more likely than Caucasian students to be physical bullies; and students from more affluent families are less likely to be physical victims. Another area of bullying, that is often overlooked, occurs to the Lesbian, Gay, Bisexual and Transgender (LGBT) student community, where 22% reported being physically assaulted because of their sexual orientation in a survey performed by Gay, Lesbian and Straight Education Network (GLSEN) (National School Climate Survey, 2007, as cited in McCollum, 2010).

Verbal bullying.

Verbal bullying is more likely to claim sixth graders as its victims and less likely to occur to seventh or eighth graders (Wang et al., 2009). Typically, it has been found, that boys (Wang et al., 2009; Varjas et al., 2009) and African-American students are more likely to be involved in verbal bullying (Wang et al., 2009). However, there were also findings that African-American students, in comparison with Caucasian students, are less verbally victimized (Wang et al., 2009). Students in the LGBT community had a high percentage (86%), which reported being verbally harassed (National School Climate Survey, 2007, as cited in McCollum, 2010).

Relational/Social Bullying.

Relational, or social bullying, deals more with bullying through the social structure or relationship that one has developed. Girls are generally more frequently involved in this type of bullying (Harris & Petrie, 2002; Olweus, 2003; Varjas et al., 2009; Wang et al., 2009). Sixth graders are more likely to be victims of relational bullying over seventh or eighth graders (Wang et al., 2009). When compared with Caucasian students, African-American students are less likely to be victims of relational bullying (Wang et al., 2009).

Cyberbullying.

Cyberbullying reports, from a survey performed by the National Crime Prevention Council (United Press International, 2008, as cited in Bhat, 2008) stated that 40% of teens are victims in the US. Multiple research findings have found girls are more likely to be cyber victims and boys are more likely to be cyber bullies (Bhat, 2008; Li, 2005; Wang et al., 2009). According to Wang et al. (2009), when compared with Caucasians, African-Americans have a stronger possibility to perform cyberbullying. In that same study it was also found that students from more affluent families have a higher chance of being cyber victims (Wang et al., 2009). Hispanic adolescents are more likely to be cyber bully-victims than their Caucasian peers (Wang et al., 2009). However, one study conducted in 2005 of Canadian seventh to ninth graders found no significant difference in victimization between genders or grade levels (Beran & Li, 2005).

INFLUENTIAL FACTORS OF BULLYING

Social dominance theory.

The Social Dominance Theory states that harassing or bullying behavior occurs to force someone into a position of submission, which can especially be seen in boys during the transition from primary to secondary schools as they figure out the new social hierarchy (Pellegrini & Long, 2002). Stronger students typically have power over the weaker ones, which is a major influential factor in physical bullying (Carney & Merrell, 2001; Pellegrini & Long, 2002). The Social Dominance Theory attributes a great deal of bullying to the stronger members of the population, as they "rule" over the weaker ones in the newly defined social hierarchy. This is possibly why younger students usually end up being the targets of older bullies (Carney & Merrell, 2001). Hazler (1996) found bullying and teasing are common occurrences, but it is more pervasive in late childhood through early or middle adolescence. Some attribute the interaction between the organization of US schools and the psychosocial and biological developmental levels of children and adolescents (Hazler, 1996).

Demographics.

These theories may be at the root of a majority of bullying, however, there are other influential factors such as self-esteem, family and peers, socioeconomic status (SES) and ethnicity to consider. First, self-esteem is considered an influential factor as students with low self-esteem are at risk to be victimized and be the ones forced into submission (Hinduja & Patchin, 2010). However, self-esteem is not a cause of victimization, there is simply a correlation present between these two. Second, parenting styles or child-rearing techniques have attributed to bullying and victimization. Wang et al. (2009) found higher parental involvement equated to students being less involved in all types of bullying. It has been found that parents who are over protective and over involved typically correlates to a higher rate of victimization during the child's school career (Juvomen & Graham, 2001). It was also found that having more friends associated with more bullying and less victimization for physical, verbal and relational bullying led to an increase in these types of behaviors (Wang et al., 2009). Finally, it has been found that SES and ethnicity play a role in acts of bullying. One study conducted by the National Association of Health Education Centers (2004) found that older boys from urban, low SES, Black/Hispanic schools are more likely to be bullies, but in this study the type of bullying is not specified. Another study found a high correlation between victimization and large disparities among SES levels. Due et al. (2009) stated, "Adolescents who attend schools with larger economic inequality among students, and adolescents who live in countries with larger economic inequality, are at elevated risk of being victims of bullying" (p. 907).

School climate.

Another important factor to take into account is the school climate. This has the potential to greatly influence bullying by vastly increasing or decreasing it. School climate refers to the many different facets of a school including connectedness to school, teacher stance on bullying and empathy. School connectedness is defined as "the degree to which a student experiences a sense of caring and closeness to teachers and the overall school environment" (Wilson, 2004, p. 298, as cited in Raskauskas et al., 2010, p. 3). In a study by Raskauskas et al. (2010), students who bully reported feeling less connected and less comfortable at school, revealing a correlation between connectedness to school and bullying. A teacher's stance on bullying attributes to school climate, as well, if they are proactive against bullying or if they ignore it (Raskauskas et al., 2010). Both of these affect school climate, the former in a positive way and the latter in a negative way. The final area of school climate deals with empathy. It has been shown that children with empathetic feelings also have a negative correlation to bullying (Endresen & Olweus, 2001; Smith & Thompson, 1991, as cited in Raskauskas et al., 2010). "The presence of empathy facilitates prosocial behavior and inhibits anti-social behavior such as bullying. It has been proposed… children who bully others may be less empathetic to the feelings of [their] victims" (Smith & Thompson, 1991, as cited in Raskauskas et al., 2010, pp. 3-4). These are some factors attributed to school climate that have an overall influence on the bullying and victimization.

Influential factors of cyberbullying.

Cyberbullying breaks from the previously mentioned influential factors that better relate to the other types of bullying. This distinction comes from the "inherent anonymity" of many electronic forms of communication, which lend themselves to a "reduction of social accountability", therefore "making it easier for users to engage in hostile, aggressive acts" (Herring, 2001, Section 3.2. Synchronous CMC, para. 6). The bullying acts become separated from the bullies and the victims lose their identities as they become just a screen name or phone number typed into the recipient box.

In addition to this anonymity influence, impulsivity among adolescents can be an influential factor in cyberbullying, as they will act without considering the full ramifications, for themselves and their victim(s) (Bhat, 2008). "Impulsivity may account for cyberbullying actions that are taken in haste to retaliate against someone or to avenge a slight, imaginary or real problem" (Bhat, 2008, p. 56). Students think that they may be anonymous through electronic forms of communication or that their actions, posts, or comments to others are fleeting (Holladay, 2010). This is a misunderstanding on their part as the "Library of Congress is archiving all Twitter messages sent from March 2006 forward. Even the 'mean tweets' will be immortalized for future generations" (Holladay, 2010, p. 46). "Everything students do online reflects on them, permanently," says Mike Donlin, the senior prevention of cyberbulling program consultant for the Seattle Public School District" (Holladay, 2010, p. 45).

One other factor that should be considered is the growth of online and cell phone use among teens and adolescents. In a research study by Pew Research Center (2009) on internet use among teens and young adults (ages 12 to 17) in 2004 an overall user rate of 87% with just over half of those using at least once to several times daily was found. In the same study they found an increase of overall user rates in 2009 among the 12 to 17 year olds (93%) with 63%

reporting use of the internet once to several times daily (Pew Research Center, 2009). Cell phone ownership has drastically increased among 12 to 17 year olds; usage rose from 45% in 2004 to 75% in 2009 as reported by Pew Internet (Lenhart, Ling, Campbell, & Purcell, 2010). Sending text messages increased among this age group as well, from 51% in 2006 to 72% in 2009 (Lenhart et al., 2010). Even a significant increase in 12 to 17 year olds sending of daily text messages increased from 38% in February, 2008 to 54% in September, 2009 (Lenhart et al., 2010). Although these may not be the only influential factors associated with cyberbullying, these are some of the main ones that have helped lend to its growth.

PURPOSE

The fundamental purposes for this exploratory investigation were to determine influential factors associated with physical, verbal, and social bullying (i.e. gender, grade level, location of bullying, and bullying behaviors) as well as influential factors associated with cyberbullying (i.e. gender, grade levels, and forms of cyberbullying). Two groups will be investigated. The first group investigated was analyzed for participation in bullying (offender or victim) activities and the second group investigated was analyzed for the observation of bullying activities. Identifying possible relationships between these influential factors may allow further understanding and assist in educating youth, school administrators, faculty, staff, and parents about current bullying behaviors within the schools and among their age groups and possibly lead to ideas of prevention techniques.

METHODS

SUBJECTS

The Summer Connection Program, a three-week educational program for seventh, eighth and ninth grade students who attended schools in two northern California counties, was implemented during the summer of 2010. Injury prevention and safety was one of the main focal points during the program, which included a unit on bullying. The purpose and mission of the Summer Connection Program was to introduce middle school students to a summer college experience via an enriched curriculum. A goal is to increase their skill levels in basic subjects and provide career exploration skills, ultimately aiming to increase high school graduation rates and promote the concept of higher education.

The subjects for this study were all participants within the Summer Connection Program. Two bullying surveys were administered to 106 seventh, eighth, and ninth grade students participating in the program held at northern California community college in June 2010. According to the California Department of Education school district database,

the sample used for this exploratory study is representative of the two counties the participating youth resided in (CDE, 2011). The sample was unique in that it included children of migrant families as well as economically and educationally disadvantaged students. Participants qualified for the program through the Federal TRIO program. Federal TRIO program guidelines were used to determine qualification for participation. "As mandated by Congress, two-thirds of students served must come from families with incomes meeting the current Federal TRIO Program's Annual Low Income Levels, where neither parent graduated from college." (Educational Talent Search Program, nd, para. 4)

The Butte College Office of Education (2006) provides the following definition for a migrant child:

> "A "migrant" child is defined as a child who is, or whose parent, spouse, or guardian is a migratory agricultural worker, including a migratory dairy worker or a migratory fisherman. The child must have moved in the preceding 36 months (3 years) across school district boundaries or from one state to another or accompany such parent, spouse, or guardian in order to obtain temporary or seasonal employment in agricultural, fishing or logging work as the principle means of livelihood." (para. 3).

It is important that states actively seek migrant families and develop comprehensive recruitment plans that include both school-based and community-based activities.

STUDY LIMITATIONS

Limitations to this study should be considered when examining the results. All of the surveys were administered by the investigator. The ability to interpret the Chi Square was limited to the small sample size and self-selection of 106 students completing the surveys presents a caution not to generalize the findings. Despite its limitations, this study adds to the growing literature about the seriousness of bullying. Health educators should be mindful of the importance of creating a safe learning environment for elementary, junior high, and high school students.

INSTRUMENT

Two instruments were used to collect data on physical, verbal, and social bullying as well as cyberbullying. The first instrument titled, "Cyberbulling and Online Aggression Survey", is a 50-item survey developed by Sameer Hinduja and Justin Patchin which collects data on overall cyberbullying victimization and offending, recent cyberbullying occurrences (for the victim and offender), and methods

of cyberbullying (for the victim and offender) . Originally, to determine internal reliability, the instrument was administered in three studies among 8,000 youth ages 11 to 18 (Hinduja & Patchin, 2009). The Cronbach's Alpha range calculated for the Cyberbullying Victimization Scale was 0.93-0.94 while the Cronbach's Alpha range calculated for the Cyberbullying Offending Scale was 0.96-0.97. For the current study, the instrument continued to indicate a high reliability. The Cronbach's Alpha was 0.91 for the Cyberbullying Victimization Scale and 0.91 for the Cyberbullying Offending Scale.

The second instrument titled, "Bullying Survey", is a 15-item survey collecting information involving physical, verbal, and social bullying. For both bullying victimization and offense, information was collected about the location of the behavior, how often the bullying victimization occurs, types of bullying behaviors, as well as information about being a bystander to someone who is being bullied. Internal consistence reliability was also calculated for the "Bullying Survey" indicating a strong reliability among the three scales within the instrument. The Bullying Victimization Scale resulted in a Cronbach's Alpha of 0.87, 0.83 for the Observation of Bullying Scale, and 0.86 for the scale analyzing location of experiencing bullying behaviors. This instrument was originally developed to be used as a tool for (1) middle school students to assess their own bullying experiences, and (2) to help school decision-makers determine the extent of bullying. However, for the purposes of this study, both surveys were used to identify problem areas related to bullying to raise awareness among the students, school personnel, and within the community. It was also used as a springboard to further educate the students on the consequences of bullying.

PROCEDURES

Prior to the administration of the bullying surveys, permission to use both surveys was granted by the authors or organization, both instruments were approved by the Human Subjects Committee at California State University, Chico, and written parental consent was obtained for the students.

The bullying surveys were administered once to six groups totaling 106 students over a one day period in June of 2010. Identical directions were read aloud for each of the six groups prior to the students completing the surveys. The administrator explained to students that the survey is (1) a tool for the students to assess their own experiences, and (2) a tool to help decision-makers determine the extent of bullying and ways to reduce bullying. The directions explained how to complete the survey as well as indicated that a name was not necessary to include on the survey for the purpose of anonymity. Therefore, student participation was voluntary and the responses were anonymous. The students were administered the written surveys and once completed the investigator collected the surveys using the Statistical Package for Social Sciences (SPSS), version 18, to analyze the data.

DATA ANALYSIS

Both descriptive and inferential statistics were used to summarize and analyze the data collected. SPSS was used to generate descriptive statistics and cross tabulations to summarize the data (Tables 1-5).

Pearson Chi-Square tests for independence were used to evaluate statistical significance for all variables. A summary of statistically significant findings addressing various influential factors related to bullying and cyberbullying is found in Tables 4 & 5. Within some of the cyberbullying analyses, the frequency of occurrence of the bullying behaviors was re-coded into two groups (one or a few times; several and many times) as well as the grade levels when comparing cyberbullying acts (seventh and eighth grade; ninth grade) for the purpose of generating cell counts sufficient for cross tabulation analyses.

RESULTS

The total number of respondents in the Summer Connection Program was 106 (100% response rate). The total number included all students in attendance the day the surveys were administered. Tables 1 and 2 summarize the demographics and frequencies among the sample within the study. Among the participants,

Table 1: Demographics of Both Bullying Surveys	
Variable	**N (%)** **(Total = 106)**
Gender	
Male	53 (50)
Female	53 (50)
Grade	
7th	38 (35.8)
8th	43 (40.6)
9th	25 (23.6)

Table 2: Bullying Survey

Variable	N (%)
Have you ever been bullied?	
Yes	89 (84.0)
No	17 (16.0)
If answered yes to previous question:	
How often did someone bully you?	
Occasionally	66 (62.3)
Often	10 (9.4)
Every day	13 (12.3)
Where did it happen?	
School	73 (82.0)
Park	12 (13.5)
Home	14 (15.7)
Neighborhood	8 (9.0)
Somewhere else	18 (20.2)
If it happened at school, where?	
Hallway	36 (48.0)
Classroom	35 (47.9)
Playground	38 (46.4)
Cafeteria	22 (30.1)
Bathroom	15 (20.5)
Elsewhere	29 (37.2)
If you've been bullied, which of the things have you experienced?	
Called names	75 (84.3)
Threatened	26 (29.2)
Stole or damaged something	18 (20.2)
Shoved, kicked, or hit	35 (39.3)
Ignored	24 (27.0)
If you've been bullied this year, whom have you told?	
Friend	43 (48.3)
Sibling	8 (9.0)
Teacher/Parents	17 (19.1)
Someone else	27 (30.3)
Have you ever seen other students being bullied at school?	
Yes	104 (98.1)
No	2 (1.9)
If you answered yes:	
How often did it happen?	
Occasionally	25 (24.0)
Often	35 (33.7)
Every day	44 (42.3)
Where have you seen other students bullied?	
Hallway	54 (51.9)
Classroom	64 (61.5)
Playground	66 (63.5)
Cafeteria	51 (49.0)
Bathroom	40 (38.5)
Elsewhere	51 (49.0)
How often do you threaten, call names, hit, kick, push, ridicule, or ignore others?	
Often	16 (15.1)
Not much	57 (53.8)
Never	33 (31.1)
How much of a problem is bullying for you?	
Very much	24 (22.6)
Not much	53 (50.0)
None	29 (27.4)

Table 3: Cyberbullying Survey

Variable	Never (N)	Once (N)	A Few Times (N)	Several Times (N)	Many Times (N)
I have seen other people being cyberbullied.	33	10	28	11	24
In my lifetime, I have been cyberbullied.	70	15	11	4	6
In the last 30 days, I have been cyberbullied.	94	3	6	1	2
In the last 30 days, I have been cyberbullied in these ways…					
Someone posted mean or hurtful comments about me online	93	5	2	5	1
Someone posted a mean or hurtful picture online of me	102	1	1	2	0
Someone posted a mean or hurtful video online of me	102	2	1	1	0
Someone created a mean or hurtful web page about me	102	1	0	3	0
Someone spread rumors about me online	89	4	8	3	2
Someone threatened to hurt me through a cell phone text message	92	9	2	2	1
Someone threatened to hurt me online	94	8	1	3	0
Someone pretended to be me online and acted in a way that was mean or hurtful to me	93	7	3	3	0
In the last 30 days, I have been cyberbullied in these online environments…					
In a chat room	96	3	4	3	0
Through email	100	2	2	2	0
Through computer instant messages	91	5	5	3	2
Through cell phone text messages	85	13	4	3	1
Through cell phone	92	5	6	3	0
PictureMail or VideoMail	100	2	2	2	0
On MySpace	89	8	4	0	5
On Facebook	100	4	0	2	0
On a different social networking web site (other than MySpace or Facebook)	99	1	5	1	0
On Twitter	103	0	2	1	0
On YouTube	101	0	2	3	0
In virtual worlds such as Second Life, Gaia, or Habbo Hotel	101	1	1	2	1
While playing a massive multiplayer online game such as World of Warcraft, Everquest, Guild Wars, or Runescape	95	4	3	1	3
While playing online with Xbox, Playstation, Wii, PSP or similar device	89	4	7	6	0
In my lifetime, I have cyberbullied others.	60	25	10	5	6
In the last 30 days, I have cyberbullied others.	87	8	9	1	1
In the last 30 days, I have cyberbullied others in these ways…					
I posted mean or hurtful comments about someone online	92	6	6	0	2
I posted a mean or hurtful picture online of someone	100	2	2	0	2
I posted a mean or hurtful video online of someone	100	1	1	3	1
I spread rumors about someone online	93	7	3	2	1
I threatened to hurt someone online	95	5	3	2	1
I threatened to hurt someone through a cell phone text message	90	8	7	0	1

Variable	Never (N)	Once (N)	AFew Times (N)	Several Times (N)	Many Times (N)
I pretended to be someone else online and acted in a way that was mean or hurtful to them	94	4	4	1	3
In the last 30 days, I have cyberbullied others in these online environments…					
In a chat room	99	2	4	1	0
Through email	101	1	2	2	0
Through computer instant messages	96	4	3	2	1
Through cell phone text messages	90	12	1	3	0
Through cell phone	93	8	2	3	0
PictureMail or VideoMail	104	1	0	1	0
On MySpace	88	10	3	3	2
On Facebook	100	3	1	1	1
On a different social networking web site (other than MySpace or Facebook)	100	1	1	2	2
On Twitter	103	0	3	0	0
On YouTube	100	2	2	1	1
In virtual worlds such as Second Life, Gaia, or Habbo Hotel	101	1	3	0	1
While playing a massive multiplayer online game such as World of Warcraft, Everquest, Guild Wars, or Runescape	97	1	4	1	3
While playing online with Xbox, Playstation, Wii, PSP or similar device	92	1	6	3	4

53 (50.0%) were male and 53 (50.0%) were female. The students ranged in grade level where 38 (35.8%) were seventh graders, 43 (40.6%) were eighth graders, and 25 (23.6%) were ninth graders.

Among the respondents, 89 (84.0%) stated they had been bullied at some point, with a majority indicating that it occurred occasionally (n=66, 62.3%) and most commonly at school (n=73, 68.9%). The location at school varied among the students as one or more locations were common for bullying to take place on school grounds. Not one location dominated among the group within the study. Of those who responded that they were bullied on school grounds, 36 (34.0%) indicated it occurred in the hallways, 35 (33.0%) stated it occurred in the classroom, 38 (35.8%) stated it occurred on the playground, 22 (20.8%) stated it occurred in the cafeteria, 15 (14.2%) stated it occurred in the bathroom, and 29 (27.4%) indicated being bullied elsewhere on the campus. Less common locations of bullying occurring outside of the school consisted of the park, home, their neighborhood, and elsewhere. Types of bullying behaviors experienced by the participants included name calling, the most common behavior (n=75, 70.8%), being threatened, having something stolen or damaged, being shoved, kicked, or hit, and

being ignored. If a participant had been bullied and they decided to tell someone, the most common individual they would tell was a friend (n=43, 40.6%). The participants were also asked if they had ever witnessed another individual being bullied. A majority of the sample responded that they had witnessed a bullying act (n=104, 98.1%), with 44 (41.5%) of the individuals having witnessed the behaviors on a daily basis. Most commonly, these observations occurred in the classroom (n=64, 60.4%) and on the playground (n=66, 62.3%) and the most common behaviors observed were name calling (n=88, 83%), being shoved, kicked, or hit (n=73, 68.9%), and having something stolen (n=60, 56.6%). Finally, when asked if they had ever performed any of the bullying behaviors 73 participants (68.9%) indicated they had either often or not much. Although 84% of the participants indicated that they had been bullied at some point, when asked if bullying was much of a problem for them only 22.6% (n=24) stated it was very much a problem and 50% (n=53) stated it was not much of a problem.

Cross tabulations and Chi-Square analyses were conducted to determine levels of significance among the independent and dependent variables. All reported significant results maintained the assump-

tions of the Pearson Chi-Square test.

When analyzing the physical, verbal, and social bullying behaviors, significant relationships were not found between gender and the various independent variables related to bullying, however significant relationships were found between the grade level and various independent variables related to bullying behaviors and occurrences (Table 4). When analyzing where the bullying occurred, a significant relation-

ship between the grade level and being bullied in the hallway at school was found ($x^2_{(2)}$ = 7.550, p = .023) indicating as grade level increased so did being bullied in the hallway: seventh grade (25.0%); eighth grade (57.1%); and ninth grade (60.9%). Forms of bullying were analyzed and significant relationships were also found among the independent variables being threatened and being ignored. A significant relationship between grade level and experiencing being

Table 4: Cross Tabulation Between Variables - Bullying

Variable	Yes N (%)	No N (%)	Total N (%)
Bullied in the School Hall x Grade*			
Grade			
7th	6 (25.0)	18 (75.0)	24 (100.0)
8th	16 (57.1)	12 (42.9)	28 (100.0)
9th	14 (60.9)	9 (39.1)	23 (100.0)
Total	36 (48.0)	39 (52.0)	75 (100.0)
Experienced a Threat x Grade*			
Grade			
7th	4 (12.5)	28 (87.5)	32 (100.0)
8th	14 (42.4)	19 (57.6)	33 (100.0)
9th	8 (33.3)	16 (66.7)	24 (100.0)
Total	26 (29.2)	63 (70.8)	89 (100.0)
Experienced being Ignored x Grade**			
Grade			
7th	2 (6.3)	30 (93.8)	32 (100.0)
8th	12 (36.4)	21 (63.6)	33 (100.0)
9th	10 (41.7)	14 (58.3)	24 (100.0)
Total	24 (27.0)	65 (73.0)	89 (100.0)
Seen Others bullied in the Hall x Grade***			
Grade			
7th	11 (29.7)	26 (70.3)	37 (100.0)
8th	24 (57.1)	18 (42.9)	42 (100.0)
9th	19 (76.0)	6 (24.0)	25 (100.0)
Total	54 (51.9)	50 (48.1)	104 (100.0)
Seen Others' Items Stolen/Damaged x Grade***			
Grade			
7th	12 (32.4)	25(67.6)	37 (100.0)
8th	29 (69.0)	13 (31.0)	42 (100.0)
9th	19 (76.0)	6 (24.0)	25 (100.0)
Total	40 (57.7)	44 (42.3)	104 (100.0)
Seen Others being Shoved x Grade**			
Grade			
7th	19 (51.4)	18 (48.6)	37 (100.0)
8th	31 (73.8)	11 (26.2)	42 (100.0)
9th	23 (92.0)	2 (8.0)	25 (100.0)
Total	73 (70.2)	31 (29.8)	104 (100.0)

Variable	Often N (%)	Not Much N (%)	Never N (%)	Total N (%)
Do you bully? x Grade*				
Grade				
7th	6 (15.8)	15 (39.5)	17 (44.7)	38 (100.0)
8th	2 (7.0)	28 (65.1)	12 (27.9)	43 (100.0)
9th	7 (28.0)	14 (56.0)	4 (16.0)	25 (100.0)
Total	16 (15.1)	57 (53.8)	33 (31.1)	106 (100.0)

*p≤.05
**p≤.01
***p≤.001

threatened ($\chi^2_{(2)}$ = 7.305, p = .026) indicated that more eighth graders experienced being threatened (42.4%) compared to 33.3% of ninth graders and 12.5% of seventh graders. The analysis conducted between the grade level and the bullying behavior of being ignored indicated a significant relationship ($\chi^2_{(2)}$ = 11.086, p = .004). As the grade levels increase, so did the act of being ignored (seventh grade = 6.3%; eighth grade = 36.4%; ninth grade = 41.7%).

The second area where significance was found was within the relationship between grade level and types of bullying behaviors observed. A significant relationship was found when analyzing the connection between grade level and seeing others being threatened by other students in the hallway ($\chi^2_{(2)}$ = 13.564, p = .001). As the grade level increased so did seeing others being threatened in the hallway (seventh grade = 29.7%; eighth grade = 57.1%; ninth grade = 76.0%). A significant relationship was also indicated between grade level and seeing others having a belonging stolen or damaged ($\chi^2_{(2)}$ = 15.324, p = .000). As grade level increased so did seeing others have a belonging stolen or damaged (seventh grade = 32.4%; eighth grade = 69.0%; ninth grade = 76.0%). The final significant finding related to observing bullying behaviors among others was found between the grade level and seeing others being shoved, kicked or hit ($\chi^2_{(2)}$ = 12.223, p = .002). As grade level increased so did the occurrence of observing others being shoved, kicked or hit by the bully (seventh grade = 51.4%; eighth grade = 73.8%; ninth grade = 92.0%).

The third area of significance tends to correspond with the previous results indicating an increase in bullying behavior as grade levels increase. Within the analysis looking at the relationship between grade level and having bullied others, a significant relationship was found between grade level and how often one bullies others ($\chi^2_{(2)}$ = 11.386, p = .023). Ninth graders (28%) bullied more often than seventh graders (15.8%) and eighth graders (7.0%) where as 44.7% of the seventh graders never bullied others in comparison to 27.9% of the eighth graders and 16.0% of the ninth graders.

When analyzing the cyberbullying, students were asked about their behaviors in relation to harassment, mistreatment, or making fun of other individuals online or while using cell phones or other electronic devices. The descriptive results (Table 3) indicated a majority of the participants had never experienced cyberbullying (n=70, 66.0%) or cyberbullied other individuals (n=60, 56.6%). However, a majority had witnessed another individual experience being cyberbullied one or more times (n=73, 68.9%).

Once again, cross tabulations and Chi-Square analyses were conducted to determine levels of significance among the independent and dependent variables in relation to cyberbullying behaviors (Table 5). Significant relationships were found among the analyses examining the relationship between grade levels and cyberbullying behaviors as well as among gender and cyberbullying behaviors. A significant relationship was found between grade level and having observed others being cyberbullied (recoded) ($\chi^2_{(2)}$ = 15.096, p = .005). As the grade level increased, a consistent increase of having seen others being cyberbullied also was observed. Ninth graders reported having observed cyberbullying several or many times (50.0%) with the greatest frequency compared to eighth (35.0%) and seventh graders (18.4%). For those who felt they had been cyberbullied, a significant relationship was found between the grade level and being cyberbullied while playing online with Xbox, Playstation, Wii, PSP or a similar device (recoded) ($\chi^2_{(2)}$ = 7.983, p = .018). Seventh grade students experienced cyberbullying while using one of the devices listed above with less frequency (2.6%) compared to eighth (22.5%) and ninth graders (25.0%). Continuing with the same cyberbullying category, a significant relationship was also found between the sex of the respondent and being cyberbullied while playing an online gaming device (recoded) ($\chi^2_{(1)}$ = 5.675, p = .017). More males reported having been cyberbullied at least once while playing an online gaming device (24.5%) compared to their female counterpart (7.5%). Finally, significant differences were also found among the analyses examining the data about the students who actually performed the cyberbullying behaviors. A significant relationship was found between the grade level of the students and having reported that they posted mean or hurtful comments about someone online at least one time (recoded) ($\chi^2_{(2)}$ = 16.816, p= .000). More ninth graders (35.7%) reported having posted hurtful comments compared to seventh and eighth graders combined (5%).

DISCUSSION

In order for students to attain and retain good health and reach their potential for academic success, it is imperative that school districts address the issue of bullying at all grade levels if each student is to adopt a healthy lifestyle in relation to behaviors that contribute to unintentional injuries, intentional injuries, and social problems. When analyzing the grade level and bullying risk factors, the results of this study support previous findings indicating that grade level plays an important role. Ninth graders bullied more than seventh and eighth graders. Significant relationships indicated that as the grade level increased so did being bullied in the hallway, being threatened by other students in the hallway, being ignored, hav-

Table 5: Cross Tabulation Between Variables - Cyberbullying

Variable	Never N (%)	Once or Few Times N (%)	Several or Many Times N(%)	Total N (%)
Observed Others being Cyberbullied x Grade**				
Grade				
7th	20 (52.6)	11 (28.9)	7 (18.4)	38 (100.0)
8th	9 (22.5)	17 (42.5)	14 (35.0)	40 (100.0)
9th	4 (14.3)	10 (35.7)	14 (50.0)	28 (100.0)
Total	33 (31.1)	38 (35.8)	35 (33.0)	106 (100.0)

Variable	Yes N (%)	No N (%)	Total N (%)
Cyberbullied Online while Playing a Game System x Grade*			
Grade			
7th	1 (2.6)	37 (97.4)	38 (100.0)
8th	9 (22.5)	31 (77.5)	40 (100.0)
9th	7 (25.0)	21 (75.0)	28 (100.0)
Total	17 (16.0)	89 (84.0)	106 (100.0)
Cyberbullied Online while Playing a Game System x Sex*			
Sex			
Male	13 (24.5)	40 (75.5)	53 (100.0)
Female	13 (7.5)	49 (92.5)	53 (100.0)
Total	17 (16.0)	89 (84.0)	106 (100.0)
Posted Mean or Hurtful Comments about Someone Online x Grade***			
Grade			
7th	2 (5.3)	36 (94.7)	38 (100.0)
8th	2 (5.0)	38 (95.0)	40 (100.0)
9th	10 (35.7)	18 (64.3)	28 (100.0)
Total	14 (13.2)	92 (86.8)	106 (100.0)

*p≤.05
**p≤.01
***p≤.001

ing a bully steal or damage something that belonged to another student, and seeing others being shoved. Although previous research indicates that a difference between grades levels in relation to bullying behaviors does not always exist, the current study shows a difference may exist. This may be an indicator for the need of further research analyzing bullying behaviors among grade levels. If a larger sample size within the current exploratory study had been used, then some of the marginal Chi-Square results may have achieved a level of significance indicating that additional differences may truly exist between grade levels and bullying behaviors.

When analyzing grade level and cyberbullying risk factors, the results of this study indicated significant relationships between grade level and cyberbullying. As the grade level increased to the ninth grade so did the cyberbullying: seeing others cyberbullied, being cyberbullied while playing online with Xbox, Playstation, Wii, PSP or similar device, and posting mean or hurtful comments about someone online at least one time. These results are aligned with previous research indicating there is a continued occurrence of cyberbullying behaviors allowing anonymity, such as posting hurtful comments online.

It is imperative that bullying prevention/reduction techniques be incorporated into local schools and continues to be used nationwide. Schools in-

cluding injury prevention programs and lessons on bullying will enable students to improve their decision making skills related to unintentional injuries, intentional injuries, and social problems. The social aspects of individuals may also play a role with bullying. Children develop social bonds and friendships early in life that can affect their decision making. It is important to focus bullying prevention programs and instruction to age groups prior to ninth grade which may help to reduce bullying related incidents. It is crucial to be aware of these factors when instructing students on injury prevention and safety or addressing any bullying and safety issues within a community.

Although the bullying safety unit was not evaluated for this study, due to the high number of bullying incidents, it is imperative for the Summer Connection Program to continue incorporating the bullying unit, as well as encouraging the continuance of bullying prevention programs. Instruction may include bullying prevention initiatives such as the Stop Bullying Now campaign, the Olweus Bullying Prevention Program, and the Let's Get Real curriculum guide. By visiting www.StopbullyingNow.hrsa.gov, children can learn about bullying and what can be done to stop it through interactive games, cartoons, and webisodes (Health Resources and Services Administration, 2009). The Olweus Bullying Prevention Program is a proven school-based program to reduce bullying and improve peer relations in schools (Institute on Family & Neighborhood Life, 2010). The Let's Get Real curriculum guide provides a curriculum framework including engaging lesson plans and related tools for teaching tolerance (Kim & Logan, 2004). This curriculum guide also includes a relevant film on name-calling, bullying and prejudice. A benefit of any of these programs is that they are able to be adjusted to various age groups and can be translated for any existing language barriers.

Bullying and cyberbullying are events that are not occurring with less frequency as time goes on. The results of this study parallel data from previous studies showing the prevalence of bullying in the middle school years. The results from the current study indicate a need to further identify influential factors revolved around bullying and cyberbullying. The current instruments, as well as others that may exist, should continue to be tested to see if there is meaningful data to apply and use within other summer programs in California, or other states, similar to the Summer Connection Program. In addition, future research on relationships among the variables within this study will enhance understanding of the risks associated with bullying and cyberbullying. Additional research should also continue examining gender and ethnicity differences related to bullying and cyberbullying, and how bullying occurs through electronic means via Web postings, e-mails, chat rooms and text messaging (cyberbullying). This may also show a continued increase in electronic usage (text messaging, cell phone usage) among youth. News media has indicated the severity of the effects of bullying and cyberbullying among males and females nationally. The consequences of repeated bullying occurrences not only include the ultimate consequence of suicide, but may include dropping out of school. Many students miss school every day out of fear of being bullied. Examining this aspect of the consequences of bullying may support the concept of how many students are home schooled due to this fear. Ultimately, parents are aiming to take action to keep their children safe; how are these actions affecting the students on an individual basis, the school, school climate, and the community? Without continual efforts to reduce and ultimately prevent bullying, the health and welfare of today's and tomorrow's children are at risk.

CONCLUSIONS

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