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Bullying and Victimization: Strains and Protections during Teenage Transitions

**By
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ABSTRACT. Teen maturational differences in the effects of straining and protective forces in school bullying and crime-associated fear were compared using a sequential mixed methods approach; the “National Crime Victimization Survey: School Crime Supplement (2015)” were supplemented with content analysis of qualitative interviews with school professionals. Strains induced by drug culture exacerbated the presence of school bullying, particularly for older teens. The protections offered through school safety measures were more in response to bullying, with effects being slightly stronger for younger students. These findings highlighted the direct objective, and indirect subjective, strains created by drug culture (Merton’s and Agnew’s Strain Theories respectively). But, the secondary preventive role of school ecologies (Human Ecology) in maintaining social order was also underscored. On balance, the types and depth of these experiences were contingent on student maturity level (Elder’s Life Course Theory). These findings not only contributed to the literature on school bullying and related problems but also highlighted the need for programmatic interventions to combat bullying by dealing with drug culture in schools.

INTRODUCTION

Students encounter a variety of obstacles on their journey towards their educational certifications, starting with graduating from elementary school, high school, college, and perhaps even graduate school. The purpose of education is to inform, inspire, and empower students, ultimately, endowing a growing generation with the tools to life success. It is therefore important that, starting early, students are provided with an academic environment that is supportive of their learning process and the manner in which they go about learning. Students are typically expected to accomplish their learning through attending classes at a school in specified locations and meeting the requirements in order to obtain satisfactory credentials and further their education.

But, many students do face obstacles in their schools, both in and outside the classrooms, which do not make for optimal learning environments. These obstacles can manifest themselves in several different ways. One more recent, but growing, obstacle

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is bullying. During middle school and early high school, especially, students' social circles become very important to them; that is, they feel the need to have friends. Many become focused on their image, material possessions, and their social clout in cultivating friendships. They can feel pressured to exclude or include others in order to further their social reputation. In fact, there are some students who feel the need to compensate for their fears of being excluded or being bullied themselves by hurting others in order to make themselves feel better. Unfortunately, these unhealthy behaviors begin to create a cycle of bullying and victimization.

Of course, there are other sources strain, outside the school walls, that might promote and encourage a bullying culture and victimization in schools. One example is the presence of crime in students' home and in their neighborhoods. If students do not feel safe, that is, that they are unable to control the circumstances under which they live, they make feel the need to compensate by victimizing, bullying, and manipulating others. Substance abuse, when added to this very dangerous mix, might become an enabler to victimizing. Once students have their inhibitions lowered, whilst already victimizing others, may find negative actions, like bullying, more permissible. This is particularly problematic for those being victimized; victims who may already be suffering from verbal abuse or feeling excluded by others.

Bullying, victimization, and/or other neighborhood crimes pose impending threats to the emotional wellbeing, and sometimes even personal, safety of students. Students who feel threatened, are worried and stressed will be detracted from, or even halt, their academic development. To address these strains, schools offer secure learning environments that allow their students to feel at ease and learn without fear. It is critical for schools to uphold and periodically review their code of conduct policies and rules, as well as set in place precautionary measures, to protect and support their students. These preventative measures are meant to deter school crime and generate a positive learning environment.

LITERATURE REVIEW

A preliminary review of relevant literature on school performance identified both sources of strain that detracted from learning and protections that enhance learning. Scholars have identified programs, both supportive and interventionist, to enhance learning. On the other hand, bullying, victimization, and associated violence posed a threat to students in schools and inhibited their learning. Despite these valuable lessons, there was not much consideration of maturational differences in how older and younger teens deal with strains and react to supportive programs.

Creating Conducive Learning Environments

Researchers have identified several aspects of the school structures and environment that can offer protection to students against crime as well improve their learning

environments. Protective structural elements in school composition and staff involvement, ranging from race/ethnic mix in student composition to supportive teachers and adults, have been noted the scholarship.

A mix in race and ethnicity cohorts in schools had positive effects on the “black-white and Latino-white achievement gaps” (Goldsmith, 2004:140-42); there were improvements in the academic and occupational aspirations of black and Latino students enrolled in segregated-minority schools than when they were in white dominant schools (p.130-132). However, ethnic mixing does not always result in academic success, of minority students in particular. For example, Burdick’s (2010) examined the 2002-2009 crime data from public high schools in Chicago and concluded that the transfer of students (as a result of public housing demolitions) from their home neighborhoods and gang territories into new schools contributed to a rise in conflict and overall crimes (in schools). Before the sudden influx of students, these schools had relatively low crime rates. Besides, student fears associated with school crime caused cognitive stress for students and negatively affected their learning process and ultimately resulted in poor academic performance (p.9).

These challenges notwithstanding, schools do act as a deterrent to crime. For one, keeping kids in school has been found to reduce the possibility of students engaging in crime, avoiding continued arrest, and eventually incarceration (Cook, Gottfredson and Na, 2010). Yet despite the high proportions of high crime risk students, Billings and Philips (2017) found crimes to decline in institutions on teacher in-service days (p. 24).

It then stands to reason that teachers can shape how students perceive and engage in their school environment. Wang and Holcombe, in their 2010 study, found that adolescents’ perception of their school environment directly impacted their success in the classroom. More specifically, it was how engaging the teachers made the course that resulted in more positive student responses. By contrast, when a teacher solely promoted the importance of high grades and completion of assignments, without positive reinforcement or engagement of course material, a student’s willingness to engage was severely limited (p.652-53).

On balance, as Cook, Gottfredson, and Na concluded, ultimately it was the type of school (mixed grade population, urban or suburban) that each student attended and how it was structured (rules set in place, schedules, classroom setup) that shaped levels of school crimes. In addition, the diversity in age and racial-ethnic composition, essentially the social composition of each school, proved to be a more tension-ridden environment. For example, a held-back student might be teased for being, “too old” for their current grade. There could be tension among students from distinct racial-ethnic group as well. Schools, where said differences were more acute, exhibited more detrimental behavior and poor academic performance.

Sources of Strains: School Crimes

School crimes are, effectively, deterrents to learning. Ranging from school associated deaths to cyber-bullying, hate crimes, and drug use, these crimes can render the environment less conducive to student learning. Gray and Laurie (2015) identified a range of school crimes which included rape, attempted rape, assault, theft, gang-related crimes, physical fights on school grounds, and substance-related (such alcohol-related or marijuana related) crime. As of 2015, according to Gray and Laurie, one of these crimes was reported to occur at least once a month at 65% of all school across the US. Because these crimes occur in a school setting it is important to examine their impacts on the student victims' academic achievement.

Among the many challenges that students face in their academic lives are personal health challenges and related negative behaviors, which in turn can negatively impact academic performance. For example, McLeod, Uemura, Rohrman (2010) found that attention deficits, delinquency, and drug use by adolescents (7th-12th graders) from 80 high schools and 52 middle schools, were all associated with diminished academic success. The key implications, according to the authors, were that the effect of these health conditions and behavioral problems did not compromise adolescent abilities. Rather these problems, particularly delinquency, not only detracted from academic learning but contributed to student's engagement in delinquency and crime (p.488-90).

Bullying

A particularly common and problematic school crime is bullying. It is important to define bullying as an intentional action meant to harm another. Often times, kids may misinterpret behavior by others as bullying when in reality the intent was not to bully, but rather to correct, inform, or support. Baumann (2008) defined bullying using three criteria: 1) the intention to harm others, 2) repetitions of these harmful intentions, and 3) a power imbalance between the bully and the victim. It is important to note that the power imbalance denotes a power or authority given to the bully as a result of physical attributes or social position, as in the case of an older middle school student bullying a younger elementary school student (p.393).

Sometimes the punishments and treatment of students by school teachers and administrators effectively may backfire and encourage students to engage in bullying behavior. Farina (2016) in the chapter, "How Schools Teach Bullying" documented the following scenario: students are punished, often times as an example, to deter unwanted behavior by other students. However, this ridicule and repetitive targeting may cause those students around them to perpetuate this sort of treatment. An example is a seven-year-old who was handed a flash drive by a peer. When he proceeded to play with it, he was accused of stealing it by their teacher. Afterwards, the teacher forced the seven-year-old to admit his crime in front of the whole class (p.76). However, embarrassment was not the only worry for these victims. In some other cases, a victim

may also become a bully themselves due to the psychological and emotional effects that a traumatizing event can have on an impressionable young child (p.80).

Drugs in Schools

What roles do drug use play in bullying? Baker and Pelfrey (2016), in their survey study of 6th-12th graders, revealed that as the availability of “soft” drugs (marijuana, cigarettes, and alcohol) became more prominent in schools the overall soft drug use among bullied students increased. In addition, victims of bullying (i.e. students who were picked on) and of cyberbullying were found to be more likely to skip school and resort to soft drugs (p.1030). The association between bullying and drugs cannot be ignored. However, it is important to point out that in these cases drug use might be a coping mechanism when students are bullied over an extended period of time.

Of course, since adolescents tend to be more impulsive, acquiring habitual addictions might be quite dangerous. As Chuang, Sussman, Stone, Pang, Chou, Leventhal, and Kirkpatrick (2017), found adolescents who tended to be more impulsive and had a history of behavior addiction (like playing video games, eating, using the internet, shopping, or working) were at a higher risk for drug addiction. In other words, impulsivity coupled with the addictive substance abuse, might result in drug use and drug addiction as early coping mechanisms among young adolescents (p.46).

Protection from Strains: School Safety Measures

Given the growing incidence of drugs and bullying related challenges to learning in schools, schools have policies and procedures in place to ameliorate some of their negative consequences. In fact, as Ramirez, Ferrer, Cheng, Cavanaugh, Peek-Asa (2011) noted, schools have to maintain social order if they are to function properly (p.214). Their results, from a study of incident reports from the school security division in an urban school district in South Los Angeles (the district enrolled an average of 19,365 students total from all grades up to high school) substantiated the fact that the students need to adhere to school behavioral policies if schools are to prioritize social control as well as to prevent disorder. They defined poor social control in schools as a violation of school behavioral policies (p.218).

Yet, the relationship between safety measures and school success is not axiomatic. No doubt, safety measures adopted by schools can reduce the strain and stress that many students experience. But, Schwartz, Ramchand, Barnes-Proby, and their colleagues (2016) found that stakeholders (teachers, administrators, counselors, etc.), who take precautions and train themselves to respond to school crime-related events, can diffuse or intervene at the time of problem incidents. As these researchers recommended, schools must be equipped with alert technologies (for law enforcement, fires, or medical services) and safety technologies (metal detectors, searches, etc.) if they are to make the school environment safe and more conducive to student learning. School

stakeholders must also tailor procedures and technologies to their specific students and school environment. However, while these programmatic interventions are geared toward the victims of violence, schools must also address delinquent students. If schools are to function properly, they must confront the perpetrators of school crime incidents as well as the victims. Ultimately, it may come to several trial and error runs with different programs and technologies to see what works best in each school.

Sport programs are another source of deterrence to school crimes, such as bullying. Opportunities to participate in school sports can redirect problematic behavior into something more expressive or creative. However, research has been mixed about the power of sports to reduce, if not deter adolescents from, crime. In a 2007 study, Hartmann and Massoglia found that athletes were associated with delinquent behavior (like driving under the influence or stealing from malls). More specifically, adolescents who were engaged in school sports were more likely to drive under the influence, even if less likely to shoplift, when compared to non-athletes (p.498)

Summary and Looking to the Future

In summary, the existing scholarship on school success and related challenges have indicated the following: Delinquent behavior, such as student misbehaviors, has been found to disrupt learning processes. Further, other more serious crimes, like bullying, can not only disrupt learning but also have long-lasting negative consequences.

It is, therefore, important for schools to employ stronger safety measures like teacher response training (in the event of a classroom incident) or more security personnel. The administrative sector of schools should be more consistently involved in providing a safer learning environment, whether it is through better supervision, a review of school policies, extra-curricular programs, and a more intimate connection with students whose home and neighborhood environments are not always supportive of academics. But, schools also need to offer their students constructive supplemental learning programs and activities (Gray and Laurie 2015; Cornell and Mayer 2010). And while drug use tended to accentuate the perpetuation of bullying, if further victimization is to be prevented more attention needs to be given to bullies as well as the victims.

Strains that disrupt learning also arise from students' home and may lead students to exhibit disruptive behaviors when in school. School programs, including more parental involvement, can both directly help students reduce overall strain of the usual grades and test scores but also succeed academically. No matter the source of strains, when dealing with these disruptive behaviors, it is apparent that they may come from a place of pain and thus may lead to drug use as a coping mechanism. It is critical that programs be tailored to helping these high risk youths, in addition to their victims. Such programs could be violence prevention programs, after school learning programs, family-oriented activities, or discipline specific programs that help students convert their aggressive or energetic tendencies into creative forms or other activities, like sports (Astor, Guerra, Acker 2010).

RESEARCH QUESTION

Scholars, reviewed above, have offered valuable insights into the connections of bullying and fear of victimization with strains caused by drug culture, neighborhood crime and protections against strain (Safety measures, college aspirations). While informative, there is a scholarly need to disaggregate the maturational effects of strains and alleviators on bullying and fear among teenagers. Teenage years are fast moving, in their growth spurts and volatility, warranting separate analyses of younger and older teens so that age appropriate programmatic interventions can be developed. A comparison of younger teens (ages 12-15) with their older (ages 16-18) cohorts, in the respective impacts of straining and alleviating sources of school bullying and crime-associated fear, was the main focus of this study.

THEORETICAL FRAMEWORK AND HYPOTHESES

An interrelated set of perspectives were used to theoretically frame the analyses of the maturational nature of strains and protection on school bullying and crime induced fear as teenagers mature. Starting with Park's Human Ecology (1936:4) model of a well-functioning school environment, Merton's Strain (1938:679-80) and Agnew's General Strain (1992:66-7) Theories were used to capture the strains that students encounter in the student academic and living environments. Explorations of the changing nature of teenagers' experiences of strains and protections, as teenagers mature, were guided by Glen Elder's Life Course Theory (1975:168-69).

The starting theoretical point in this research was Park's Human Ecology (1936:4) model, who stressed the importance of a symbiotic balance maintained in an organized social structure for effective functioning. Because humans are free agents of their own will, if a society is to maintain social equilibrium, they must set checks and balances in place. In a school setting, rules and safety measures become the mechanisms through which a symbiotic balance is obtained and maintained so that students have a safe atmosphere that is conducive to their learning needs. For example, schools institute on-going supervision of students by school staff to deter acts of delinquency and protect students from these crimes. Additionally, inculcating a "college-bound" mentality among high school students also promotes the value of on-going learning. Under this scenario, it was hypothesized that, on balance, the more protective sources (school safety measures and college aspirations) existed in the lives of teenagers, the less bullying and fear of crime there will be among students, net of straining factors, race/ethnicity, sex, and academic involvement (Hypothesis #1).

No doubt, the mere existence of rules and promoting college aspirations do not guarantee a functioning school atmosphere. Sometimes, crime and other social problems can disrupt the proper functioning of the system and create strains on students. Robert Park did acknowledge the potential for social disequilibrium. But, it was

Merton who elaborated on the sources of disequilibrium in his Strain Theory (1938:679-80) when he argued that strains are inherent in unequal social structures. In hierarchical societies, some (those with resources) have access to the socially approved means to achieve culturally approved goals while others without resources do not have as much access. The socially conditioned desires to achieve the culturally approved goals often force many of those without resources to utilize illegitimate means to acquire culturally approved goals; stealing, or selling drugs, bullying, or other disruptive actions that would involve breaking the law are some examples. Applying Merton's exposition of Strain Theory, it can be argued that the presence of crime (such as school drug culture and neighborhood crime) in the students' lives can induce bullying. Crimes, in the school and in the student neighborhoods, lead to more disruptive experiences that ultimately present an objective impediment to student learning and disruption of the symbiotic school balance. Following Merton's theoretical argument, it was predicted that the more students were surrounded by a drug culture and neighborhood crimes, the more bullying they would experience, net of the protective school resources, race/ethnicity, sex, and academic involvement (Hypothesis #2).

However, there is also a subjective component to this strain where students internalize the crime-associated fear. Agnew's General Strain Theory (1992:66-7) was instructive in explaining how it is that crime-associated fear might affect student learning and disruption of the school equilibrium. To Agnew, subjective strain, is the stress that is projected by an individual's own self. In the presence of crime, students might find it more difficult to obtain the culturally valued goals of performing well in school. When students are fearful of crime and paranoid of becoming victims, such fear would prevent them from fully engaging in their academics and getting the most out of their education. Under this scenario, it was hypothesized that the more drug culture and neighborhood crime in students' lives, the more fear they will have of crime, regardless of the school protective resources, objective bullying, race/ethnicity, sex, and academic involvement (Hypothesis #3).

It is also axiomatic that these experiences are not constant and are subject to change as teenagers mature in age. In Elder's Life Course perspective (1975:168-69) while social values are transmitted through early socialization, they are also shaped by life stages and situations. As Elder puts it, "a man who learned the value of job security as a child may have little regard for this issue in adulthood if he has achieved a measure of success and security in his work life" (p.171). In other words, as people mature in age, they differentiate not just their values but also their priorities, privileges, and, of course, experiences. A teenage student may no longer be as sensitive, affected by, or fearful of harassment and crime if they have grown to accept it and are not embarrassed by it now that they are older. Following Elder's life course model, it was hypothesized that the negative effects of school drug culture and neighborhood crime as well as the protective effects of school safety measures on bullying and crime associated fear will be weaker among older teenagers than their younger counterparts (Hypothesis #4).

METHODOLOGY: SEQUENTIAL MIXED METHODS

A sequential mixed methods approach was used to test the differences in bullying and crime-associated fear among two teenage age groups. Secondary survey data from the National Crime Victimization Survey: School Crime Supplement was key to testing the hypotheses. Survey analyses were then supplemented with qualitative comments from schooling professionals working in both high schools and middle schools to provide experiential perspectives on school crime and bullying.

Secondary Survey Data

The SCS (School Crime Supplement 2015), the secondary survey used in this study, contained information about student victimization as result of criminal activity as well as the school environment; a sample of 9,552 students, ranging from ages 12 to 18 were surveyed. The SCS was a product of the US Department of Justice and the Bureau of Justice statistics (United States Department of Justice 2015).

There were more young teens (12-15 years: 57.8%) than older teens (16-18 years: 42.2%) in the sample. They were predominantly white (~73% in both age groups). Of the non-white student groups, roughly 15% of reported being black and even smaller percentages were Asian (~6%), or Hispanic (~3%). There was also a very slight majority of male students that were included in the sample (~51%). In addition, while an overwhelming majority attended school (98% young and 89% older teens), only under a quarter (16% young and 24% older teens) were involved in academic clubs (Appendix A, Table A.1). These demographics will be controlled for in the multivariate analyses.

Qualitative Interviews

Interviews with school administrators and counselors were used to supplement and elaborate on the statistical findings. Three interviewees were identified through search engines and snowballing methods. The first interviewee (Interviewee #1), a female School Principal of a local Primary and Secondary Montessori Education Institution, offered her reflections and experiences with the student population, prior school operations, and understanding of the child psychology. Being the head of an institution that has an emphasis on the performing arts and other technical activities, she stressed that “some students who experience stress, of any kind, require some sort of outlet, be it creative writing, music, art, or a sport.”

Two female school counselors, one from a private high school and another from a catholic private middle school, also contributed to this research by offering their insights and recollections of prior experiences working with students. Interviewee #2 is an Upper School Counselor in a local private school with grades K-12; she specifically worked with the high school students and noted that social relationships are more important to

incoming students. But, as concerns about college manifested in the final years of high school, conflict and drama among students tended to subside. The third interviewee (Interviewee #3) was also a School Counselor from a local catholic private school. She highlighted the family as a core influencer, especially when it came to student behavior. The interviewee consent form and protocol are available in Appendix D.

DATA ANALYSIS: SURVEY AND QUALITATIVE INSIGHTS

In the following sections, three different types of statistical analysis were used. They were descriptive, bivariate, and multivariate analysis. The descriptive analysis offered a detailed portrayal of school bullying, crime-associated fear experienced by these students, the drug culture that they have described, the school safety measures active at each student's school, a brief assessment about their college aspirations, and their academic involvement. In the bivariate analysis, preliminary correlations of school bullying and crime-associated fear with drug culture, neighborhood crime, school safety measures, and college aspirations; the correlations were disaggregated between the two age groups. In the Multivariate analysis, both school bullying and crime-associated fear were separately regressed on the respective strain protective factors. In keeping with the research design, separate analyses were conducted for young and older teens.

Operationalization and Descriptive Analysis

In order to understand the maturational changes in bullying experiences and crime fears of teenagers, analyses were separated into two age groups: young teens aged 12-15 and older teens 16-18 years (Table 1 for summary, with details in Appendix C, Tables C.1.A to C.1.F.). Overall, the younger teens experienced more bullying and fear of crime than their older counterparts. But, there were more drugs and neighborhood crime in the lives of older teens. It was hopeful that there were more alleviating factors, such as effective safety measures and college aspirations, in the lives of the younger, than the older teens.

Table 1. Descriptive Data
National Crime Victimization Survey: School Crime Supplement, 2015

Concept Indices	Age Group:	Age Group:
	12-15 (n=5415)	16-18 (n= 3957)
	Mean (sd)	Mean (sd)
1. School Bullying ¹	-10.98 (10.91)	-12.88 (9.44)
2. Crime-Associated Fear ²	2.25 (2.37)	1.73 (2.14)
3. Strains:		
a. School Drug Culture ³	0.711 (.451)	1.11 (1.43)
b. Neighborhood Crime ⁴	3.60 (3.41)	1.86 (3.35)
4. Protective Sources:		
a. School safety Measures ⁵	7.10 (6.60)	5.75 (6.62)
b. College Aspirations ⁶	0.915 (.970)	0.727 (.931)

¹ School Bullying= DummySCS192 + DummySCS193 + DummySCS194 + DummySCS195 + DummySCS191 + DummySCS190 + DummySCS196 + DummySCS197 + DummySCS198 + DummySCS199 + DummyVS0081 + DummyVS0082 + DummyVS0083 + DummyVS0087 + DummyVS0085 + DummyVS0086 + DummySCS211 + DummySCS200 + DummySCS201 + DummySCS202 + DummySCS203 + DummySCS204 + DummySCS205 + DummySCS206 + DummyVS0073 + DummyVS0074 + DummyVS0075 + DummyVS0076 + DummyVS0077 + DummyVS0078 + DummyVS0079 + DummyVS0071 + DummyVS0127 + DummyVS0128 + DummyVS0129 + DummyVS0130 + DummyVS0132 + DummyVS0134;

² Crime-Associated Fear= DummyVS0113 + DummyVS0114 + DummyVS0115 + DummyVS0116 + DummyVS0117 + DummyVS0118 + DummyVS0119 + DummyVS0120 + DummySCS208 + DummyVS0121 + DummyVS0122 + DummyVS0123 + DummyVS0136 + DummyVS0124 + DummyVS0125 + DummyVS0126 + DummySCS189;

³ School Drug Culture= DummyVS0058 + DummyVS0059 + DummyVS0067 + DummySCS209 + DummySCS210;

⁴ Neighborhood Crime= DummySCS212_V2 + DummySCS213_V3;

⁵ Safety Measures= DummyVS0036 + DummyVS0037 + DummyVS0038 + DummyVS0039 + DummyVS0040 + DummyVS0041 + DummyVS0042 + DummyVS0043 + DummyVS0044 + DummyVS0045 + DummyVS0088 + DummyVS0050 + DummyVS0051;

⁶ College Aspirations= DummyVS0139 + DummyVS0140.

School Bullying

As seen in Table 1, young teens (Mean index of bullying = 10.98 on a range of -20 – 43²) indicated that they experienced bullying more often than the older students (Mean index score = 9.44 on a range of -20 to 37). It appears that after a period of maturation, adolescents have either moved on or stopped bullying others.

More specifically (see Table C.1.A. in Appendix C), younger students seemed even more susceptible to trauma caused by bullied experiences than older adolescents. In this case, three percent of younger students were bullied by another student compared to 1% of older students. Similarly, while 2.7% of younger students were bullied by someone in power, only 1.3% of older students were. Bullying experiences of younger

² The negative sign on the lower range of the bullying index refers to those who did not experience bullying and were assigned the code of -1.

students tended to be more name calling and having rumors spread about them (2.8%); only 0.9% of older students encountered this type of bullying.

Crime-Associated Fear

For teens already traumatized by bullying or crime in general it is important to assess the ways in which trauma is manifested in their day to day lives. Generally, younger students, more than their older counterparts, tended to avoid spaces purposefully in an attempt to remain safe from bullying. For example, (Table C.1.B. in Appendix C), compared to older students, younger students tended to stay away from the shortest route to school (1.4%), to stay away from less supervised areas such as bathrooms (1.1%), and also experience more fear of harm (0.9%). The comparable percentages for older teens was only 0.6%, 0.5%, and 0.4%, respectively.

The average score on the index of crime associated fear was fairly low, at 2.25 (range of 0-23) and 1.73 (0-19), for the young and older teens, respectively. However, even if both sets of teenagers exhibited had few types of fear, one cannot ignore that students, particularly the younger group, are actually avoiding specific spaces because they fear being harmed by someone in those spaces.

Sources of Strain: Neighborhood Crime

Stress inducers exist everywhere and are especially problematic when they are in one's own environment. These stressors can stem from the neighborhoods of a student's home or school. Overall, about half of the young teens agreed that there was crime in both their school and home environments (Table C.1.C. in Appendix C). More precisely, 49% of younger students indicated that there is a lot of crime in their school neighborhood and almost half confirmed the presence of crime in their home neighborhood. In contrast, older students reported less crime in school (28.8%) and more at home (39%). Overall it is safe to say that the younger students tended to notice more crime. The mean on the index of neighborhood crime was 3.60 for young teens when compared to the older students mean of 1.86; the range for both groups was 0-8.

Sources of Strain: School Drug Culture

Faced with these stressors, some students turn to drugs as coping mechanisms, compounding the stress. Students may resort to drugs should they feel the need to cope or peer pressure from their friends to try it for the first time. In addition, bullies, who are often victims themselves, may resort to drug use to cope with their life stressors. At a glance, it seemed, as per the older teens, that there is a prominent network of dealers and users; the younger teens may just be naïve to its presence and not notice. (Table C.1.D. in Appendix C). For instance, older teens (20.7%) reported a large presence of marijuana as opposed to the younger teens (13.9%). Similarly, presence of alcoholic

beverages in their schools was more likely to be noted older (13.8%) than by young teens (9.5%). Furthermore, a larger percentage of older students (15.5%) also indicated that they had witnessed another student under the influence of drugs or alcohol while at school while only 9.5% younger students reported having witnessed this sort of incident.

Perhaps it is the maturation effect and/or the additional stressors associated with a more rigorous curriculum that older students encounter, that older teens were more likely to observe the drug culture in their school environment. The average presence of drug culture for older teens was 1.11 (on range of 0-5) compared to younger students (mean=0.71 on a range of 0-5).

Protections: Safety Measures

Because of the presence of bullying, drugs, and other forms of crimes in schools, it is imperative that schools maintain a degree of safety and order. Safety measures are procedures that school personnel take to ensure the safety and flourishing of students in their charge. While protecting students against existing harm is the main goal, schools also institute preventative measures, such as supervision and rules, that serve as deterrence from crime related acts.

There is a general consensus among a good number of students, across both age groups, felt safe and that their schools had a fair amount of safety measures in place mean on the index of safety measure means was 7.10 and 5.75, for the young and older teens, respectively. For example, 34% of younger and 37% of older students confirmed the presence of assigned police officers or some kind of security personnel in their schools. In addition, there were security cameras present at schools, as reported by 44% of younger and 38% of older students. Interestingly, enough students from both age groups (34% of younger and 28.2% of older students) felt that school rules were not being enforced (Table C.1.E. in Appendix C).

Protections: College Aspirations.

Like safety measures and supervisions, academic engagement might also deter crime. Students who are struggling, being distracted, or suffering from other types of strain may benefit from preoccupying themselves with their school work and academic responsibility. However, stress-related experiences, such as fear and bullying, may cause many students to become disengaged from school, under-perform, and have a poor academic self-image.

There was a clear maturational divide (Table C.1.F. in Appendix C) between the two groups of teens. The younger students (mean=0.92 on range of 0-2) were more adamant about their future academic plans than the older students (mean=.073 on a range of 0-2). In comparison with the younger teens, only a third of the older age group was interested in higher education (33.6% vs. 43.5%) or schooling in a technical field

(39.1% vs. 48.1%). Perhaps, the rigor of a high school curriculum and the increased workload lead to lowering of academic aspirations. Also, as teenagers mature, their interests change as well; some of them no longer want to be become a doctor, mathematician, or teacher anymore.

Bivariate Analyses

In the second analytical step, bivariate correlations were run between bullying and crime induced fear with the strains and supportive sources (Table 2 in see Appendix D). In keeping with the research design, correlational analyses were disaggregated into two teen groups: the 12-15 year olds versus the 16-18 year olds.

For the younger group (12-15 year olds), it was found that those who were fearful of experiencing crime were more likely to be bullied ($r=.50^{***}$) and vice versa. Concerning strains, drug culture was found to aggravate ($r=.54^{***}$) the presence of bullying and to instill fear as well ($r=.38^{***}$). Moreover, the presence of crime in the home and school neighborhood was found to incite more fear ($r=.82^{***}$) than bullying ($r=.34^{***}$). It was rather unexpected that protections, like safety measures, increased, rather than alleviated, fear of crime ($r=.89^{***}$) and bullying experiences ($r=.54^{***}$). This pattern was similar with college aspirations too; those with more college aspirations were more fearful of crime ($r=.80^{***}$) and experienced more bullying ($r=.46^{***}$). There were no significant differences in school bullying and crime associated between the different races, sexes, or academic involvement.

Similar patterns were also noted among the older teen group (16-18 years old). Those who were bullied were more likely to have experienced fear ($r=.57^{***}$). Drugs were found to accentuate the presence of bullying ($r=.67^{***}$), even if they were slightly less impactful on student fear ($r=.55^{***}$). Crime presence in school and home neighborhoods made students more fearful overall ($r=.87^{***}$) while impacting bullying on a lesser level ($r=.47^{***}$). As with the younger cohort, protective sources were connected with more fear and bullying among older students also. For example, safety measures were associated with more fear ($r=.89^{***}$) and more, than less, bullying ($r = .54^{***}$). And students who had more promising outlooks on their college plans, experienced more fear ($r=.80^{***}$) and more bullying ($r=.46^{***}$). The robustness of these relationships was re-assessed using multivariate regression analyses. Of particular relevance was whether the unexpected positive connections, of protective measures with bullying or fear of crime, remained stable, once the strains of drug cultures and neighborhood crimes were accounted for.

Multivariate Regression Analyses

Finally, multivariate regression analyses were run to test the hypotheses about the roles of strains and alleviating factors in bullying and fear of crime. The analyses, which were

disaggregated by the two groups of young teens and older teens, are presented in Table 3 below.

Irrespective of how old the teenagers were, bullying and fear of crime strongly influenced each other in a vicious cycle, net of the strains they experienced or the protections they had. That is, if students exhibited fear it was because they had experienced bullying (12-15 $\beta = .309^{***}$ and 16-18 $\beta = .203^{**}$) or vice versa (12-15 $\beta = .40^{***}$ and 16-18 $\beta = .32^{***}$). In other words, strains from bullying and submissive fear responses elicit and incite more bullying and fear.

Several additional noteworthy patterns were evident in the comparative impacts of strains leading to bullying (objective) versus fear of crime (subjective). First, strains from drug cultures in schools were the most impactful in bullying experiences of students. For example, presence of drug cultures in schools, increased the probability of bullying, irrespective of whether the teens were older ($\beta = .379^{***}$) or younger ($\beta = .47^{***}$). But, once bullying was accounted for, drugs did not elicit much fear of crimes in either age group. Second, neighborhood crimes, a second source of strain, did not have the predicted effect on bullying or crime associated fears. Neighborhood crimes slightly lowered (net of drug cultures) the bullying potential for young ($\beta = -.082^{***}$) and older teens ($\beta = -.056^{***}$) but raised crime fears only for youngest teens ($\beta = .06^{**}$).

Third, the strains, particularly caused by drug culture, increased the potential for bullying substantially more than the protection offered by school safety measures or college aspirations. In fact, school safety measures were slightly associated with more bullying for younger teens ($\beta = .125^{***}$) and for older teens ($\beta = .098^{***}$) alike. College aspirations had little to no impact on either bullying or fear of crime for either group of teenagers.

Fourth, neither protecting nor alleviating factors directly influenced the crime fears that students, young and old alike, experienced. But, drugs and protective measures indirectly shaped teenagers' fears of crime, because of bullying, the major strain that elicited fear among teenagers.

There were also a few theoretically interesting maturational differences in the impacts of strains and protective resources in bullying and fear of crime. Regarding the maturational differences in the cyclical impacts of crime-associated fear on school bullying, it would seem that younger students experienced more fear induced bullying ($\beta = .309^{***}$) and more bullying induced fear ($\beta = .40^{**}$) than older teens ($\beta = .203^{***}$ vs. $\beta = .32^{***}$ respectively). Students, young students in particular, were more susceptible to the trauma caused by prior bullying experiences, and when they fear it, more bullying seems to occur. However, as they mature and grow, students seem to adapt to this fear and learn how cope with it or perhaps they have managed to reconcile the conflict with their bully. As reiterated by Interviewee #2, an Upper School Counselor, "conflict and drama becomes more present in the younger grades and then starts to lessen as their priorities shift to academic and college applications." As result, there are more bullying events in the lives of younger students. Unfortunately, more bullying would also mean a more traumatized target audience for bullies.

Table 3
Regression of School Bullying and Crime Associated Fear on
Strains and Protections (net Race, Sex, & Academic Involvement) in Young and Older Teens:
National Crime Victimization Survey: School Crime Supplement (2015)

	School Bullying		Crime-Associated Fear	
	(1) Age 12-15	(2) Age 16-18	(3) Age 12-15	(4) Age 16-18
Crime-Associated Fear¹	.309***	.203***	-	-
School Bullying²	-	-	.40 ***	.32***
Straining Factors:				
School Drug Culture³	.379***	.470***	-.06**	-.06
Neighborhood Crime⁴	-.082***	-.056***	.06**	.013
Alleviating Factors:				
College Aspirations⁵	-.006	.034	.02	.057*
School Safety Measures⁶	.125***	.098***	.002	.02
Demographics:				
Minority (1) vs. White (0)⁷	-.001	-.026	-.01	-.016
Female (1) vs. Male (0)⁸	.021	.043	.001	.032
Academic Involvement⁹	.024	.036	-.038	.047
Model Statistics:				
Constant(a)	-26.753	-24.516	4.648	4.505
Adjusted R²	.325	.344	.136	.091
DF 1 & 2	8 & 2217	8 & 1315	8 & 2217	8 & 1315

*** p <= .001; * p <= .05

¹ School Bullying= DummySCS192 + DummySCS193 + DummySCS194 + DummySCS195 + DummySCS191 + DummySCS190 + DummySCS196 + DummySCS197 + DummySCS198 + DummySCS199 + DummyVS0081 + DummyVS0082 + DummyVS0083 + DummyVS0087 + DummyVS0085 + DummyVS0086 + DummySCS211 + DummySCS200 + DummySCS201 + DummySCS202 + DummySCS203 + DummySCS204 + DummySCS205 + DummySCS206 + DummyVS0073 + DummyVS0074 + DummyVS0075 + DummyVS0076 + DummyVS0077 + DummyVS0078 + DummyVS0079 + DummyVS0071 + DummyVS0127 + DummyVS0128 + DummyVS0129 + DummyVS0130 + DummyVS0132 + DummyVS0134;.

² Crime-Associated Fear= DummyVS0113 + DummyVS0114 + DummyVS0115 + DummyVS0116 + DummyVS0117 + DummyVS0118 + DummyVS0119 + DummyVS0120 + DummySCS208 + DummyVS0121 + DummyVS0122 + DummyVS0123 + DummyVS0136 + DummyVS0124 + DummyVS0125 + DummyVS0126 + DummySCS189;

³ School Drug Culture= DummyVS0058 + DummyVS0059 + DummyVS0067 + DummySCS209 + DummySCS210;

⁴ Neighborhood Crime= DummySCS212_V2 + DummySCS213_V3;

⁵ Safety Measures= DummyVS0036 + DummyVS0037 + DummyVS0038 + DummyVS0039 + DummyVS0040 + DummyVS0041 + DummyVS0042 + DummyVS0043 + DummyVS0044 + DummyVS0045 + DummyVS0088 + DummyVS0050 + DummyVS0051;

⁶ College Aspirations= DummyVS0139 + DummyVS0140;

⁷ Race: 1 = Minority Race, 0 = White, Non-Hispanic;

⁸ Sex: 1 = Female, 0 = Male;

⁹ Academic Involvement: School attendance + Participation in Academic Clubs.

On the other hand, the maturational prospects of being bullied when exposed to drug cultures increased more for older teens ($\beta=.470^{***}$) than for the young teens

($\beta=.379^{***}$). Two of the counselor interviewees assisted in contextualizing this maturational drug culture effect. The School Counselor (Interviewee #3) stated that drugs and alcohol lower inhibition, and unleash otherwise repressed daring behaviors. Such lowering of inhibitions was also substantiated by the Upper School Counselor, Interviewee #2; she added that while under the influence (of drugs/alcohol) certain acts of bullying instantly become more permissible, such as posting material or texts online, calling someone, or even, “hooking up”. These drug-connected negative behaviors were more common among older than younger students perhaps due to the increased autonomy and access that comes with teens growing older. For example, access to a vehicle or longer curfews, and even income (such as working a part-time), that come with turning 16 might enable them to engage in more unsupervised drug-related activity. The transitory period between middle and high school, when young high school students are mainly concerned with reestablishing their social circles as they enter new social environments, needs special programmatic and research attention.

CONCLUDING REMARKS

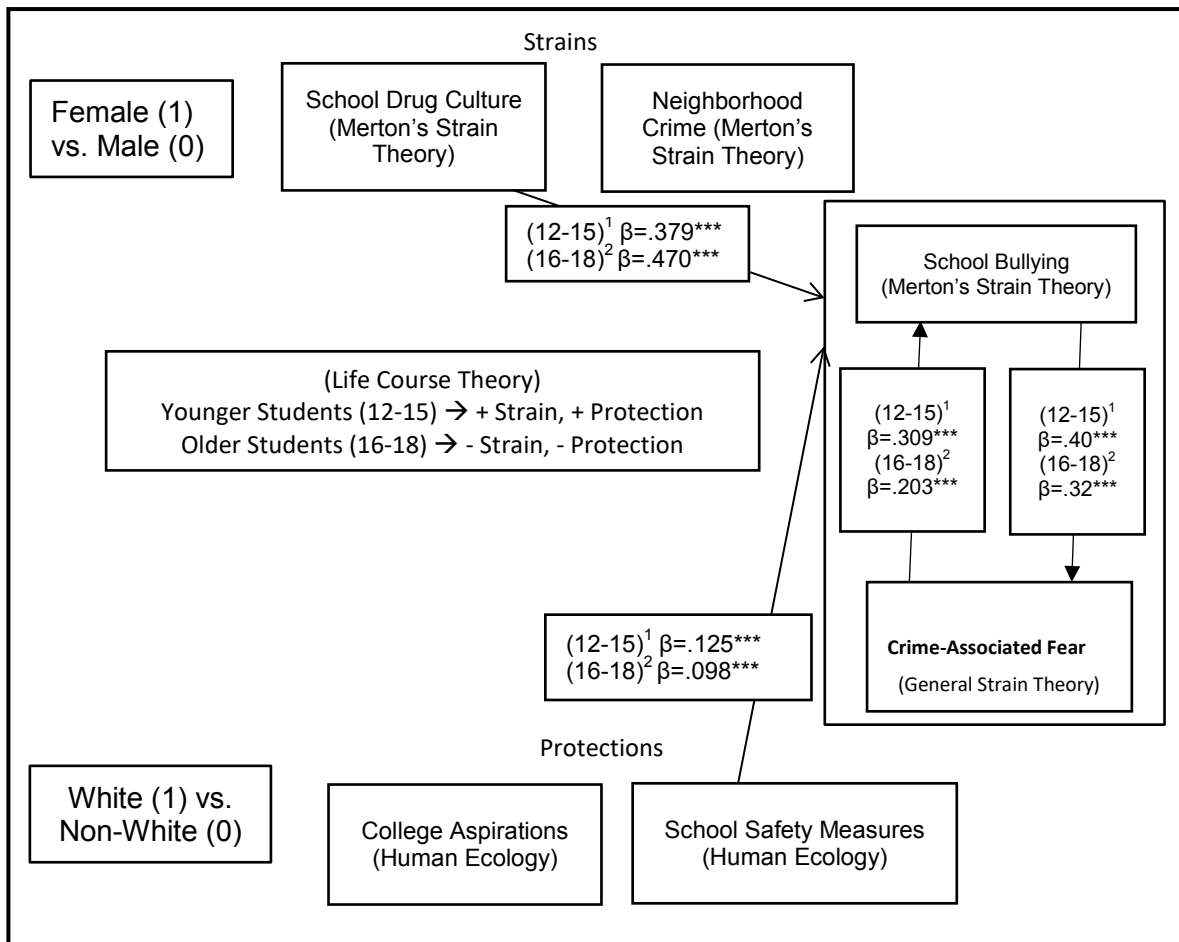
Empirical & Theoretical Implications

Maturational differences in how teens experienced bullying, fear of crimes, protections, and other sources of strain were manifested in two ways. First, the cycle of objective and subjective fears was much more acutely experienced by the younger teens than by the older teens. Second, the way strains and protective sources impacted bullying and fear of crime predictably varied by maturation stages (See Figure 1).

Starting with the most powerful effects, the vicious cycle of bullying (objective strain) creating fear (subjective strain), and in turn resulting in bullying, was strong in both groups of teenagers, but was stronger for the young than older teens (Hypotheses #2, #3, and #4). Younger students, who were more inexperienced and less mature, were more likely to succumb to reoccurring bullying coupled by fear of victimization. Although older students were also caught up in the bullying-fear repeat cycle, the grip of the cycle got a bit weaker as teenagers matured in age, as Elder predicted. Younger teens seem to have more difficulty coping with the subjective fear. But, as the teens matured, they acquired coping methods and began to learn how to adapt to their experiences.

More specifically, Merton’ Strain theory received support in the objective strain experiences of teens (Hypothesis #2). Drug cultures were most likely to exacerbate the prospect of bullying for both age groups. Yet, following Glen Elder’s maturational predictions, the strains of drugs were much stronger on the older than the younger teens (Hypothesis #4). However, there was not much direct support for Agnews’ subjective strain theory (Hypothesis #3), where it was predicted that drug culture and neighborhood crime in students’ lives will be directly associated with more fear of crime. Yet, strains from drugs did, even if indirectly, raise crime associated fears by exacerbating bullying.

Figure 1
Empirical and Theoretical Model of School Bullying and Crime Associated Fear on Strains and Protective Factors (net of Race, Sex, and Academic Involvement) among Young and Older Teens: (NCVS: SCS [2015])^a



*** $p \leq .001$, ** $p \leq .01$, * $p \leq .05$;

^a Refer to Table 3 for coding of indices and other variables

¹ Teens 12-15 years of age

² Teens 16-18 years of age

Finally, the prediction using Park's Human Ecology model, that school safety measures will reduce bullying and crime associated fears (Hypothesis #1), was also indirectly supported. Even though school safety measures seemed to operate more as responses to bullying (weak positive Beta effects) an argument can be made for their deterring effects. A balanced school structure was useful, even if as a secondary prevention tool, in securing social control within a school setting. Students generally tend to adhere to school rules and avoid possible consequences for breaking the rules. Even so, the safety structure proved to be more protective of younger than the older teens. As the teens aged, they, perhaps, adhered less to school rules. Older students may also be

less preoccupied with the consequences of breaking the rules (Elder's Life Course and Hypothesis #4).

Applied Implications

In the final analysis, bullying and fear of crime operated in a cycle in the lives of teenagers. Students who experienced fear were more likely to be bullied themselves; similarly, as students were bullied they experienced more fear for becoming bullied. Drugs were found to accentuate the presence of bullying among this sample of students. While school safety measures were the primary source of protection against bullying, their protective power, even if in response to bullying, was not strong enough to counter the presence of drugs. And these effects weakened as students matured, had more liberty, and experience.

Important messages are available to school administrators in these findings. Bullying was most responsive to both the strains experienced by youth and the protections that schools offered. If schools can contain bullying, they can create an atmosphere where their students can learn free from fear. To this end, schools will need to refocus their attention on school safety measures. Strengthening safety measures need to be looked at not only as a secondary response to bullying but also as a prime deterrent. Besides, schools should strengthen, not only their rules and guidelines, but should also monitor adherence to the rules to reduce, and not only to respond to, the incidence of bullying.

One structural safety solution would be to have closer supervision of more secluded areas, such as corridors, school yards, locker rooms, and bathrooms, where bullying may take place. In addition, there is a need for supportive programs to alleviate and prevent drug use, bullying and fear of crime. The School Counselor (Interviewee #3), recommended supportive programs that include those with a familial focus; when parents are able to be involved in their child's education, the child receives the necessary attention that they were seeking in the first place. The School Principal (Interviewee #1) believed it important for habitual bullies to find outlets for that extra energy. These activities should include ones that student would enjoy such as drawing, painting, playing an instrument, or participating in sports. It is imperative for researchers to evaluate the effectiveness of these programmatic suggestions as well the maturational trends in bullying among different grades and age groups of teens. At the same time, as the Upper School Counselor (Interviewee #2) noted, bullying type behavior tends to decrease as students mature, are engaged in more rigorous courses, and become preoccupied with their academic responsibilities. Of course, these maturational changes should not be assumed to be uniform in all schools, as the level of rigor and expectations tend to vary between schools.

Limitations and Suggestions for Future Research

As a school crime supplement, the secondary survey used in this analysis had valuable data geared toward capturing the victim's experiences of bullying and other school

crimes. However, there was not much information on the perpetrators of bullying. A holistic portrayal of school bullying will require information on not only the victim but also the perpetrator. Also, cyber bullying, another growing forum for bullying, needs urgent scholarly and programmatic attention. In Interviewee #2's (Upper School Counselor) experience, there is a very active culture of cyberbullying and internet harassment. Interestingly enough, the anonymity of the internet seems to allow for a permissible environment where anything can be said without facing the consequences or taking responsibility. In the experience of this Upper School Counselor, cyberbullying was mostly seen among young adolescent girls, who tend to be more passive with their bullying as opposed to face-to-face confrontations with boys. Gendered bullying and their gendered consequences is another fruitful area of research.

A comprehensive study of school bullying will have to also include parents. As noted by Interviewee #3 (School Counselor), parents may also be victims of bullying. To reiterate, the criterion for bullying is having the intent to harm, repeating said action, resulting in a power imbalance between victim and bully. She mentioned a case of an immigrant family, whose parents were threatened by their own son with deportation. The complex dynamic of a power imbalance in the inverted parent-child roles in immigrant families cannot be ignored. Many Immigrant parents rely on their children to help them navigate life in their new home. The anxiety and stress caused by such role reversals might create a need for control in young students and inappropriate acting out of the perceived power imbalance.

Lastly, due to the very strong connection between school bullying and the presence of drugs in schools, there should be more research on the intricate connection between drugs and impulsivity of young adolescents (Chuang, Sussman, Stone, et al. 2017:46). It is also important to note that the drugs in the schools are not facilitated by the schools but by students themselves. Therefore, it is plausible to assume that there are active distributors at large that have instilled realms of communication within school walls. Perhaps a less aggressive attitude towards student drug users would entice them to step forward and offer helpful information so that the distributors are caught and evaluated for the causes and potential solutions to drug cultures.

APPENDICES

Appendix A Table A.1. Controls

National Crime Victimization Survey: School Crime Supplement, 2015

Controls	Indicators	Values and Responses	Statistics	
			12-15 (n=5415)	16-18 (n=3957)
Demographics	AGE	1 = Ages 12-15	57.8%	
		2 = Ages 16-18	42.2	
	RACE/ETHNICITY	1 = White Only	73.8%	73.1%
		2 = Black	15.5	16.9
		3 = Amd INd/Ak native only	0.7	1.9
		4 = Asian Only	6.2	5.6
5 =Hawaiian/Pacific IS Only		0.4	0.4	
6 = Mixed Race		3.6	3.0	
	SEX	0 = Male	51.0%	51.8%
		1 = Female	49.0	48.2
Academic Involvement	ModifiedS0013. DID YOU ATTEND SCHOOL AT ANY TIME THIS SCHOOL YEAR?	0 = No	1.9%	10.6%
		1 = Yes	98.1	89.4
	ModifiedVS0032. DURING THIS SCHOOL YEAR, HAVE YOU PARTICIPATED IN ANY ACADEMIC CLUBS?	0 = No	83.5%	75.6%
		1 = Yes	16.5	24.4

Appendix B

Consent Forms and Interview Protocols

Letter of Consent

Dear _____:

I am a Sociology Senior working on my Research Capstone Paper under the direction of Professor Marilyn Fernandez in the Department of Sociology at Santa Clara University. I am conducting my research regarding the different impacts between age groups in the presence of school bullying and fear of becoming victimized.

You were selected for this interview because of your knowledge of and experience working with students in the field of education.

I am requesting your participation, which will involve responding to questions regarding the impacts of drug culture, college aspirations, safety measures on bullying culture among students of different age groups. This will last about 30 minutes. Your participation in this study is voluntary. You have the right to choose to not participate or to withdraw from the interview at any time. The results of the research study may be presented at SCU's Annual Anthropology/Sociology Undergraduate Research Conference and published the Silicon Valley Notebook. Pseudonyms will be used in lieu of your name and the name of your organization in the written paper. You will also not be asked (nor recorded) questions about your specific characteristics, such as age, race, sex, religion.

If you have any questions concerning the research study, please email me at _____ or Dr. Fernandez at mfernandez@scu.edu.

Sincerely,
Emilio Sanchez

By signing below, you are giving consent to participate in the above study.

Signature: _____ Printed Name: _____ Date _____

If you have any questions about your rights as a subject/participant in this research, or if you feel you have been placed at risk, you can contact the Chair of the Human Subjects Committee, through Office of Research Compliance and Integrity at (408) 554-5591.

Interview Schedule

for Supplemental Qualitative Interviews for Research on the differences in impacts on bullying and victimization in teenage adolescents, Sociology 195, Winter 2018

Interview Date and Time: _____

Respondent ID#: ____

1. What is the type of agency where you learned about (and/or worked) with this issue?
2. What is your position in this organization?
3. How long have you been in this position and in this organization?
4. Based on what you know about school bullying, what is kind of factors tend to influence it? Perpetuate it?
5. In your opinion, what influences bullying and victimization among students?
 - 6a. How about the drug culture/gang presence?
 - 6b. How about school safety Measures?
 - 6c. How about neighborhood crime?
 - 6d. How about college aspirations?
 - 6e. How about the age? Race/Ethnicity?

Appendix C

**Table C. 1.A School Bullying
National Crime Victimization Survey: School Crime Supplement, 2015**

Concept	Dimension	Indicators	Values and Responses	Statistics			
				Ages: Ages: 12-15 (n=5415)	16-18 (n=3957)		
School Bullying	Bullying experiences	DummySCS192. BY THIS DEFINITION, HAVE YOU BEEN BULLIED AT SCHOOL, BY ANOTHER STUDENT THIS SCHOOL YEAR	-1 = Not Bullied 0 = Not Bullied This Way 1 = Bullied This Way	93.5% 3.5 3.0	97.4% 1.6 1.0		
		DummySCS191. ¹ BULLIED BY SOMEONE HAD MORE POWER	-1 = Not Bullied 0 = Not Bullied This Way 1 = Bullied This Way	93.5% 3.8 2.7	97.4% 1.4 1.3		
		DummySCS190. ¹ DID IT HAPPEN OVER AND OVER, OR WERE YOU AFRAID IT WOULD HAPPEN OVER AND OVER?	-1 = Not Bullied 0 = Not Bullied This Way 1 = Bullied This Way	93.5% 4.0 2.5	97.4% 1.8 0.9		
		DummySCS193. ¹ VERBAL - THAT IS, DID IT INVOLVE MAKING FUN OF YOU, CALLING YOU NAMES, OR SPREADING RUMORS ABOUT YOU	-1 = Not Bullied 0 = Not Bullied This Way 1 = Bullied This Way	93.5% 3.7 2.8	97.4% 1.7 0.9		
		DummySCS194. ² PHYSICAL - THAT IS, DID IT INVOLVE HITTING, SHOVING, TRIPPING, OR PHYSICALLY HURTING YOU IN SOME WAY, OR THE THREAT OF HURTING YOU IN SOME WAY.	-1 = Not Bullied 0 = Not Bullied This Way 1 = Bullied This Way	93.5% 5.3 1.2	97.4% 2.5 0.1		
		DummySCS195. ² SOCIAL - THAT IS, DID IT INVOLVE IGNORING YOU OR EXCLUDING YOU FROM ACTIVITIES ON PURPOSE IN ORDER TO HURT YOU	-1 = Not Bullied 0 = Not Bullied This Way 1 = Bullied This Way	93.5% 5.3 1.2	97.4% 2.1 0.5		
		DummySCS200. ² DID YOU EVER THINK IT WAS RELATED TO YOUR RACE?	-1 = Not Bullied 0 = Not Bullied This Way 1 = Bullied This Way	78.8% 20.2 1.1	75.0% 24.7 0.3		

	DummySCS201. ² DID YOU EVER THINK IT WAS RELATED TO YOUR RELIGION?	-1 = Not Bullied 0 = Not Bullied This Way 1 = Bullied This Way	78.8% 20.8 0.4	75.0% 24.8 0.2
	DummySCS202. ² DID YOU EVER THINK IT WAS RELATED TO: YOUR ETHNIC BACKGROUND OR NATIONAL ORIGIN. FOR EXAMPLE, PEOPLE OF HISPANIC ORIGIN?	-1 = Not Bullied 0 = Not Bullied This Way 1 = Bullied This Way	78.8% 20.6 0.6	75.0% 24.7 0.3
	DummySCS203. ² DID YOU EVER THINK IT WAS RELATED TO: ANY DISABILITY YOU MAY HAVE - SUCH AS PHYSICAL, MENTAL, OR DEVELOPMENTAL DISABILITIES?	-1 = Not Bullied 0 = Not Bullied This Way 1 = Bullied This Way	78.8% 20.6 0.6	75.0% 24.6 0.4
	DummySCS204. ² DID YOU EVER THINK IT WAS RELATED TO: YOUR GENDER?	-1 = Not Bullied 0 = Not Bullied This Way 1 = Bullied This Way	78.8% 20.4 0.8	75.0% 24.7 0.3
	DummySCS205. ² DID YOU EVER THINK IT WAS RELATED TO: YOUR SEXUAL ORIENTATION - BY THIS WE MEAN GAY, LESBIAN, BISEXUAL, OR STRAIGHT?	-1 = Not Bullied 0 = Not Bullied This Way 1 = Bullied This Way	78.8% 20.8 0.5	75.0% 24.8 0.2
	DummySCS206. ² DID YOU EVER THINK IT WAS RELATED TO: YOUR PHYSICAL APPEARANCE?	-1 = Not Bullied 0 = Not Bullied This Way 1 = Bullied This Way	78.8% 18.4 2.8	75.0% 23.6 1.4
Location	VS0081. ³ IN A CLASSROOM AT SCHOOL	-1 = Not Bullied 0 = Not Bullied This Way 1 = Bullied This Way	91.1% 5.4 3.5	95.4% 3.1 1.5
	VS0082. ³ IN A HALLWAY OR STAIRWELL AT SCHOOL	-1 = Not Bullied 0 = Not Bullied This Way 1 = Bullied This Way	91.1% 5.2 3.7	95.4% 2.6 2.0
	VS0083. ³ IN A BATHROOM OR LOCKER ROOM AT SCHOOL	-1 = Not Bullied 0 = Not Bullied This Way 1 = Bullied This Way	91.1% 7.7 1.2	95.4% 4.1 0.4
	VS0087. ³ IN A CAFETERIA OR	-1 = Not Bullied 0 = Not Bullied	91.1% 6.6	95.4% 3.6

	LUNCHROOM AT SCHOOL	This Way 1 = Bullied This Way	2.3	1.0
	VS0085. ³ OUTSIDE ON SCHOOL GROUNDS	-1 = Not Bullied 0 = Not Bullied This Way 1 = Bullied This Way	91.1% 7.2	95.4% 3.7
	VS0086. ³ ON A SCHOOL BUS	-1 = Not Bullied 0 = Not Bullied This Way 1 = Bullied This Way	91.1% 7.8	95.4% 4.2
	SCS211. ³ ON-LINE OR BY TEXT	-1 = Not Bullied 0 = Not Bullied This Way 1 = Bullied This Way	91.1% 7.9	95.4% 3.8
Nature of Effects	DummySCS196. ⁴ YOUR SCHOOL WORK	0 = Not at All 1 = Not very much 2 = Somewhat 3 = A lot	95.9% 2.3	98.2% 1.2
	DummySCS197. ⁴ YOUR RELATIONSHIPS WITH FRIENDS OR FAMILY	0 = Not at All 1 = Not very much 2 = Somewhat 3 = A lot	97.0% 1.4	98.7% 0.5
	DummySCS198. ⁴ HOW YOU FEEL ABOUT YOURSELF	0 = Not at All 1 = Not very much 2 = Somewhat 3 = A lot	95.9% 1.6	98.5% 0.6
	DummySCS199. ⁴ YOUR PHYSICAL HEALTH FOR EXAMPLE, CAUSED INJURIES, GAV YOU HEADACHES OR STOMACH ACHES	0 = Not at All 1 = Not very much 2 = Somewhat 3 = A lot	97.7% 1.0	99.1% 0.5
	DummyVS0127. ⁵ A GUN?	0 = No 1 = Yes	99.8% 0.2	99.8% 0.2
Weapon Possession	DummyVS0128. ⁵ A KNIFE BROUGHT AS A WEAPON?	0 = No 1 = Yes	99.2% 0.8	99.3% 0.7
	DummyVS0129. ⁵ SOME OTHER WEAPON??	0 = No 1 = Yes	99.7% 0.3	99.8% 0.2
	DummyVS0130. ⁶ DO YOU KNOW OF ANY OTHER STUDENTS WHO HAVE BROUGHT A GUN TO YOUR SCHOOL?	0 = No 1 = Yes	98.6% 1.4	98.5% 1.5
	DummyVS0132. ⁶ COULD YOU HAVE GOTTEN A LOADED GUN WITHOUT ADULT PERMISSION, EITHER AT SCHOOL OR AWAY FROM SCHOOL?	0 = No 1 = Yes	98.3% 1.7	97.3% 2.7
	DummyVS0134. ⁶ HOW	0 = Never	96.8%	96.6%

	OFTEN HAVE GANGS BEEN INVOLVED IN FIGHTS, ATTACKS, OR OTHER VIOLENCE AT YOUR SCHOOL?	1 = Once or twice this school year 2 = Once or twice a month 3 = Once or twice a week 4 = Almost every day	1.9 0.8 0.2 0.2	2.5 0.7 0.1 0.1
Acts of Bullying	DummyVS0071. ⁶ HAVE YOU BEEN IN ONE OR MORE PHYSICAL FIGHTS AT SCHOOL?	0 = No 1 = Yes	97.9% 2.1	99.3% 0.7
	DummyVS0073. ⁷ MADE FUN OF YOU, CALLED YOU NAMES, OR INSULTED YOU,	0 = No 1 = Yes	95.9% 4.1	97.9% 2.1
	DummyVS0074. ⁷ SPREAD RUMORS ABOUT YOU OR TRIED TO MAKE OTHERS DISLIKE YOU?	0 = No 1 = Yes	96.5% 3.5	97.5% 2.5
	DummyVS0075. ⁷ THREATENED YOU WITH HARM?	0 = No 1 = Yes	98.9% 1.1	99.3% .7
	DummyVS0076. ⁷ PUSHED YOU, SHOVED YOU, TRIPPED YOU, OR SPIT ON YOU?	0 = No 1 = Yes	98.1% 1.9	99.5% .5
	DummyVS0077. ⁷ TRIED TO MAKE YOU DO THINGS YOU DID NOT WANT TO DO?	0 = No 1 = Yes	99.3% 0.7	99.6% 0.4
	DummyVS0078. ⁷ EXCLUDED YOU FROM ACTIVITIES ON PURPOSE?	0 = No 1 = Yes	98.3% 1.7	99.2% 0.8
	DummyVS0079. ⁷ DESTROYED YOUR PROPERTY ON PURPOSE?	0 = No 1 = Yes	99.3% 0.7	99.8% 0.2
	Index of School Bullying ⁸		Mean (SD) Range:	-10.98 (10.91) -20 to 43

¹ When You Were Bullied This School Year: ² Was Any of the Bullying:

³ Where Did the Bullying Occur? ⁴ This School Year, How Much Has Bullying Had a Negative Effect On:

⁵ During This School Year, Did You Ever Bring the Following to School Grounds:

⁶ During This School Year

⁷ During This School Year Has Another Student;

⁸ Index of School Bullying= DummySCS192 + DummySCS193 + DummySCS194 + DummySCS195 + DummySCS191 + DummySCS190 + DummySCS196 + DummySCS197 + DummySCS198 + DummySCS199 + DummyVS0081 + DummyVS0082 + DummyVS0083 + DummyVS0087 + DummyVS0085 + DummyVS0086 + DummySCS211 + DummySCS200 + DummySCS201 + DummySCS202 + DummySCS203 + DummySCS204 + DummySCS205 + DummySCS206 + DummyVS0073 + DummyVS0074 + DummyVS0075 + DummyVS0076 + DummyVS0077 + DummyVS0078 + DummyVS0079 + DummyVS0071 + DummyVS0127 + DummyVS0128 + DummyVS0129 + DummyVS0130 + DummyVS0132 + DummyVS0134; correlations ranged from .020*** to .994***. Of Both younger and older age groups.

Table C.1.B Crime-Associated Fear
National Crime Victimization Survey: School Crime Supplement, 2015

Concept	Dimension	Indicators	Values and Responses	Statistics		
				Ages 12-15 (n=5415)	Ages 16-18 (n=3857)	
Crime-Associated Fear	Avoidance of Certain Spaces	DummyVS0113. ¹ SHORTEST ROUTE TO SCHOOL	0 = No 1 = Yes	98.6% 1.4	99.4% 0.6	
		DummyVS0114. ¹ THE ENTRANCE INTO THE SCHOOL	0 = No 1 = Yes	99.4% 0.6	99.7% 0.3	
		DummyVS0115. ¹ ANY HALLWAYS OR STAIRS IN SCHOOL	0 = No 1 = Yes	98.9% 1.1	99.2% 0.8	
		DummyVS0116. ¹ PARTS OF THE SCHOOL CAFETERIA	0 = No 1 = Yes	99.1% 0.9	99.6% 0.4	
		DummyVS0117. ¹ ANY SCHOOL RESTROOMS	0 = No 1 = Yes	98.9% 1.1	99.5% 0.5	
		DummyVS0118. ¹ OTHER PLACES INSIDE THE SCHOOL BUILDING	0 = No 1 = Yes	99.4% 0.6	99.7% 0.3	
		DummyVS0119. ¹ SCHOOL PARKING LOT	0 = No 1 = Yes	99.5% 0.5	99.8% 0.2	
		DummyVS0120. ¹ OTHER PLACES ON SCHOOL GROUNDS	0 = No 1 = Yes	99.4% 0.6	99.7% 0.3	
		DummySCS208. ¹ SCHOOL BUS OR BUS STOP	0 = No 1 = Yes	99.4% 0.6	99.7% 0.3	
		Paranoia	DummyVS0121. DID YOU AVOID ANY ACTIVITIES AT YOUR SCHOOL BECAUSE YOU THOUGHT SOMEONE MIGHT ATTACK OR HARM YOU?	0 = No 1 = Yes	99.1% 0.9	99.6% 0.4
			DummyVS0122. DID YOU AVOID ANY CLASSES BECAUSE YOU THOUGHT SOMEONE MIGHT ATTACK OR HARM YOU?	0 = No 1 = Yes	99.6% 0.4	99.8% 0.2
			DummyVS0123. DID YOU STAY HOME FROM SCHOOL BECAUSE YOU THOUGHT SOMEONE MIGHT ATTACK OR HARM YOU?	0 = No 1 = Yes	99.4% 0.6	99.7% 0.3
	DummyVS0136. DURING THE LAST 4 WEEKS, DID YOU SKIP ANY CLASSES		0 = No 1 = Yes	98.4% 1.6	96.1% 3.9	

DummyVS0124. ² IN THE BULDING/PROPERTY?	0=Never 1=Always 2=Sometimes 3=Most of the time	91.0% 7.1 1.8 0.2	94.4% 4.7 0.9 0.0
DummyVS0125. ² ON A SCHOOL BUS OR ON THE WAY TO AND FROM SCHOOL?	0=Never 1=Always 2=Sometimes 3 = Most of the time	94.4% 4.6 0.9 0.1	96.5% 3.1 0.3 0.1
DummyVS0126. BESIDES THE TIMES YOU ARE ON SCHOOL PREPerty OR GOING TO RO FROM SCHOOL, HOW OFTEN ARE YOU AFRIAD THAT SOMOENE WILL ATTACK OR HARM YOU?	0=Never 1= Always 2=Sometimes 3 = Most of the time	92.3% 6.3 1.3 0.1	94.2% 5.1 0.7 0.1
Index of Crime Associated Fears	Mean (SD) Range	2.25 (2.37) 0-23	1.73 (2.14) 0-19

¹Did you Stay Away from Any of the Following Places

²How Often Are You Afraid That Someone Will Attack or Harm you

³Index of Crime-Associated Fear= DummyVS0113 + DummyVS0114 + DummyVS0115 + DummyVS0116 + DummyVS0117 + DummyVS0118 + DummyVS0119 + DummyVS0120 + DummySCS208 + DummyVS0121 + DummyVS0122 + DummyVS0123 + DummyVS0136 + DummyVS0124 + DummyVS0125 + DummyVS0126 + DummySCS189; correlations among these indicators ranged from .035*** to .596***

**Table C.1.C Neighborhood Crime
National Crime Victimization Survey: School Crime Supplement, 2015**

Concept	Dimension	Indicators	Values and Responses	Statistics	
				Ages: 12-15 (n=5415)	Ages: 16-18 (n=3957)
Neighborhood Crime	School Neighborhood	DummySCS213_V2.	0=Did not answer	45.5%	56.3%
		¹ WHERE YOUR SCHOOL IS LOCATED, THERE IS A LOT OF CRIME IN THE NIEGHBORHOOD WHERE YOU GO TO SCHOOL	1=Strongly Disagree	1.1	1.1
			2=Disagree	4.4	3.8
			3=Agree	24.8	8.7
			4=Strongly Agree	24.2	20.1
	Home Neighborhood	DummySCS212_V2.	0=Did not answer	45.6%	56.3%
		¹ WHERE YOU LIVE: THERE IS A LOT OF CRIME IN THE NEIGHBORHOOD WHERE YOU LIVE	1=Strongly Disagree	0.8	0.9
			2=Disagree	3.7	3.8
		3=Agree	28.8	23.4	
		4=Strongly Agree	21.1	15.6	

Index of Neighborhood Crime ²	Mean (SD) Range	3.60 (3.41) 0-8	1.86 (3.35) 0-8
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¹ Thinking about the Neighborhood where you live

² Index of Neighborhood Crime= DummySCS212_V2 + DummySCS213_V3; correlations among these indicators ranged from .961*** to .961***

**Table C.1.D School Drug Culture
National Crime Victimization Survey: School Crime Supplement, 2015**

Concept	Dimension	Indicators	Values and Responses	Statistics	
				Ages: 12-15 (n=5415)	Ages: 16-18 (n=3957)
School Drug Culture	Drug Presence	DummyVS0058_V2. ¹ ALCOHOLIC BEVERAGES	0 = No 1 = Yes	90.5% 9.5	86.2% 13.8
		DummyVS0059_V2. ¹ MARIJUANA	0 = No 1 = Yes	86.1% 13.9	79.3% 20.7
		DummyVS0067_V2. ¹ PRESCRIPTION DRUGS ILLEGALLY OBTAINED WITHOUT A PRESCRIPTION	0 = No 1 = Yes	92.8% 7.2	86.8% 13.2
	Personal Experiences	DummySCS209_V2. ¹ OTHER ILLEGAL DRUGS, SUCH AS COCAINE, UPPERS, OR HEROIN	0 = No 1 = Yes	95.1% 4.9	92.0% 8.0
		DummySCS210_V2.DURING THIS SCHOOL YEAR, DID YOU SEE ANOTHER STUDENT WAS UNDER THE INFLUENCE OF ILLEGAL DRUGS OR ALCOHOL WHILE THEY WERE AT SCHOOL?	0 = No 1 = Yes	90.5% 9.5	84.5% 15.5
		Index of Drugs/Alcohol Culture	Mean (SD) Range	.711 (.451) 0-5	1.11 (1.43) 0-5

¹The Availability of Drugs/Alcohol at School

² Index of School Drug Culture= DummyVS0058 + DummyVS0059 + DummyVS0067 + DummySCS209 + DummySCS210; correlations among these indicators ranged from .409*** to .700***

**Table C.1.E Safety Measures
National Crime Victimization Survey: School Crime Supplement, 2015**

Concept	Dimension	Indicators	Values and Responses	Statistics	
				Ages: 12-15 (n=5415)	Ages: 16-18 (n=3957)
Safety Measures	Supervision	DummyVS0036. ¹ SECURITY GUARDS OR ASSIGNED POLICE OFFICERS	0 = No 1 = Yes	64% 34.0	66.3 33.7
		DummyVS0037. ¹ STAFF OR OTHER ADULTS SUPERVISING	0 = No 1 = Yes	50.9% 49.1	60.3% 39.7
	Use of Technology	DummyVS0038. ¹ METAL DETECTORS, INCLUDING WANDS?	0 = No 1 = Yes	94.4% 5.6	93.9% 6.1
		DummyVS0039. ¹ LOCKED ENTRANCE OR EXIT DOORS DURING THE DAY?	0 = No 1 = Yes	56.6% 43.4	65.8% 34.2
	Checks & Searches	DummyVS0040. ¹ A REQUIREMENT THAT VISITORS SIGN IN?	0 = No 1 = Yes	50.4% 49.6	59.9% 40.1
		DummyVS0041. ¹ LOCKER CHECKS?	0 = No 1 = Yes	75.0% 25.0	77.0% 23.0
		DummyVS0042. ¹ A REQUIREMENT THAT STUDENTS EAR BADGES OR ID	0 = No 1 = Yes	88.3% 11.7	88.4% 11.6
	School Policy	DummyVS0043. ¹ ONE OR MORE SECURITY CAMERAS TO MONITOR THE SCHOOL GROUNDS?	0 = No 1 = Yes	55.9% 44.1	62.0% 38.0
		DummyVS0044. ¹ TAKE A CODE OF STUDENT CONDUCT?	0 = No 1 = Yes	47.7% 52.3	57.5% 42.5
		DummyVS0045. IF YOU HEAR ABOUT A THEAT TO SCHOOL OR STUDENT SAFETY DO YOU HAVE A WAY TO REPORT IT TO SOMEONE IN AUTHORITY...	0 = No 1 = Yes	60.1% 39.9	65.5 34.5
		DummyVS0088.WAS A TEACHER OR SOME OTHER DAULT AT SCHOOL NOTIFIED ABOUT THIS BULLYING?	0 = No 1 = Yes	95.5% 4.5	98.2 1.8
		DummyVS0050.WOULD YOU AGREE: THE PUNISHMENT FOR BREAKING SCHOOL RULES IS THE SAME NO MATTER WHO YOU ARE	0 = Did not answer 1 = Strongly Disagree 2 = Disagree 3 = Agree 4 = Strongly Agree	45.4% 0.8 4.6 31.5 17.7	56.3% 0.9 5.9 25.0 11.9

DummyVS0051.WOULD YOU AGREE: THE SCHOOL RULES ARE STRICTLY ENFORCED	0 = Did not answer 1 = Strongly Disagree 2 = Disagree 3 = Agree 4 = Strongly Agree	45.3% 0.4 5.2 34.0 15.0	56.2% 0.4 5.3 28.2 9.9
Index of School Safety Measures	Mean (SD) Range	7.10 6.60 0-18	5.75 6.62 0-18

¹ Does your school take any measures to make sure students are safe?

² Index of Safety Measures = DummyVS0036 + DummyVS0037 + DummyVS0038 + DummyVS0039 + DummyVS0040 + DummyVS0041 + DummyVS0042 + DummyVS0043 + DummyVS0044 + DummyVS0045 + DummyVS0088 + DummyVS0050 + DummyVS0051; correlations among these indicators ranged from .055*** to .953***

**Table C.1.F College Aspirations
National Crime Victimization Survey: School Crime Supplement, 2015**

Concept	Indicators	Values and Responses	Statistics	
			Ages: 12-15 (n=5415)	Ages: 16-18 (n=3857)
College Aspirations	DummyVS0139. THINKING ABOUT THE FUTURE, DO YOU THINK YOU WILL: ATTEND SCHOOL AFTER HIGH SCHOOL, SUCH AS A COLLEGE OR TECHNICAL SCHOOL	0 = No 1 = Yes	52.0% 48.0	60.9% 39.1
	DummyVS0140. THINKING ABOUT THE FUTURE, DO YOU THINK YOU WILL: GRADUATE FROM A 4-YEAR COLLEGE?	0 = No 1 = Yes	56.5 43.5	66.4 33.6
	Index of College Aspirations	Mean (SD) Range	.915 (.970) 0-2	.727 (.931) 0-2

¹ Index of College Aspirations = DummyVS0139 + DummyVS0140; correlations among these indicators ranged from .894*** to .894***

Appendix D.
Table 2. Bivariate Analysis

Ages 12-15 (n=5415- 2976)									
Ages 16-18 (n= 3957- 2976)	A	B	C	D	E	F	G	H	I
A. School Bullying¹	1.0	.50***	.54***	.34***	.44***	.34***	-.003	.02	.02
B. Crime Associated Fear²	.57***	1.0	.38***	.82***	.83***	.73***	-.011	.015	-.007
C. School Drug Culture³	.67***	.55***	1.0	.33***	.42***	.34***	-.008	.004	.006
D. Neighborhood Crime⁴	.47***	.87***	.52***	1.0	.908***	.84***	-.019	.009	.06***
E. Safety Measures⁵	.54***	.89***	.59***	.93***	1.0	.83***	-.001	.01	-.03
F. College Aspirations⁶	.46***	.80***	.52***	.87***	.86***	1.0	.011	.050***	.14***
G. Race⁷	-.02	.03	-.04*	.02	.04**	.031	1.0	.009	.022
H. Sex⁸	.04	.01	.01	-.01	-.004	.03	-.01	1.0	.005
I. Academic Involvement⁹	.07**	-.01	.08***	.12***	-.02	.21***	-.001	.084***	1.0

¹ School Bullying= DummySCS192 + DummySCS193 + DummySCS194 + DummySCS195 + DummySCS191 + DummySCS190 + DummySCS196 + DummySCS197 + DummySCS198 + DummySCS199 + DummyVS0081 + DummyVS0082 + DummyVS0083 + DummyVS0087 + DummyVS0085 + DummyVS0086 + DummySCS211 + DummySCS200 + DummySCS201 + DummySCS202 + DummySCS203 + DummySCS204 + DummySCS205 + DummySCS206 + DummyVS0073 + DummyVS0074 + DummyVS0075 + DummyVS0076 + DummyVS0077 + DummyVS0078 + DummyVS0079 + DummyVS0071 + DummyVS0127 + DummyVS0128 + DummyVS0129 + DummyVS0130 + DummyVS0132 + DummyVS0134.

² Crime-Associated Fear= DummyVS0113 + DummyVS0114 + DummyVS0115 + DummyVS0116 + DummyVS0117 + DummyVS0118 + DummyVS0119 + DummyVS0120 + DummySCS208 + DummyVS0121 + DummyVS0122 + DummyVS0123 + DummyVS0136 + DummyVS0124 + DummyVS0125 + DummyVS0126 + DummySCS189.

³ School Drug Culture= DummyVS0058 + DummyVS0059 + DummyVS0067 + DummySCS209 + DummySCS210.

⁴ Neighborhood Crime= DummySCS212_V2 + DummySCS213_V3.

⁵ Safety Measures= DummyVS0036 + DummyVS0037 + DummyVS0038 + DummyVS0039 + DummyVS0040 + DummyVS0041 + DummyVS0042 + DummyVS0043 + DummyVS0044 + DummyVS0045 + DummyVS0088 + DummyVS0050 + DummyVS0051.

⁶ College Aspirations= DummyVS0139 + DummyVS0140.

⁷ Race: 1 = Minority Race, 0 = White, Non-Hispanic

⁸ Sex: 1 = Female, 0 = Male

⁹ Academic Involvement: ModifiedVS0013+ModifiedVS0032

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