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Bullying: How Feelings of Fatalism May Influence Youth Choices to Offend

By
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B.A. Psychology, Minor Criminology, Behavioral Neuroscience Certificate, 2018

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Abstract

School age bullying continues to be a source of intense research as it is commonly linked to increased levels of delinquency in adolescents. In an effort to understand the process through which bullying victimization is linked to increased levels of delinquency, researchers continue to explore environmental and psychological components. This study used both OLS regression and negative binomial regression to examine the relationship between traditional and cyberbullying victimization and delinquency to assesses if fatalism mediates or moderates this relationship. An individual with fatalism often feels they are stuck within a revolving cycle of bad happenings and are powerless to change their impending doom. The anticipation of early death is often a contributing component of a fatalistic outlook. The combination of a decreased future orientation and early death have been shown to increase risk taking behaviors in adolescents and diminish the effectiveness of negative consequences. (Gottfredson & Hirschi, 1990; Haynie, Soller & Williams, 2014). Longitudinal data collected as part of the University of Missouri - St. Louis Comprehensive School Safety Initiative (UMSL CSSI) was used to address these research questions among a sample of N = 3,640 middle school students within 12 school districts. Findings did not support the hypotheses and suggest that non-behavior specific measures of traditional and cyberbullying victimization are not related to delinquency. Furthermore, results did not support the hypotheses that a fatalistic outlook influences the relationship between bullying victimization and delinquent outcomes as a mediator or as a moderator. Previous research both supports and contradicts these findings, suggesting that further research is, indeed, necessary.

Keywords Traditional bullying, Cyberbullying, Delinquency, Fatalism, Adolescents, Victimization, Learned Helplessness

Chapter 1 Introduction

Research, over the past three decades, has not only increased bullying awareness worldwide, but has highlighted several important factors to help us better understand the dynamic that surrounds bullying behaviors, and why victims of bullying may later choose to engage in delinquent behaviors (Wolke, Copeland, Angold & Costello, 2013).

Bullying has been defined as a “systematic abuse of power,” that involves intentional acts of aggression by an individual or group that is consistently recurring over time and is against a victim who is unable to defend him or herself appropriately, thereby, resulting in an imbalance of power (Olweus, 1994; Wolke et al., 2013; Menesini & Salmivalli, 2017; Jackman, Kreuze, Caceres, & Schnall, 2020).

A 2014 review of research concluded that approximately 9-25% of school-aged youth are bullied and 35% of youth are either a bullying victim or a perpetrator (Modecki, Minchin, Harbaugh, Guerra, & Runions, 2014; Menesini & Salmivalli, 2017).

Some children are more likely than others to be victimized by bullies. Children who are more likely to be bullied are those who appear weak or withdrawn, are socially awkward, shy and have few friends (Wolke et al., 2013). There is some evidence that adolescents who are routinely bullied have also been shown to engage in bullying behaviors against others, subsequently falling into the bully-victim category (Wolke et al., 2013). More generally, being bullied has been linked to an increased risk of engaging in delinquency (Agnew, 2001; Barker, Arseneault, Brendgen, Fontaine and Maughan, 2008; Jackson, Hanson, Amstadter, Saunders & Kilpatrick, 2013; Wong & Schonlau, 2013).

Research has shown that children who are bullied are at an increased risk for physiological health deficiencies along with emotional and psychological difficulties (Wolke et al., 2013; Bender & Losel, 2011). Bullying, both direct and relational, has been identified as hindering healthy development due to the lack of peer group support and persistent negative responses from others (Olweus, 1993).

Repeat victimization, such as that which occurs with bullying, has also been associated with a decrease in future orientation (Stoddard, Zimmerman & Bauermeister, 2011). Research has found exposure to violence decreases the ability to feel optimism about future goals and opportunities (Warner & Swisher, 2014). Reduced hope or ambivalence for one's future can lead to increased feelings of early fatality or fatalism. Fatalism is the acceptance of a belief that bad happenings are inevitable, and that no matter what one tries to accomplish, they will never meet their goals, and it oftentimes encompasses the perception of early death. (Haynie, Soller & Williams, 2014; Duke, Borowsky, Pettingell, Skay, McMorris, 2011).

Studies have found that decreased optimism about future goals increases the likelihood one will engage in risky behaviors (Warner & Swisher, 2014). Findings indicate that when an adolescent feels they have no future due to the lack of opportunity or loss of hope, it greatly diminishes their fear of negative consequences for adverse actions (Haynie, Soller & Williams, 2014). Youth have been shown to be more likely to engage in delinquent behaviors if failure is an inescapable element of their future (Bolland, Lian & Formichella, 2005).

The unspoken mechanism in the above scenario is the individual's mental processing necessary to decide whether or not to engage in delinquency. This mechanism

directly parallels Rational Choice theory (Brezina, Tekin & Topalli, 2009; Jacobs & Cherbonneau, 2017). Individuals suffering from hopelessness, and potentially a fatalistic outlook, will often choose to engage in delinquent acts without caring about the consequences or jeopardizing future goals (Brezina et al., 2009). Rational Choice theory posits that youth will weigh the costs and benefits of committing a crime before making the choice to do so. If a youth is experiencing a diminished future outlook with little to no fear of consequences, daily instant gratification will weigh heavily as a benefit, while costs or subsequent consequences will have little to no deterring effect within the decision-making process (Gelder, Hershfield & Nordgren, 2013; Brezina et al., 2009; Jacobs & Cherbonneau, 2017).

¹Research suggests that youth's perception of fatality may account for the increase in risky behavior during this stage in their development.¹ The choice to participate in riskier behaviors could be a confluence of feelings of one's own fatality and the current time perspective of adolescence (Haynie, Soller & Williams, 2014).

Combined, this research suggests that the relationship between bullying victimization and delinquency may be accounted for, in part, by higher levels of fatalism. Although, several studies have shown that fatalism is positively associated with an adolescent's choice to engage in criminal behavior (Haynie, Soller & Williams, 2013; Warner & Swisher, 2014; Alm, Laftman, Sandahl & Modin, 2019; Jacobs & Cherbonneau, 2017; Brezina, 2000), little research has investigated the presence and

¹Adolescents have, historically, had an elevated perception of early fatality (see Fischhoff, Parker, Bruine, Downs, Palmgren, Dawes & Manske, 2000). Adolescents between the ages of 15-16 reported that they had approximately a 19% chance of dying from any cause within the next year, while 20% were convinced that they would die by age 19 or 20 (Fischhoff et al., 2000). It is important to note that mortality rates for teens are, actually, quite low with only 0.4% of youth that actually perish before their 20th birthday (see Duke, et al, 2011).

importance of fatalism for shaping bullied youth's involvement in delinquency and its potential to intensify an already powerful relationship (Brezina et al., 2009; Kaufman & Widom, 1999).

This proposed study will examine the relationship between traditional bullying, cyberbullying and delinquency within a sample of middle school and high school students in St. Louis County and explore how fatalism may shape this relationship.

I hypothesize that bullied youth will have higher levels of delinquency than non-bullied youth, in part, due to increased feelings of fatalism. In addition, because youth who are high in fatalism are present oriented, fatalism is expected to amplify the relationship between bullying victimization and delinquency because it reduces inhibitions against engaging in behaviors that may have long-term negative consequences (Bolland, Lian & Formichella, 2005; Haynie, Soller & Williams, 2014; Stoddard, et al., 2011).

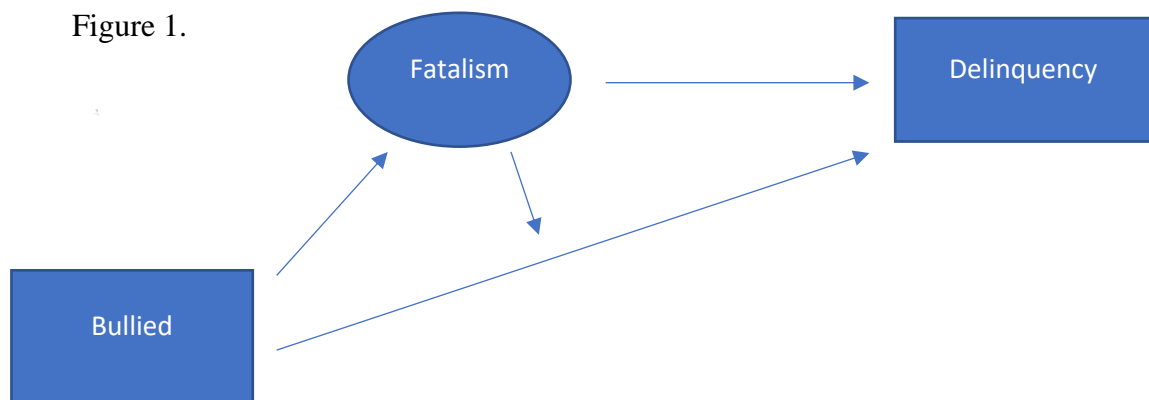
Although traditional bullying and cyberbullying share many similar characteristics, I do expect that results may show subtle differences between the two types. Unlike traditional bullying, cyberbullying victims are unable to escape their abuser as easily as changing their location or simply going home to a safe place. A cyberbully continues to pursue their victim through texting, calling, emailing, and when that becomes unavailable, they are able to reach their victims through social media outlets and post negative comments to be seen by all that may be online. In addition to this difference, research has found that anger mediates the relationship between cyberbullying and delinquency, but not traditional bullying (Yang, Li, Gao & Wang, 2020). Other research has shown a clear profile for trait anger in cases of cyberbullying, but a weaker

association for traditional bullying (Lonigro, Schneider, Laghi, Baiocco, Pallini & Brunner, 2015). Although both types of bullying exhibit inescapable attributes, cyberbullying, may have a stronger relationship with delinquency than traditional bullying.

I will test the following hypotheses, which are depicted in Figure 1.

- 1) Adolescents who are victims of bullying will engage in higher levels of delinquency and will be more fatalistic.
- 2) Adolescents who are more fatalistic will engage in higher levels of delinquency and fatalism will mediate part of the relationship between bullying victimization and delinquency.
- 3) Fatalism will moderate the relationship between bullying victimization and offending such that adolescents who have a history of bullying and experience feelings of fatalism have a higher likelihood of delinquency than adolescents who have a history of bullying and do not experience feelings of fatalism.

Figure 1.



These hypotheses will be tested using longitudinal data collected from approximately 3600 students across 12 middle schools, within six districts. Student participants attended the 7th and 8th grade when initially surveyed as part of the Comprehensive School Safety Initiative at the University of Missouri, St. Louis (UMSL, CSSI) between 2017 and 2019). Youth were followed for three years, and the first two waves of data will be used for this study.

By examining the direct and indirect effects of fatalism on delinquency, I hope to contribute to the literature on the behavioral patterns and underlying mechanisms that contribute to an adolescent's involvement in delinquency.

I believe that an awareness of how often these particular feelings are present, and how substantial their influence in the decision making process, may promote attention to possible interventions available.

Chapter Two

The Link between Bullying and Offending

“When you are a victim, the biggest thing you lose is your power” (B. Stapleton, personal communication, April 16, 2021).

Victimization is a cycle, for you can easily be a victim one day and a perpetrator the next. Being a victim of a crime has long been identified as one of the strongest correlates of delinquency. (Lauritsen & Laub, 2007; Jackson et al., 2013). Youth are at an increased risk for both victimization and offending (Pellegrini, 2002). The victim-offender overlap posits that participation in delinquency increases one's risk for personal victimization (Lauritsen & Laub, 2007), and a considerable amount of research has

focused on explaining the relationship between victimization and delinquency (Lauritsen, Sampson & Laub, 1991).

When considering the victim-offender dynamic in youth, it may be particularly important to look at bullying because some people have suggested that it may be different from the predetermined victim offender overlap (McCuddy & Esbenson, 2021; Menesini & Salmivalli, 2017). There is some question as to how the victim/offender overlap plays out because there is evidence this relationship may operate antithetically for bullying victimization (Olweus, 1994; McCuddy & Esbenson, 2021). Previous research has argued that the reason bullying victimization may not fall into the victim/offender overlap category is that it has differentiating characteristics such as intent, repeat harm, and a disparate balance of power to another individual (Olweus, 1994; McCuddy & Esbenson, 2021, Menesini & Salmivalli, 2017). This is a question that should be further explored as arguments on both sides are compelling and subsequently impact future research.

In addition, bullying, as a form of victimization, has been shown to be common among young people (Menesini & Salmivalli, 2017). Peer dynamics play a substantial role during the social development of a child (Jackson et al., 2013). Whether these dynamics are positive or negative can have a pivotal impact on the mental well-being of a child. During adolescence, youth experience an increase in peer involvement through school, neighborhood play and athletics (Bettencourt & Farrell, 2013). The transition to middle school and new peer groups can be an additional catalyst for increased peer pressure and bullying (Bettencourt & Farrell, 2013). Furthermore, when an adolescent is bullied, it affects all aspects of their life. The bullied victim, oftentimes, will become

withdrawn and display avoidance behaviors such as increased absenteeism, poor school performance, and an increased focus on isolation (Payne & Hutzell, 2017).

Research has examined the long-term effects of peer violent victimization, which includes bullying, on adolescent's future delinquency. Jackson and colleagues (2013) used the longitudinal National Survey of Adolescents-Replication (NSA-R) to assess risk factors and potential behavioral health outcomes based on past trauma for a sample of 3,614 (1806 males, 1808 females) adolescents between the ages of 12-17. Results showed that nearly 12.4% of adolescents in the United States experience peer violent victimization. In addition, youth who experienced interpersonal violence, including physical abuse, sexual assault, and bullying, were more likely to engage in subsequent delinquency. For example, an adolescent who was victimized by a peer was twice as likely to engage in delinquency as other youth (Jackson et al., 2013).

More recently, research has looked at traditional bullying and cyberbullying and their separate and dual link to delinquency using a longitudinal study design (McCuddy & Esbensen, 2017). Cyberbullying is an online version of peer pressure that occurs when an individual repeatedly intimidates, mistreats, or ridicules another person online by using a cell phone or other electronic device (Hinduja & Patchin, 2015). Oftentimes, there is an overlap in forms of bullying such that youth who are traditionally bullied experience online attacks as well (Hay & Meldrum, 2010). McCuddy & Esbensen (2017) examined the delinquency outcomes for youth who were cyberbullied, while also looking at the heightened dual effect of experiencing both traditional bullying and cyberbullying. They used four waves of data from the National Evaluation (2006 to 2011) of the Gang Resistance Education and Training Program (GREAT) which sampled 3,271 respondents

across 31 middle schools. Findings indicated that the prevalence of cyberbullying remained consistent across all four waves at 13%, traditional bullying showed a decrease over time from 12% to 8%, while the prevalence of dual victimization remained steady at 6%. Outcomes showed general delinquency to remain steady while violent delinquency decreased over time and substance use increased. Results indicated a considerable overlap between both types of bullying victimization and delinquency. While 67% of youth who experienced only traditional bullying, engaged in delinquency, 80% of youth who were cyberbullied or were victims of both types of bullying engaged in delinquency. These findings suggest that the online environment, although behind the scenes and virtually unseen, is a prime foundation for increased victimization, and must be considered as harmful as traditional bullying. Cyberbullying and dual bullying victimization, show stronger effects on delinquency than traditional bullying, suggesting that future research may need to further examine this powerful dynamic (McCuddy & Esbensen, 2017).

Although, there is overwhelming research offering support for the victim/delinquency relationship, researchers believed that there may be multiple pathways that may lead victims to engage in delinquency (Cuevas, Finkelhor, Turner & Ormrod, 2007). In a cross-sectional study, telephone interviews were conducted with a sample of 1000 adolescents aged 10-17 using the Developmental Victimization Survey. Results identified three primary types of victims that have been shown to later engage in delinquency, delinquent-victims, who have also been called bully-victims in other research, delinquent sex/maltreatment-victims, and property delinquent-victims (Cuevas et al., 2007). Interestingly, findings showed that bully-victims consisted primarily of boys

with noticeably elevated levels of delinquency, victimization, anger and adversity, and tended to include emotionally and behaviorally maladjusted youth. In contrast, the delinquent sex/maltreatment-victims were primarily girls, driven to minor delinquency and substance abuse as a coping mechanism for feelings of depression, anxiety and anger. This group showed the highest rates of within-family adult perpetrators. The third group, property delinquent-victim, was shown to be predominantly boys who experienced lower rates of victimization than the other two groups, while also experiencing less depression and anger. This group had the lowest proportion of adult perpetrators. The bully-victims and the delinquent sex/maltreatment victims were shown to have higher levels of mental health problems such as depression, anxiety and a consistent state of anger, while the non-delinquent sex/maltreatment group experienced less symptomology related to depression, anxiety and anger. This reinforces that the combination of victimization and delinquency can serve as a pre-emptive marker for victims with mental health concerns. In regard to additional pathways that victimization can take to delinquency, findings suggest that it may be the level of physical violence or abuse that is key to the level of and extent of the delinquency (Cuevas et al., 2007).

In the current study, we control for victimization and do expect to see a small difference with bullying victimization having a stronger effect than general victimization due to the repetitive and inescapable nature of bullying victimization. The gender differences are interesting in that boys appear to be a more common victim of bullying and are predisposed to engaging in delinquency that involves victimization with anger and aggression, while the girls, victims of sexual maltreatment, also turn to delinquency, however, it is in the form of substance abuse as a coping mechanism. Both

aforementioned types of victimization are quite personal in nature and were shown to have more negative health outcomes compared with the third type of property-crime victimization and highlights the lesser effects on the victim when the crime is a property crime as opposed to a personal crime (Cuevas et al., 2007). Jackson et al., (2018) highlights the importance of interpersonal violence as a predictor of delinquency. This included peer victimization, such as bullying, physical abuse and sexual assault. Findings indicated a higher likelihood of negative behavioral health outcomes. Given the above studies and others like them, I expect that bullying will show a greater effect than general victimization within the current study due to its incessant and personal level of attack rendering the victim powerless to escape or improve their situation (Jackson et al., 2018; Cuevas et al., 2007).

Other recent research has looked at whether bullied or cyberbullied youth may be at a higher risk for delinquency when negative emotions are present, such as anger or frustration (Lee, Patchin, Hinduja & Dischinger, 2020). Drawing on General Strain Theory, Lee and colleagues (2020) assessed whether negative emotions, resulting from victimization, such as anger or frustration, account for the relationship between being a victim of bullying or cyberbullying and subsequent delinquency. Bullying and cyberbullying may generate a heightened negative affect as it is often repeat assault, whether physical, verbal or online. (Agnew, 2001, McCuddy & Esbensen, 2017). They found that victims of bullying or cyberbullying were more likely to participate in delinquent behavior, as were, victims who experienced negative emotions that result from this experience. However, results also indicated that bullying victimization has a stronger effect on delinquency than the negative emotions that derive as a result. In other words,

youth, who were victims of bullying, were more likely to participate in delinquent behaviors whether or not negative emotions were present.

General Strain Theory (GST) argues that daily life stressors or strain can increase one's likelihood of experiencing negative emotions such as anger and frustration. Oftentimes, individuals that struggle with these feelings have been shown to seek illegal means to alleviate the daily pressure of these negative emotions. General Strain Theory suggests bullying will be linked to delinquency and negative emotions could be the mechanism (Moon, Morash, McCluskey, & Hwang, 2009; Ganem, 2010; Wang & Jiang, 2021; Glassner & Cho, 2018).

Glassner & Cho (2018) looked at data from the National Longitudinal Survey of Youth, 1997, (n = 2,423). Youth responses were analyzed to explore possible indicators of negative emotions and diminished mood as a result of childhood bullying. This study did not differentiate between traditional bullying and cyberbullying but refers to all types of bullying as "childhood bullying" (Glassner & Cho, 2018). Agnew (1997, 2001) has previously found that adolescents victimized by their peers, such as bullying, experience a heightened sense of strain that often leads to deviant behaviors as a coping mechanism and can result in disparate emotional states. Additional past research clearly implicates negative emotions as a substantial threat to an adolescent's long term emotional and psychological health as a result of bullying victimization (Wang & Jiang, 2021; Glassner & Cho, 2018). Researchers Hay and Meldrum (2010) found that bullying victimization was related to self-destructive behaviors including suicidal ideation. Negative emotions were found to partially mediate these relationships.

Fatalism can be considered a negative emotional response. It should mediate the relationship between bullying and delinquency. To the extent that fatalism shapes how one copes with strain, it should moderate the effect of bullying on delinquency.

Another study examined these outcomes using propensity score matching to determine the level of impact that bullying could have on a spectrum of delinquent outcomes (Wong & Schonlau, 2013). Wong & Schonlau (2013) used longitudinal data from the National Longitudinal Survey of Youth 1997 (NLSY97) to compare delinquent outcomes over a 6-year span for participants with and without bullying victimization experiences prior to their 12th birthday. Results indicated that out of a sample of 8,833 youth, 19% (n = 1,713) reported being victimized prior to the age of 12. Results further showed that 38% of bullied adolescents reported committing assault, while 24% of non-bullied adolescents reported assault behaviors (Wong & Schonlau, 2013). There is a significant association between delinquency and bullying within multiple measures of delinquency such as, vandalism, theft, property crimes and assault, etc. Furthermore, Wong and Schonlau (2013) found all the outcome variables, such as the few mentioned above, to be significant in regression models, while the propensity score model, which might better account for existing differences between bullied and non-bullied youth, found 4 outcome variables to be significant, highlighting existing differences between bullied and non-bullied youth might explain some of the differences in delinquency.

In summary, across decades of research, study findings consistently point to a relationship between bullying and delinquency and emphasize the prevalence of bullying. (Wong & Schonlau, 2013iI; Menesini & Salmivalli, 2017; Jackson et al., 2013; Esbensen & Carson, 2009). Oftentimes, youth are told to toughen up or that surviving playground

bullying will make you strong, but research has shown that there can be several life-altering negative outcomes, including increased risk of involvement in delinquency, that result from being bullied (Wong & Schonlau, 2013). As the next section describes, fatalism (and related orientations) is another negative outcome that has been linked to bullying and other forms of victimization. Moreover, there is some evidence that fatalism can account for some of the relationship between bullying victimization and delinquency. The next section first describes how exposure to bullying and similar repeated adverse experiences can lead to fatalism. It then discusses the link between fatalism and delinquency.

The Link between Bullying and Fatalism

Fatalism is a dark lens through which one views the world. Hope is removed from future thoughts of improving life circumstances, consequences offer no deterrence from deviant behavior, and instant gratification becomes an everyday way of life (Gelder, Hershfield & Nordgren, 2013). Oftentimes, fatalistic adolescents do not see themselves living past the age of 19 (Duke, et al, 2011). Fatalism is often an outcome for youth who experience frequent and systematic exposure to negative stimuli, such as bullying (Navarro, Yubero & Larranaga, 2018).

The literature on fatalism can be confusing because this term is often used interchangeably with hopelessness and learned helplessness, which are interconnected concepts (Palker-Correll & Marcus, 2004; Jamieson & Romer, 2008; Trejnowska, Goodall, Rush, Ellison & McVittie, 2020). In an effort to bring together a better understanding of these terms, and how they may be associated with fatalism, I would like to highlight some similarities, but also some fundamental differences. Fatalism is a belief

that bad happenings are inevitable, and that no matter what one tries to accomplish, they will never meet their goals. Individuals, who are fatalistic, often perceive they will have an early death. (Haynie, Soller & Williams, 2014; (Duke et al., 2011). In comparison, hopelessness is perceiving that you have no control over future events and expecting that future events will turn out badly (Carson, Butcher & Mineka, 2000, p.239). “Hope” has also been shown to be a predictor of fatalism (Cidade, Moura, Nepomuceno, Ximenes & Sarriera, 2016). This would suggest that feelings, or the state, of hopelessness may be the road leading to fatalism with fatalism being the outcome or ultimate cultivation of hopeless events (Cidade, et al, 2016). Hopelessness and fatalism conjointly share similarities with learned helplessness (LH), which is defined as a behavioral response by one who has been subjected to an inescapable, repetitive negative stimuli that is consistently beyond their control, and leaves one feeling powerless that nothing they do will matter or change the outcome (Seligman, 1972, Hiroto and Seligman, 1975). However, learned helplessness differs in that it evolved from a more physiological inception (Seligman, 1972).

Research on LH provides a physiological explanation for why bullying should be positively related to fatalism. Seligman (1972) originally looked at the concept of LH to better understand how uncontrollable, repeat trauma, such as being bullied, could affect behavioral and psychological well-being. Seligman’s (1972) research perspective was that it is the lack of control in traumatic events that may lead to one becoming inactive or indifferent in the face of a threat.

²LH is a behavioral response by one who has been subjected to an inescapable, repetitive negative stimuli that is consistently beyond their control and leaves one feeling powerless and believing that nothing they do will matter or change the outcome (Seligman, 1972, Hiroto and Seligman, 1975). Inescapable callous events conferred to animals or to humans can result in extensive interference with subsequent conducive behavioral learning (Hiroto, 1974; Overmier and Seligman, 1967; Seligman and Maier, 1967). These findings would suggest a strong physiological component to the fatalistic behaviors of victims who are faced with an inescapable situation and repeatedly bullied both at school and/or online.

There has not been an abundance of research examining the link between bullying and fatalism, but a recent study examined the relationship between cyberbullying and fatalism (Navarro, Yubero and Larranaga, 2018). Cyberbullying is an especially intense form of bullying. While an adolescent can often leave school or change their environment in an effort to shield themselves from traditional bullying, cyberbullying, occurs via text messaging, photos, and social media outlets, thereby, tethering the victim to their aggressor for as long as the victim uses their electronics and social media (Navarro, Yubero and Larranaga, 2018; McCuddy and Esbensen, 2017). Navarro, Yubero and Larranaga (2018) sampled 643 adolescents from Spain across grades 7 through 10 and found that fatalism was positively associated with cyberbullying.

² This research used a shuttle box that was divided into two sections by an adjustable barrier. A dog was placed on one side where the shocks would take place, however, if he jumped the barrier, he could escape shock. This was called a 'naïve' dog as it took time and several tries before the dog was able to escape shock, altogether, by jumping the barrier almost immediately after entering the shuttle box. In contrast, what Seligman called a 'typical' dog was one that had been given uncontrollable shocks from the beginning and before any avoidance training had been conducted (see Seligman (1972). This dog would quietly lay down and whine until the shocks would subside, as opposed to trying to jump the barrier, and escape the repeated shocks. The typical dog appeared to give up and accept its predetermined fate without a fight (see Seligman, 1972). This paradox was subsequently termed, "Learned Helplessness."

Additional support for a link between bullying and fatalism comes from research on psychological control, which is defined as the parental manipulation of a child's psychological and emotional environment by chronically invasive and belligerent behaviors toward the child meant to reduce their own sense of validity and importance (Filippello, Sorrenti, Buzzai and Costa, 2015).

Although, research has yet to classify bullying behaviors as a form of psychological control, such an argument could be made. Filippello and colleagues (2015) examined perceived parental psychological control and LH, and whether this relationship is mediated by school self-efficacy.

They focused on school self-efficacy because the likelihood of finding children who display LH behaviors within classrooms across the country is quite high (Filippello et al., 2015). This study included 186 adolescents ranging in age from 14-18 (103 males, 83 females). Findings indicated a statistically significant negative correlation between psychological control and academic competence. Findings further showed that perceived psychological control correlated with low self-esteem, and with a robust day-to-day vacillation in self-efficacy, while self-efficacy was negatively associated with LH (Filippello et al., 2015). These findings would suggest that during this important development period, increased psychological control lowers an adolescent's feelings of competence and increases their perceived inability to control their circumstances. The psychological control serves as a repetitive aversive event that the adolescent must inescapably endure. This adolescent often views school as overwhelming and may adopt the fatalistic viewpoint that they will never succeed in school no matter what they do (Filippello et al., 2015). Although, this research is specific to parental psychological

control, psychological control is similar to bullying in several respects, (e.g. exerting control over another person) and both types of experiences are linked to similar negative outcomes, including low self-esteem, decreased academic success, feelings of hopelessness with a loss of power that may lead to low motivation for future goals (Alm et al., 2019; Boland, Lian & Formichella, 2005; Cidade et al., 2016).

Fatalism and Delinquency

As described above, research suggests that bullying and other types of repeat victimization may lead to fatalism. Although research is limited and often indirect, some studies suggest that fatalism may increase participation in delinquency or mediate the victimization-delinquency relationship. For example, research by Brezina (2000) suggests that fatalism may mediate the relationship between authoritative control and delinquency. Specifically, authoritative control may lead to fatalistic views, thereby, generating negative outcomes as youth use this fatalistic view to justify exerting their personal independence through delinquent behavior. Brezina (2000) argues that delinquency may serve as a strategy that enables youth to regain the perception of personal control in an attempt to avoid negative outcomes associated with feelings of powerlessness. He examined these relationships using three waves of longitudinal data from the Youth in Transition (YIT) survey, which sampled 2,213 male adolescents. Specifically, he tested three hypotheses. (1) Adult control on a youth's need for independence may lead to feelings of fatalism in youth. (2) Fatalistic views contribute to delinquency and (3) Juvenile delinquency allows adolescents to exert their independence in an attempt to mitigate their feelings of fatalism. Findings indicated statistically significant support for hypothesis (1) in that adult control can lead to feelings of fatalism in youth. Statistically

significant support was also found for both hypotheses (2) and (3). Fatalism is statistically significantly related to delinquency and its effect is mediated by anger, offering further empirical support that youth engage in delinquency to relieve their feelings of fatalism, and take back their perception of power. Thus, Brezina's (2000) findings suggest a link among loss of power, fatalism and delinquency.

Youth who are presented with repeat negative stimuli, such as physical, verbal, and online bullying, will begin to search for behavioral coping mechanisms in an attempt to evade or lessen distressing events and threatening environments (Navarro, Yubero & Larranaga, 2018). Oftentimes, these coping mechanisms result in diminishing the youth's present situation, such as missed school and subsequent failing grades, or diminished feelings of self-worth and an increase in behaviors of self-harm. Much like being bullied, fatalism is also comprised of a sense of powerlessness, an inescapable set of negative circumstances, and the inability to improve one's present and future affairs (Navarro, Yubero & Larranaga, 2018). Interestingly, past research has identified, a type of structural fatalism that can often come from feeling powerless due to the current social structures within our society, such as slavery, and has been suggested that fatalism may exist as a cognitive orientation (Acevedo, 2005).

Other research has focused, specifically, on one component of fatalism: expectation of an early death. Wolff, Intravia, Baglivio & Piquero (2020) examined whether adopting street code values contributed to an adolescent's expectation of early death. This research draws on Anderson's (1994, 1999) work on Code of the Street, which suggests that among African Americans living in low-income urban environments, "respect" is an important factor involved in a youth surviving the streets and reducing

their chances of victimization. Youth maintain their “respected status” by participating in violence, and other delinquent behaviors, or suffer the ensuing consequences of having other street youth prey upon their perceived weakness (Anderson, 1999). Wolff and colleagues’ (2020) research used a sample of juvenile serious offenders who were committed to juvenile detention centers to examine subcultural beliefs and how violent and deviant environments may affect an adolescent’s anticipation of an early death. Results indicated that the street code mindset significantly predicts anticipated early death in youth across all genders, races and ethnicities. Interestingly, only 9.6% reported anticipating an early death for themselves, most of the sample could see themselves living well past 35 (Wolff et al., 2020). These findings suggest that a victim may participate in delinquent behaviors to prevent further victimization, which then places them in high-risk environments that could increase the likelihood of anticipating an early death (Anderson, 1994; Wolff et al., 2020).

Social environment can play a substantial role in the development of an adolescent’s individual perceptions (Haynie, Soller & Williams, 2014). Haynie, Soller & Williams (2014) examined the influence of friend’s and schoolmate’s attitudes regarding fatality on an individual adolescent, and their choice to offend. They argue that adolescents place an increased level of importance on friends during this critical developmental period, while the majority of their waking hours are spent at school or in a social setting involving peers. If many of their friends from school are looking at their lives with little future perspective and participating in delinquent behaviors in a ‘here and now’ approach, it is not unreasonable that they may adopt their friend’s outlook as their own and participate in those same behaviors. Fatalistic behaviors can often appear

surreptitiously hedonistic as there is no regard for future consequences, only the instant gratification of the here and the now. Using data from Add Health on 9,584 students across 113 schools, these researchers found that perceptions of fatalism are robustly associated with offending, further suggesting that friends and school mates, along with the school environment as a whole, have a conspicuous impact on an adolescent's personal outlook (Haynie, Soller & Williams, 2014).

Individual perceptions of early death have led to increased risk-taking behaviors in adolescents and have been shown to contribute to negative outcomes transitioning into young adulthood. Researchers conducted a 90 minute, in home interview for 7,202 young adults, nationwide, across 3 points in time, 1995, 1996 and 2001 (Duke et al., 2011). Participants were 18 to 26 years at the time of wave 3. This study sought to examine the relationship between youth perceptions of early death across time, and the effect on risk-taking behaviors. Demographic components were shown to be significantly correlated with long-term perceptions of early death. Approximately one in four participants reported experiencing the perception of early death at a point in time, while one in 17 continued to experience perceptions of early death into early adulthood. Findings further indicated that long-term perceptions of early death were significantly correlated with having at least one parent who received government assistance (Duke et al., 2011). Persistent perceptions of early death are significantly associated with self-injurious behaviors, such as violent offending and other criminal behaviors, and can result in diminished self-esteem, emotional maladjustment, low academic performance or self-efficacy, and diminished life opportunities (Duke et al., 2011).

Prior research looked at the influence that direct and indirect violent experiences could have during adolescence to see if this could account for a decrease in individual survival expectations, and how this may correspond with increased delinquent behaviors (Warner & Swisher, 2014). Researchers used data from the National Longitudinal Study of Adolescent Health to examine adolescents from 7th grade through 12th grade across 80 schools to determine direct and indirect effects of violent experiences. Results indicated victims of child abuse had a significantly decreased likelihood of expected survival, while violent victimization was also correlated with a decrease in survival expectations. School violence was shown to be negatively associated with expected survival at the bivariate level, but after controlling for individual demographics, became nonsignificant. Results further indicated that perpetrating violence was statistically significantly and negatively associated with expectations of survival (Warner & Swisher, 2014). Findings suggest that exposure to early violence interrupts the positive trajectory of the adolescent developmental process. This disruption can result in unfavorable, negative outcomes, thereby, jeopardizes an individual's future outlook (Flores-Barrera, Thomases & Tseng, 2020; Debnath, Tang, Zeanah, Nelson & Fox, 2020; Tseng, Lewis, Lipska & O'Donnell, 2007). A diminished or non-existent future outlook can predispose an adolescent to participate in deviant behaviors that further impair personal well-being and feelings of longevity (Warner & Swisher, 2014; Duke et al., 2011; Haynie, Soller & Williams, 2014).

Fatalism as a moderator of the relationship between bullying victimization and delinquency: How fatalism influences the decision to offend

Just as fatalism is likely to have a direct effect on delinquency by making long term consequences of behavior less relevant, the relationship between victimization and offending is likely to be stronger for youth with higher levels of fatalism because their decision-making and their actions reflect an increased need for instant gratification. There would be no reason to consider future consequences or outcomes if one does not believe there will be a future (Gelder, Hershfield & Nordgren, 2013). No research has explicitly examined whether fatalism moderates the relationship between bullying victimization and delinquency, but rational choice theory suggests that this relationship exists.

Rational Choice Theory

Although, several perspectives can often be used to explain similar criminal behaviors, for this study, I would like to view delinquency through the lens of the Rational Choice Theory. Rational Choice Theory (RCT) posits that a potential offender will weigh the costs and benefits of a crime before committing the act (Gelder, Hershfield & Nordgren, 2013; Wright, Caspi, Moffitt & Paternoster, 2004). The choice to engage in delinquency has often been shown as an impulsive choice that is solely focused on an immediate reward with little regard for long term consequences (Wright et al., 2004).

Perceptions of fatalism can have a profound effect on a youth's choice to engage in delinquent behaviors (Haynie, Soller & Williams, 2014). Overwhelmingly, research has shown that adolescence is an important developmental period in life (Haynie, Soller & Williams, 2014; Stoddard, Zimmerman & Bauermeister, 2011; Stoddard, Henly, Sieving & Bolland, 2011; Warner & Swisher, 2014). Youth experiencing feelings of fatalism exhibit very little consideration for what may happen to them, as the future holds

very little meaning, and inevitable failure will be the all-encompassing result (Bolland, Lian & Formichella, 2005). In addition, transitioning from an optimistic futuristic outlook to one influenced by fatalism can diminish one's ability to their future life (Gelder, Hershfield & Nordgren, 2013). This transition is often associated with the need for instant gratification and can result in more impulsive decisions.

Instant gratification is a strong characteristic of delinquency (Gelder, Hershfield & Nordgren, 2013). It is the impulsivity that "...leads the criminally prone to neglect the long-term consequences of their behavior to focus instead on their immediate benefits" (Gottfredson & Hirschi, 1990; Wilson & Herrnstein, 1995; Wright et al., 2004). Additionally, qualitative studies have found a link between fatalism and the choice to offend (Jacobs & Cherbonneau, 2017).

Researchers suggest that there is a 'nerve management' component involved within the decision-making process (Jacobs & Cherbonneau, 2017). This was a recent study that included interviews with 35 active car thieves, specifically, asking questions about their cognitive thought processes leading up to the offense. Findings showed that in order to neutralize the fear of sanctions, offenders would consciously adopt a fatalistic view to allow them to proceed with their crime (Jacobs & Cherbonneau, 2017). "In being *fatalistic*, offenders essentially take the power away from fear" (Jacobs & Cherbonneau, 2017, pg. 625). Subsequently, when one weighs the cost and benefits of the riskier behavior, the presence of fatalism will likely compel the offender to prioritize instant gratification over any possible consequence that may happen at an unknown time, and in the unknown future (Gelder, Hershfield & Nordgren, 2013; Wright et al., 2004).

RCT combined with research on fatalism and the decision-making process suggests that fatalism will moderate the relationship between bullying and offending such that adolescents who have a history of bullying and experience feelings of fatalism have a higher likelihood of delinquency than adolescents who have a history of bullying and do not experience feelings of fatalism. This is because adolescents, who experience feelings of fatalism, do not feel the same fear of consequences that others may. They have set no goals to attain as they foresee no future opportunity for themselves. They do not see past the need for today's instant gratification (Gelder, Hershfield & Nordgren, 2013).

Summary

Although, there has been much research on bullying and victimization over the past few decades, few have incorporated fatalism as a component. Past research has indicated that a victim of bullying may experience maladaptive difficulties, physical adjustment problems or predicted psychopathology, but these vague descriptions could encompass a great deal of difficulties or pathologies without offering the specifics that are necessary in understanding the overall dynamic (Payne and Hutzell, 2017; Barker et al., 2008). If a bullied youth is described as feeling "hopeless," across several events, at which point does an adolescent move from hopeless to fatalistic? In an effort to fully consider possible contributing factors and outcomes of traditional bullying and cyberbullying, fatalism is an important facet in understanding the mindset and outlook of the victim and how this mindset leads to increased levels of offending. Rational Choice Theory has been previously associated with fatalism, but in a more limited capacity (Brezina et al., 2009).

Current Study

The current study contributes to the existing literature on fatalism and bullying victimization by investigating how fatalism may affect the relationship between bullying victimization and delinquency. I analyze the existence and importance of fatalism as a potential factor and how fatalism may increase an adolescent's choice to offend. I argue that bullied youth will engage in higher levels of delinquency and be more fatalistic. Furthermore, I posit that adolescents who are more fatalistic will engage in higher levels of delinquency and fatalism will serve as a mediator in the relationship between bullying and delinquency. Additionally, I postulate that fatalism will moderate the relationship between bullying and delinquency such that adolescents who have a history of bullying and experience feelings of fatalism will have a higher likelihood of delinquency than adolescents who have a history of bullying and do not experience feelings of fatalism. The theoretical model of my hypothesized relationships is shown in Figure 1.

Although fatalism has previously been significantly correlated with delinquency (Duke et al., 2011; Gelder, Hershfield & Nordgren, 2013), few, if any, have looked at how bullying victimization may lead to fatalism and how this confluence affects the youth's choice to offend. The following hypotheses will be tested:

H₁: Adolescents who are victims of bullying will engage in higher levels of delinquency and will be more fatalistic.

H₂: Adolescents who are more fatalistic will engage in higher levels of delinquency and fatalism will mediate part of the relationship between bullying and delinquency.

H₃: Fatalism will moderate the relationship between bullying and offending such that adolescents who have a history of bullying and experience feelings of fatalism have a higher likelihood of delinquency than adolescents who have a history of bullying and do not experience feelings of fatalism.

Chapter Three

Data and Methods

To investigate the role of fatalism in shaping delinquency, I use data collected, as part of the University of Missouri - St. Louis Comprehensive School Safety Initiative (UMSL CSSI). The UMSL CSSI study examined many different elements that may contribute to school violence, including bullying behaviors and victimization, while also analyzing levels of future orientation and potential outcomes such as delinquency.

Data from the UMSL-CSSI project was collected using a 3-wave longitudinal design that spans across three years starting with students in the 7th and 8th grades. Students were sampled from 12 middle schools within six school districts located in a large county in the Midwest. Researchers conducted Wave 1 in-person surveys between January and May of 2017. Parental consent was obtained for 3,664 (78%) out of approximately 4700 7th and 8th grade students currently enrolled in the 12 middle schools. Of the active sample, 3,640 (99.4%) agreed to complete the online survey through Qualtrics. Two or more research assistants were present at the time of administration to ensure survey completion. Concurrently, for Wave 2, researchers conducted more than 100 visits to 33 schools, thereby, acquiring an 86.4% (N=3,165) response rate. As students transitioned into high school, the response rate for Wave 3 dropped to 75%

(n=2,753). Survey questions for this study focus on school bullying and cyberbullying victimization and their causes and consequences.

Variables

Data from Wave 2 will be used for delinquency, and Wave 1 will be used for fatalism, bullying victimization and control variables. List wise deletion was used after deleting the missing cases and n = 2897 remaining. Most cases were lost because they did not complete Wave 2 of the study. Descriptive statistics for all variables can be found in Table 1. Appendix A. includes all items included in each scale.

Table 1
Descriptive Statistics of Independent, Mediating, and Dependent Variables (N=2897)

	Mean/Freq	SD	Range
Race			
White	.41		0-1
Black	.40		0-1
Other	.20		0-1
Gender			
Male	.46		0-1
Age	13.13	.757	10-16
Count Traditional Bullying	.60	1.42	0-5
Count Cyberbullying	.22	.873	0-5
Categorical Traditional Bullying “never bullied”	80.2		0-1
Categorical Traditional Bullying “bullied 1 time”	5.7		0-1
Categorical Traditional Bullying “bullied 2 or more times”	14.1		0-1
Categorical Cyberbullying	95.4		0-1

“never cyberbullied”			
Categorical Cyberbullying “cyberbullied 1 time”	3.1		0-1
Categorical Cyberbullying “bullied 2 or more times”	1.5		0-1
Fatalism	2.88	1.12	1-5
Delinquency	1.08	1.84	0-13
All Parent Monitoring	3.92	.636	1-5
Impulsivity	2.83	.776	1-5
Anger	2.89	1.10	1-5
Parental Attachment	3.74	.928	1-5
Delinquent Peers	1.22	.397	1-5
Safe School	2.20	1.04	1-5
Victimization	1.44	2.83	0-25
Self Esteem	3.93	.808	1-5
Opportunity Awareness	2.27	.778	1-5
Self-Efficacy	3.77	.812	1-5

DEPENDENT VARIABLE

Delinquency

Delinquency is measured at wave 2 using a 13-item general variety score.

Participants were asked to report how many times they had engaged in 13 different delinquent acts within the past 6 months and includes questions such as, lied about your age to get into someplace or to buy something, hit someone with the idea of hurting them, and sold marijuana or other illegal drugs. Response categories ranged from 0 for no crime committed to 5 or more. Due to the distribution showing a positive skew for the

individual items, a variety scale was created by dichotomizing each delinquency item and subsequently adding the sum of all items (McCuddy, 2021). Bullying has been linked to a wide range of negative outcomes which is why combining different types of delinquency can be beneficial (Jackson et al., 2013; Wong & Schonlau, 2013).

INDEPENDENT VARIABLES

Fatalism

Fatalism is measured using a single item that states, “bad things are meant to happen.” Participants were asked to report their level of agreement using a 5-point scale beginning with *strongly disagree* (=1) continuing through to *strongly agree* (=5). A single item was used because the fatalism scale has lower reliability. A single item measure may have inhibited a true reflection of the key factors of fatalism within the questions. Instant gratification, no fear of future consequences and little regard for future ambitions or goals are important facets to examine when identifying a fatalistic outlook.

In an attempt to offer a more comprehensive view of this variable, additional analyses will be conducted replacing fatalism with self-efficacy ($\alpha = 0.80$). Self-efficacy offers a broader view of one’s self-belief about themselves and how they may approach future events.

Bullying Victimization

Bullying victimization is quantified through a 1-item *Count Traditional Bullying* measure that asks respondents how many times they have been bullied in the past 6 months. Answers range from 0, indicating no history of bullying victimization to as many as 5 times that they have been bullied in the past 6 months.

Cyberbullying victimization parallels school bullying in most comparisons, except location. Unlike traditional bullying, cyberbullying pursues the victim through the internet or online social networks which “tethers” the victim to their abuser (McCuddy & Esbensen, 2017). To be consistent with the traditional bullying measure, *Count Cyberbullying* is a 1-item measure and asks how many times a respondent has been cyberbullied in the past 6 months with responses ranging from 0 to five or more times.

The above bullying measures were used because Behavior Specific Bullying measures were unavailable at the time of Wave 1. Research has shown both advantages and disadvantages to using a single-item measure. A potential disadvantage could be that a decreased level of importance is placed on the problem of bullying, whereas behaviorally specific questions highlight the intricacies of what this type of victimization reveals (Esbensen & Carson, 2009). If the single item measure is unable to capture the full capacity of what bullying can entail, students may under report, not thinking themselves a victim of bullying, which may result in inaccurate data gathering and unreliable results. However, a single-item measure can reinforce the consistency and reliability that the question is clear and directly related to the research question without additional survey questions that may cause confusion and increase the potential for response error. A single-item measure has also been shown to reduce the chances of common method variance within a more complex measurement construct. Interestingly, results have also shown that outcomes can remain resolutely constant no matter which form of measurement was used (Esbensen & Carson, 2009; Takuya, Grading, Strohmeier, Solomontos-Kountouri, Trip & Bora, 2016).

To explore additional analyses for more vigorous findings, each count bullying variable will be transformed into a *Categorical Traditional Bullying* and a *Categorical Cyberbullying* measure. There will be three possible responses for each variable, “never bullied,” “bullied one time,” and “bullied 2 or more times,” with “never bullied” serving as the reference category.

CONTROL VARIABLES

Key individual, community and criminogenic covariates were included to control for factors that may confound fatalism’s direct and indirect influence on delinquency. Each measure is briefly defined for better understanding and predominately derived from previous school-oriented research. We start with measures that reflect the outlook or mindset of the individual. *Self-Esteem* includes 5 items that focus on the respondent’s current view of themselves and their level of value with questions, such as, “I feel good about myself,” or “I am able to do things as well as most other people ($\alpha = 0.77$).” *School commitment* is also a measure made up of 5 items that seeks to capture a student’s individual level of commitment to school by asking how much they agree or disagree with questions such as, “Homework is a waste of time” ($\alpha = 0.70$). *Self-efficacy* is comprised of 4 items that look for the student’s level of agreement to determine how much they may believe that they can or cannot complete a task or attain a set goal ($\alpha = 0.77$). *Limited opportunity awareness* is a 4-item scale that refers to the level of agreement that a student has in regard to opportunities in comparison with others. For example, do they believe that another has more opportunity than themselves due to ill-gotten gains or simple birthright or do they believe they have the same opportunities as others. ($\alpha = 0.74$).

To measure individual feelings of school safety and the threat of victimization.

Feelings of safety at school is comprised of two items that gauge individual feelings of safety while at school with prompts like, “Safe at school/have to watch back” ($\alpha = 0.71$).”

To determine potential differences between bullying victimization and general victimization, *Victimization* will be controlled for by using a 7-item frequency score.

Questions such as, “Been hit by someone who wanted to hurt you?” and “Been attacked by someone with a weapon or by someone trying to seriously hurt or kill you?” will be asked, specifically concentrating on the individual’s previous 6 months ($\alpha = 0.62$).

Peers are an important influence in an adolescent’s choices (Jackson et al., 2013).

Delinquent peers have long been associated with an increased choice to offend (Haynie, Soller & Williams, 2014). The measure, delinquent peers, includes a 9-item scale with prompts such as, “Friend’s steal < \$50” or “Friends attack with a weapon” ($\alpha = 0.85$).

Research indicates that victimization can often generate negative emotions that can contribute to a loss of control (Cuevas et al., 2007; Lee et al., 2020). Previous research has shown anger to be a stronger correlate for cyberbullying than traditional bullying, therefore this study will control for those differences (Yang et al., 2020; Lonigro et al., 2015). The presence of *Anger* is measured using three items that ask a respondent to determine their level of agreement on prompts such as, “Lose temper pretty easily” and “Feel like hurting people when angry” ($\alpha = 0.79$). Another helpful measure of self-control is *Impulsivity*, and includes 3-items that ask, “I often act without stopping to think,” or “I often do whatever brings me pleasure here and now” ($\alpha = 0.44$).”

Victims who have a support network, such as family, have been shown to have a decrease in the likelihood of a negative outcome (Stadler, Feifel, Rohrman, Vermeiren

& Poustka, 2010; Pan, Yang, Liu, Chan, Liu & Zhang, 2020). According to Bowlby (1982), and the attachment theory, children who are surrounded by secure parental and social attachments will routinely view themselves in higher esteem than those without secure attachments. To identify levels of support, *Parental attachment* is assessed using a three-item scale that includes questions such as, “I feel like we can talk about anything,” “I often ask them for advice,” and “They always trust me ($\alpha = 0.78$).” *Parental Monitoring* captures both offline and online monitoring and is evaluated using a 5-item scale that includes prompts such as, “Parents know where I am” or “Parents limit electronic device usage ($\alpha = .627$).”

Lastly, basic demographic characteristics are included. *Sex* is a dichotomous variable with two possible choices (Males = 1; Females = 0). *Race* is differentiated using a categorical measure with respondents coded as White, Black, and Other, using White as the reference category.

Analytic Strategy

The goal of this study is to explore whether fatalism mediates and/or moderates the relationship between bullying and delinquency. First, bivariate relationships will be explored by examining correlations among the variables. Second, mediation will be explored using the Baron and Kenny (1986) method. This study suggests that bullying victimization will have a direct relationship with delinquency without fatalism. Additionally, bullying will predict fatalism and then fatalism will have a direct relationship with delinquency. I would like to establish a chain of influence that shows that bullying influences fatalism, thereby, fatalism influences delinquency (Baron & Kenny, 1986).

For this study, evidence of mediation requires establishing the following relationships:

1. Delinquency is related to bullying by regressing delinquency on bullying and control variables, but with fatalism excluded.
2. Bullying is related to fatalism by regressing fatalism on bullying victimization and control variables.
3. Fatalism is related to delinquency and the relationship between bullying victimization and delinquency is reduced (partial mediation) or is non-significant (full mediation). This regresses delinquency on fatalism, bullying, and control variables.

Third, to assess moderation, I will regress delinquency on bullying victimization and fatalism, including an interaction term created by multiplying bullying victimization with fatalism. If this interaction is significant, there is evidence of moderation.

Given the limited reliability of the fatalism measure, these analyses will be repeated replacing fatalism with self-efficacy. This additional measure is important as it captures key factors within the realm of fatalism. Originally, Bandura (1977) defined self-efficacy as a reflection of one's own view of their accomplishments and deficiencies based on their personal perception of response from others. More recent research suggests a strong relationship exists between positive self-efficacy and higher self-belief, much like fatalism's belief in one's ability to control their own future (Bandura, 1977; Bandura, Cioffi, Taylor & Brouillard, 1988; Natvig, Albrektsen & Qvarnstrom, 2003). Very little research, if any, has previously looked at this dynamic as a factor of fatalism.

To increase the robustness of each analysis, alternative models will be examined. First, the models will be repeated by using only one measure of bullying at a time because these measures have a moderately high correlation with one another. Second, each analysis will be replicated using the categorical bullying measures, in the model together and one at a time.

This study uses OLS regression for continuous variables, fatalism and self-efficacy. Delinquency was unable to be run using an OLS because it violated the assumption of normal error terms, therefore, negative binomial regression will be used to properly analyze delinquency models.

Bivariate Statistics

Preliminary analyses were conducted to explore the bivariate correlations among the key variables. As anticipated, the number of times a youth reported being a victim of traditional bullying is statistically significant and positively correlated with the number of different types of self-reported delinquency ($r = .068, p < .001$). Cyberbullying victimization also shows a statistically significant and positive correlation with delinquency ($r = .077, p < .001$). As hypothesized, fatalism ($r = .065, p = .001; p < .001$) is positively related to delinquency while self-efficacy is negatively associated ($r = -.053, p = .005$). These relationships are consistent with the hypothesis that having a fatalistic outlook or lower levels of self-efficacy increases the likelihood of an individual making the choice to offend (Warner & Swisher, 2014).

Table 2 Means, Standard Deviation and Pearson Correlation matrix for continuous variables (n = 2889)

	M	SD	1	2	3	4	5
Traditional Bullying	.60	1.420	1				
Cyberbullying	.22	.873	.480**	1			
Fatalism	2.88	1.121	.032	.058**	1		
Self-Efficacy	3.77	.812	-.084**	-.097**	.074**	1	
Delinquency	1.08	1.841	.068**	.077**	.065**	-.053**	1

Fatalism is not significantly associated with traditional bullying ($r = .032, p = .082$), however, the results do indicate there is a statistically significant relationship between fatalism and cyberbullying victimization ($r = .058, p = .002$). Self-efficacy is significantly related to both traditional bullying ($r = -.084, p < .001$) and cyberbullying victimization ($r = -.097, p < .001$) indicating that as bullying victimization, in either form increases, an individual's self-efficacy decreases.

In an effort to evaluate the robustness of the above findings, both traditional bullying and cyberbullying measures were transformed into categorical measures that included three categories each, "never bullied," (reference category) "bullied one time," and "bullied two times or more," and a chi square test of independence was used to assess their relationships with fatalism. Consistent with the count traditional bullying measure, the categorical traditional bullying measure was also statistically non-significant $X^2(8, N = 2870) = 6.7, p = .092$). However, categorical cyberbullying was significantly related to fatalism $X^2(8, N = 2767) = 7.2, p = .022$) paralleling the count cyberbullying measure. A frequency analyses indicated that 80.2% of respondents reported never have been bullied, while 5.7% reported that they had been traditionally bullied one time with 9.8% reporting that they strongly agreed with "If bad things happen, it is because they were meant to

happen;” 14.1% reported being traditional bullied 2 or more times. In comparison, 95.4% of respondents reported never have been cyberbullied, while 3.1% reported being cyberbullied 1 time with 10.5% indicating that they strongly agree with the statement, “If bad things happen, it is because they were meant to happen;” 1.5% disclosed 2 or more experiences of cyberbullying victimization. A one-way ANOVA was also run to test the association between the categorical measures of bullying victimization and fatalism, and these relationships were non-significant for both traditional bullying ($F([2, 2867]) = 1.532, p = .216$) and cyberbullying ($F([2, 2764]) = 2.636, p = .072$).

For comparison, a one-way ANOVA was run using self-efficacy in place of fatalism as a potential correlate for the categorical bullying variables. Interestingly, findings showed that self-efficacy was significantly related to traditional bullying ($F([2, 2867]) = 8.903, p < .001$), but not cyberbullying victimization ($F([2, 2764]) = 1.975, p = .139$).

A one-way ANOVA was used to examine the relationship between each categorical bullying variable and delinquency. Findings indicated that these measures of traditional bullying and cyberbullying are significantly related to the number of different types of delinquency a youth reports engaging in ($F([2, 2867]) = 4.763, p = .009$) and ($F([2, 2764]) = 3.448, p = .032$), respectively. A Tukey post hoc analysis further showed that “never bullied” (reference category) reported fewer types of delinquent acts than those who report 2x or more bullying victimization ($p = .011$). This would indicate that those who had never experienced bullying victimization were less likely to engage in delinquent acts, while those who are victims of bullying, experience some form of

influence that predisposes them to the increased likelihood that they will choose to offend.

Multivariate Statistics – Mediation Analyses

Regression Table 1

Negative Binomial Regression of Delinquency on Traditional and Cyberbullying and controls, excluding fatalism (N = 2,767).

Variable	<i>B</i>	<i>SE</i>	<i>Sig.</i>
Male	.004	.056	.946
Black	.409	.068	.000***
Other Race/Ethnicity	.227	.079	.004*
Age	-.096	.037	.010**
W1_Parental Monitoring	-.253	.047	.000***
W1 Impulsivity	-.002	.038	.965
W1 Anger	.237	.029	.000***
W1 Par. Attachment	-.111	.033	.001***
W1 Del. Peers	.516	.076	.000***
W1 School Safety	.025	.029	.407
W1 Victimization	.052	.009	.000***
W1 Self Esteem	-.048	.041	.247
W1 Opportunity Awareness	.004	.040	.926
W1 Self Efficacy	-.031	.038	.418
W1 Traditional Bullying	.001	.021	.969
W1 Cyber Bullying	.005	.034	.881

*** $p < .001$. ** $p < .01$. * $p < .05$.

Regression analyses examining if fatalism mediates the relationship between both traditional and cyberbullying victimization and delinquency are presented in regression tables 1-3. Control variables are included in all of the regression analyses to reduce the likelihood that the findings are spurious. An alpha of .05 is used to determine if relationships are statistically significant.

Step 1 of the mediation analysis involves examining the relationship between key independent variables (bullying victimization) and the dependent variable (delinquency) excluding the mediator. A negative binomial regression was used to examine the relationship of both traditional and cyberbullying count measures and control variables

with the number of different types of delinquent acts a youth reported, omitting fatalism (see Table 1). Findings show that neither traditional nor cyberbullying victimization were significantly related to delinquency. Instead, delinquency is significantly correlated with several controls such as parental monitoring, anger, parental attachment, delinquent peers, and general victimization. In addition, black youth report engaging in more types of delinquency than white youth (the reference group). Results were unable to support the first hypothesis that adolescents who are victims of traditional and cyberbullying will engage in higher levels of delinquency.

Regression Table 2

OLS Regression of Fatalism on Traditional Bullying, Cyberbullying, and controls (N = 2,767).

Variable	<i>B</i>	<i>SE</i>	<i>Sig.</i>
Male	-.059	.0444	.182
Black	-.054	.0535	.315
Other Race/Ethnicity	.017	.0612	.779
Age	.012	.0290	.680
W1_Parental Monitoring	-.014	.0400	.733
W1 Impulsivity	.007	.0306	.824
W1 Anger	.019	.0234	.424
W1 Par. Attachment	-.002	.0275	.956
W1 Del. Peers	.039	.0643	.540
W1 School Safety	-.007	.0247	.762
W1 Victimization	.004	.0087	.669
W1 Self Esteem	.015	.0345	.674
W1 Opportunity Awareness	.106	.0331	.001***
W1 Self Efficacy	.062	.0318	.053
W1 Traditional Bullying	-.005	.0184	.769
W1 Cyber Bullying	.013	.0290	.647

*** $p < .001$. ** $p < .01$. * $p < .05$.

Step 2 of the mediation analysis involves assessing the relationship between the independent variables of interest (bullying victimization) and the mediator (fatalism).

Table 2 reports the OLS regression model for the effects of the count measures for both

types of bullying on fatalism. Findings show no significant relationship between fatalism and traditional or cyberbullying victimization. Fatalism was shown to be statistically significant in relation to awareness of the opportunities of others, but not with any other controls.

Regression Table 3

Negative Binomial Regression of Delinquency on Fatalism, Traditional Bullying, Cyberbullying, and controls (N = 2,767).

Variable	<i>B</i>	<i>SE</i>	<i>Sig.</i>
Male	.010	.0563	.859
Black	.415	.0682	.000***
Other Race/Ethnicity	.227	.0792	.004**
Age	-.095	.0370	.010**
W1_Parental Monitoring	-.252	.0476	.000***
W1 Impulsivity	-.002	.0389	.964
W1 Anger	.235	.0290	.000***
W1 Par. Attachment	-.112	.0330	.001***
W1 Del. Peers	.510	.0769	.000***
W1 School Safety	.026	.0299	.384
W1 Victimization	.051	.0099	.000***
W1 Self Esteem	-.051	.0419	.225
W1 Opportunity Awareness	-.008	.0415	.849
W1 Self Efficacy	-.036	.0383	.350
Fatalism	.036	.0253	.158
W1 Traditional Bullying	.001	.0218	.955
W1 Cyber Bullying	.004	.0349	.908

*** $p < .001$. ** $p < .01$. * $p < .05$.

The final step in the mediation analysis is to see if the relationship between the independent and dependent variables is reduced by the inclusion of the mediator. The analysis shown in Table 3 examines to see if fatalism reduced the relationship between bullying victimization and delinquency. Fatalism is shown to be non-significant, thus, fatalism does not mediate the relationship between either count measure of bullying victimization and delinquency. Findings show, as in the above Table 1, that delinquency is significantly correlated with several controls such as parental monitoring, anger,

parental attachment, delinquent peers, and general victimization, and black individuals engage in more forms of delinquency than white youth. The results in Tables 1 and 3 indicate that there is not support for hypotheses 1-3.

The robustness of these results was examined by looking at several alternate models. First, the models were replicated including only one measure of bullying at a time, and the findings remained substantively the same. Second, these analyses were repeated using the categorical bullying measures, including analyzing bullying measures one at a time, but the results did not change. Results from models using Categorical bullying measures that correspond with the above models are represented in tables 1-3 in the Appendices.

Regression Table 4

Negative Binomial Regression of Delinquency on Traditional Bullying, Cyberbullying, and controls, without Self Efficacy (N = 2767).

Variable	<i>B</i>	<i>SE</i>	<i>Sig.</i>
Male	.009	.056	.871
Black	.410	.068	.000***
Other Race/Ethnicity	.222	.079	.005**
Age	-.095	.037	.010**
W1_Parental Monitoring	-.256	.047	.000***
W1 Impulsivity	.001	.038	.988
W1 Anger	.235	.029	.000***
W1 Par. Attachment	-.118	.032	.000***
W1 Del. Peers	.507	.076	.000***
W1 School Safety	.023	.029	.433
W1 Victimization	.051	.009	.000***
W1 Self Esteem	-.064	.033	.101
W1 Opportunity Awareness	-.008	.045	.841
W1 Traditional Bullying	.034	.022	.182
W1 Cyber Bullying	.001	.021	.975
W1 Fatalism	.005	.034	.881

*** $p < .001$. ** $p < .01$. * $p < .05$.

Table 4 duplicates the findings from Table 1 above. The same controls that were shown to be significantly related to delinquency indicate that youth with lower levels of parental monitoring, higher levels of anger, less parental attachment, more delinquent peers, and higher levels of victimization engaged in more forms of delinquent behavior.

Regression Table 5

OLS of Self-Efficacy on Traditional Bullying, Cyberbullying, and controls (N = 2,767).

Variable	<i>B</i>	<i>SE</i>	<i>Sig.</i>
Male	-.003	.027	.920
Black	.115	.032	.000***
Other Race/Ethnicity	.075	.037	.045*
Age	-.022	.018	.212
W1_Parental Monitoring	.141	.024	.000***
W1 Impulsivity	-.079	.019	.000***
W1 Anger	.013	.014	.347
W1 Par. Attachment	.152	.016	.000***
W1 Del. Peers	.063	.039	.101
W1 School Safety	.070	.015	.000***
W1 Victimization	.010	.005	.052
W1 Self Esteem	.370	.020	.000***
W1 Opportunity Awareness	.036	.020	.079
Fatalism	.064	.012	.000***
W1 Traditional Bullying	.009	.011	.441
W1 Cyber Bullying	-.025	.018	.154

*** $p < .001$. ** $p < .01$. * $p < .05$.

The next model, shown in Table 5, used OLS regression to regress self-efficacy onto both count measures of traditional and cyberbullying victimization. Self-efficacy was statistically related to black (relative to white), parental monitoring, impulsivity, parental attachment, school safety, self-esteem and fatalism at $p < .001$. Consistent with previous analyses, count variables traditional and cyberbullying victimization was shown to be non-significant.

Regression Table 6

Negative Binomial Regression of Delinquency on Traditional Bullying, Cyberbullying, and controls, including Self-Efficacy (N = 2,767).

Variable	<i>B</i>	<i>SE</i>	<i>Sig.</i>
Male	.010	.056	.859
Black	.415	.068	.000***
Other Race/Ethnicity	.227	.079	.004**
Age	-.095	.037	.010**
W1_Parental Monitoring	-.252	.047	.000***
W1 Impulsivity	-.002	.038	.964
W1 Anger	.235	.029	.000***
W1 Par. Attachment	-.112	.033	.001***
W1 Del. Peers	.510	.076	.000***
W1 School Safety	.026	.029	.384
W1 Victimization	.051	.009	.000***
W1 Self Esteem	-.051	.041	.225
W1 Opportunity Awareness	-.008	.041	.849
W1 Self Efficacy	-.036	.038	.350
Fatalism	.036	.025	.158
W1 Traditional Bullying	.001	.021	.955
W1 Cyber Bullying	.004	.034	.908

*** $p < .001$. ** $p < .01$. * $p < .05$.

Table 6 reveals the findings of a negative binomial regression that was used to assess the influence of self-efficacy on the relationship between both count measures of bullying victimization and delinquency. These findings fall in direct line with the results in the above Table 3 including fatalism. The controls, black, parental monitoring, anger, parental attachment, delinquent peers, and victimization are statistically significant when related to self-efficacy as they were with fatalism at $p < .001$. Findings for count measures of traditional and cyberbullying victimization remain non-significant. There is no evidence to support hypotheses 1-3 when using self-efficacy in place of fatalism.

These analyses were repeated using the categorical bullying measures, including analyzing bullying measures one at a time, but the results did not change. Categorical

bullying measures that correspond with the above models are represented in tables 3-6 in the Appendices.

Moderation analyses

Regression Table 7

Negative Binomial Regression of Delinquency on Fatalism, Traditional Bullying, Interaction term and controls (N = 2,870).

Variable	<i>B</i>	<i>SE</i>	<i>Sig.</i>
Male	.009	.056	.868
Black	.415	.067	.000***
Other Race/Ethnicity	.228	.079	.004**
Age	-.095	.037	.010**
W1_Parental Monitoring	-.252	.047	.000***
W1 Impulsivity	-.002	.038	.967
W1 Anger	.235	.028	.000***
W1 Par. Attachment	-.112	.033	.001***
W1 Del. Peers	.510	.076	.000***
W1 School Safety	.026	.029	.391
W1 Victimization	.052	.009	.000***
W1 Self Esteem	-.052	.041	.217
W1 Opportunity Awareness	-.008	.041	.850
W1 Self Efficacy	-.036	.038	.342
Fatalism	.040	.027	.143
W1 Traditional Bullying	.022	.051	.671
Fatalism X Bullying	-.007	.015	.678

*** $p < .001$. ** $p < .01$. * $p < .05$.

Our final hypothesis predicted that fatalism would moderate the relationship between bullying victimization and offending. Traditional bullying and cyberbullying victimization were analyzed separately due to concerns about collinearity among the interaction terms. Table 7 shows the results from a negative binomial regression that included fatalism, traditional bullying and a fatalism x bullying interaction term. Findings indicate that the same controls are shown to be consistently predictive of delinquency, however, fatalism, traditional bullying and the fatalism x traditional bullying interaction

term do not show a significant effect on delinquency as earlier predicted. Table 8, below, shows findings from fatalism, cyberbullying victimization, and the cyberbullying interaction term. With only the slightest differences in results, the relationship between bullying victimization and delinquency is not moderated by fatalism.

These analyses were repeated using the categorical bullying measures, including analyzing bullying measures one at a time, but the results did not change. Categorical bullying measures that correspond with the above models are represented in tables 7 and 8 in the Appendices.

Regression Table 8

Negative Binomial Regression of Delinquency on Fatalism, Cyberbullying, Interaction term and controls (N = 2,767).

Variable	<i>B</i>	<i>SE</i>	<i>Sig.</i>
Male	.008	.056	.882
Black	.415	.067	.000***
Other Race/Ethnicity	.230	.079	.004**
Age	-.096	.037	.009**
W1_Parental Monitoring	-.253	.047	.000***
W1 Impulsivity	-.001	.039	.988
W1 Anger	.235	.029	.000***
W1 Par. Attachment	-.112	.033	.001***
W1 Del. Peers	.514	.077	.000***
W1 School Safety	.026	.029	.373
W1 Victimization	.051	.009	.000***
W1 Self Esteem	-.052	.041	.212
W1 Opportunity Awareness	-.009	.041	.836
W1 Self Efficacy	-.035	.038	.355
Fatalism	.041	.026	.113
W1 Cyber Bullying	.086	.095	.364
Fatalism X Cyber Bullying	-.026	.028	.360

*** $p < .001$. ** $p < .01$. * $p < .05$.

Chapter 4

Discussion

The goal of this study was to examine the relationship between both traditional bullying and cyberbullying and their effects on delinquency, and to determine if fatalism mediates this relationship in a sample of 3,640 middle school students within 12 different school districts and across 2 waves. This study contributes to the existing body of research on traditional and cyberbullying victimization by not only looking at how fatalism may mediate the relationship between bullying victimization and delinquency, but also by looking at the moderating effect of fatalism within this sophisticated dynamic.

First, it is important to acknowledge this study's alternative measurement approaches. By running analyses using both count and categorical bullying variables, I was able to assess the robustness of my findings. Including additional analyses examining each variable separately prevented any potential collinearity concerns, and the ability to look at the self-efficacy measure in place of fatalism added more confidence within the results.

Consistent with previous literature, decreased parental monitoring, higher levels of anger, distant relationship with parents, having friends who engage in delinquency and those who have experienced recurrent or frequent victimization are consistently contributing factors to delinquency (Lauritsen, Sampson & Laub, 1991; Filippello et al., 2015; Cuevas et al., 2007; Haynie, Soller & Williams, 2014; Stadler et al., 2010). Although, fatalism was not consistently related to these controls, self-efficacy was significantly related to parental monitoring, impulsivity, having a distant relationship with parents, one's self-esteem and fatalism. Past studies have indicated the importance

of impulsive choices to fulfill a need for instant gratification and one's perception of their own successes and achievements, better understood as self-efficacy, as factors for identifying fatalistic outlooks (Wright et al., 2004; Gelder, Hershfield & Nordgren, 2013; Filippello et al., 2015; Alm et al., 2019; Boland, Lian & Formichella, 2005).

While results did not support the predictions of my study and were unable to support any of my three hypotheses, there were other consistencies worthy of mention. Despite findings indicating no support for bullying victimization as a significant contributing factor to delinquency, results did show significant support for general victimization as a persistent predictor of a delinquent outcome. This bears asking, "Why the substantial difference?" Could it be simply the difference in survey questions or does bullying victimization require more specific questions? There are many different forms of victimization, our findings would suggest that bullying victimization may be a less intense form and less likely to lead to delinquent outcomes, however, past literature contradicts this (Cuevas et al., 2007; Lee et al., 2020).

Another interesting coherence is presented when looking at the significance of anger in every model including delinquency. Adolescents who experience higher levels of anger have been shown to be more likely to engage in delinquency (Cuevas et al., 2007; Lonigro et al., 2015). Comparatively, there are studies that have also looked at anger as either a mediator or as a direct contributor to delinquency and were unable to substantiate their analyses when, specifically, looking at types of bullying victimization (Lee et al., 2; Brezina, 2000; Wang and Jiang, 2021; Glassner and Cho, 2018). This is an interesting integration of conflicting results as to how anger truly effects bullying

victimization or perhaps bullying victimization effects anger within the adolescent population.

Limitations and Future Research

There were several limitations to this study. The reliability of the original fatalism scale was a concern. To address this, I used a single item measure of fatalism, but a more robust scale with more detailed questions surrounding a fatalistic outlook may have been better suited. Single item bullying measures, as used in this study, may not have differentiated the intensity and types of victimization clearly enough to have been along the spectrum with general victimization. Many adolescents may not fully understand the criteria for bullying and are often told that being “picked on” or “pushed around” at school are normal and only makes you stronger. More behaviorally oriented questions may allow respondents to more accurately reveal their experiences, while also increasing awareness of what truly defines bullying.

Moving forward, future research may choose to look at anger as a possible mediator in the relationship between bullying victimization and delinquency. This could be an exceedingly valuable contribution to the conflicting body of research that currently exists. The CSSI data appears to provide a good foundation for future anger research. While gathering articles in support of this study, I noticed that peer victimization, bullying victimization and general victimization are often used interchangeably. It would be interesting research to compare and contrast bullying victimization and general victimization as there is a substantial difference when statistically compared to delinquency. This study did not specifically look at gender differences, but future

research may find significant implications for gender and negative outcomes, such as fatalism, as different genders have been shown to experience different types of bullying.

Although, there was no support for my predictions, this study did call attention to alternate approaches that may help better understand bullying victimization, the potential negative emotions and outlook that surround it, and how it may increase the propensity for youth to make the choice to offend. In summary, results were unable to show that fatalism mediates or moderates the relationship between bullying victimization and delinquency, however, anger was persistent in its relationship with delinquency. This could imply that victims of bullying experience more of a retaliatory behavioral response as opposed to becoming fatalistic. Age and current time perspective are important considerations and may play a larger role within this dynamic. Future research looking at these potential influences would be an invaluable contribution to the current body of research surrounding bullying victimization.

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APPENDICES

Appendix A. Original Survey Items and Response Categories from the University of Missouri-St. Louis Comprehensive School Safety Initiative (UMSL CSSI) project.

Variable	Alpha	Survey Items	Response Range
<i>Dependent variable</i>			
Delinquency	$\alpha = 0.75$	Skipped classes without an excuse? Lied about your age to get into some place or to buy something? Avoided paying for things such as movies or bus/metro rides? Purposely damaged or destroyed property that did not belong to you? Carried a hidden weapon for protection? Stolen or tried to steal something worth less than \$50? Stolen or tried to steal something worth more than \$50? Gone into or tried to go into a building to steal something? Hit someone with the idea of hurting him/her? Attacked someone with a weapon? Used a weapon or force to get money or things from people? Been involved in gang fights? Sold marijuana or other illegal drugs?	0-13
<i>Independent Variables</i>			
Count Traditional Bullying		Times been bullied in the last 6 months.	0-5 or more
Count Cyberbullying		Times been cyberbullied in the last 6 months.	0-5 or more
Fatalism		Bad things are meant to happen.	Strongly disagree to strongly agree (1-5)
Categorical Traditional Bullying		If yes, how many times in last 6 mos have been bullied at school	0-5 or more
Categorical Traditional Bullying		If yes, how many times in last 6 mos have been cyberbullied	0-5 or more
<i>Control Variables</i>			
Self-Esteem	$\alpha = 0.77$	I believe that I am a person of worth. I can't do anything right. I am able to do things. I feel good about myself. I'm no good at all.	Almost never to almost always (1-5)
School Commitment	$\alpha = 0.70$	Homework is a waste of time I try hard in school In general, I like school Grades are very important to me I usually finish my homework	Strongly disagree to strongly agree (1-5)
Self-Efficacy	$\alpha = 0.77$	If I fail the first time, I keep trying. If I have something unpleasant to do, I finish it. When I decide to do something, I start right away. Failure makes me try harder.	Strongly disagree to strongly agree (1-5)
Limited Opportunity Awareness	$\alpha = 0.74$	Most are better off than me. I don't have the opportunity to succeed as those from other neighborhoods. Successful people are only successful because they use illegal means. I don't have the same opportunity to succeed as other students at my school.	Strongly disagree to strongly agree (1-5)
Feelings of Safety at School	$\alpha = 0.71$	Safe at school, have to watch my back. Safe at school, can't concentrate.	Strongly disagree to strongly agree (1-5)
General Victimization	$\alpha = .095$	Times attacked threatened on way to or from school in last 6 months Times had things stolen at school in last 6 months Times attacked threatened at school in last 6 months Times hit by someone in last 6 months	0-5 or more

		Times been robbed in last 6 months Times attacked with weapon in last 6 months Times had things stolen in last 6 months	
Delinquent Peers	$\alpha = 0.85$	Friends steal something worth less than \$50? Friends attacked someone with a weapon? Friends sold marijuana or other illegal drugs? Friends used tobacco and alcohol? Friends used marijuana or other illegal drugs? Friends hit someone? Friends searched via frisked by police? Friends arrested? Friends brought gun to school?	None of them to all of them (1-5)
Anger	$\alpha = 0.79$	Lose temper pretty easily. Feel like hurting people when angry. People better stay away when angry.	Strongly disagree to strongly agree (1-5)
Impulsivity	$\alpha = 0.44$	Act without thinking. No effort preparing for the future. Do what brings pleasure now.	Strongly disagree to strongly agree (1-5)
Parental Attachment	$\alpha = 0.78$	I feel like we can talk about anything. I often ask them for advice. They always trust me.	Strongly disagree to strongly agree (1-5)
All-Monitoring	$\alpha = 0.64$	My parents know where I am. I know how to contact my parents if I need them. My parents know who I am with. My parents know when I am on my electronics My parents limit my usage of electronics.	Strongly disagree to strongly agree (1-5)

Corresponding Categorical Mediation Analysis - Fatalism**Categorical Regression Table 1**

Negative Binomial Regression of Delinquency on Traditional and Cyberbullying and controls, excluding fatalism (N = 2,767).

Variable	<i>B</i>	<i>SE</i>	<i>Sig.</i>
Male	-.001	.057	.981
Black	.433	.069	.000***
Other Race/Ethnicity	.268	.082	.001***
Age	-.098	.037	.009**
W1_Parental Monitoring	-.245	.048	.000***
W1 Impulsivity	-.005	.039	.892
W1 Anger	.244	.030	.000***
W1 Par. Attachment	-.115	.034	.001***
W1 Del. Peers	.592	.081	.000***
W1 School Safety	.017	.031	.585
W1 Victimization Frequency	.051	.010	.000***
W1 Self Esteem	-.055	.043	.209
W1 Opportunity Awareness	.004	.042	.915
W1 Self Efficacy	-.032	.039	.415
Categorical Traditional Bullying 2 or more times	.014	.094	.879
Categorical Traditional Bullying 1 Time	.124	.120	.302
Categorical Cyber Bullying 2 or more times	.012	.224	.956
Categorical Cyber Bullying 1 time	.202	.157	.200

*** $p < .001$. ** $p < .01$. * $p < .05$.

Categorical Regression Table 2

*OLS Regression of Fatalism on Traditional Bullying, Cyberbullying, and controls
(N = 2,767).*

Variable	<i>B</i>	<i>SE</i>	<i>Sig.</i>
Male	-.159	.042	.000***
Black	-.135	.051	.008**
Other Race/Ethnicity	.056	.059	.340
Age	.036	.028	.188
W1_Parental Monitoring	-.042	.038	.268
W1 Impulsivity	.008	.029	.783
W1 Anger	.052	.022	.020*
W1 Par. Attachment	.003	.026	.900
W1 Del. Peers	.114	.064	.076
W1 School Safety	-.022	.024	.361
W1 Victimization Frequency	.020	.009	.027*
W1 Self Esteem	.045	.033	.177
W1 Opportunity Awareness	.300	.031	.000***
W1 Self Efficacy	.145	.029	.000***
Categorical Traditional Bullying 1 time	.109	.091	.229
Categorical Traditional Bullying 2 or more times	-.093	.072	.197
Categorical Cyber Bullying 1 time	.059	.124	.636
Categorical Cyber Bullying 2 or more times	.153	.176	.383

*** $p < .001$. ** $p < .01$. * $p < .05$.

Categorical Regression Table 3

Negative Binomial Regression of Delinquency on Fatalism, Traditional Bullying, Cyberbullying, and controls (N = 2,767).

Variable	<i>B</i>	<i>SE</i>	<i>Sig.</i>
Male	.004	.057	.939
Black	.439	.070	.000***
Other Race/Ethnicity	.269	.082	.001***
Age	-.098	.037	.009**
W1_Parental Monitoring	-.244	.048	.000***
W1 Impulsivity	-.005	.039	.904
W1 Anger	.241	.030	.000***
W1 Par. Attachment	-.116	.034	.001***
W1 Del. Peers	.587	.081	.000***
W1 School Safety	.019	.031	.550
W1 Victimization Frequency	.051	.010	.000***
W1 Self Esteem	-.058	.043	.187
W1 Opportunity Awareness	-.009	.042	.841
W1 Self Efficacy	-.037	.039	.351
Categorical Traditional Bullying 1 time	.017	.094	.859
Categorical Traditional Bullying 2 or more times	.117	.120	.330
Categorical Cyber Bullying 1 time	.006	.223	.979
Categorical Cyber Bullying 2 or more times	.193	.157	.219
Fatalism	.038	.025	.139

*** $p < .001$. ** $p < .01$. * $p < .05$.

CATEGORICAL Mediation Analysis – Self-Efficacy**Categorical Regression Table 4**

Negative Binomial Regression of Delinquency on Traditional Bullying, Cyberbullying, and controls, without Self Efficacy (N = 2767).

Variable	<i>B</i>	<i>SE</i>	<i>Sig.</i>
Male	.004	.057	.950
Black	.434	.069	.000***
Other Race/Ethnicity	.264	.081	.001***
Age	-.098	.037	.009**
W1_Parental Monitoring	-.248	.048	.000***
W1 Impulsivity	-.002	.039	.951
W1 Anger	.241	.030	.000***
W1 Par. Attachment	-.122	.033	.000***
W1 Del. Peers	.583	.081	.000***
W1 School Safety	.016	.030	.608
W1 Victimization Frequency	.050	.010	.000***
W1 Self Esteem	-.072	.041	.081
W1 Opportunity Awareness	-.010	.042	.822
Categorical Traditional Bullying 2 or more times	.015	.094	.877
Categorical Traditional Bullying 1 time	.115	.120	.339
Categorical Cyber Bullying 2 or more times	.002	.223	.992
Categorical Cyber Bullying 1 time	.193	.157	.221
Fatalism	.036	.025	.159

*** $p < .001$. ** $p < .01$. * $p < .05$.

Categorical Regression Table 5*OLS of Self-Efficacy on Traditional Bullying, Cyberbullying, and controls (N = 2,767).*

Variable	<i>B</i>	<i>SE</i>	<i>Sig.</i>
Male	-.005	.028	.849
Black	.109	.033	.001***
Other Race/Ethnicity	.056	.038	.146
Age	-.025	.018	.170
W1_Parental Monitoring	.147	.024	.000***
W1 Impulsivity	-.076	.019	.000***
W1 Anger	.011	.015	.443
W1 Par. Attachment	.150	.017	.000***
W1 Del. Peers	.097	.042	.021*
W1 School Safety	.069	.015	.000***
W1 Victimization Frequency	.013	.006	.021
W1 Self Esteem	.374	.021	.000***
W1 Opportunity Awareness	.048	.021	.020*
Fatalism	.061	.012	.000***
Categorical Traditional Bullying 1 Time	.051	.059	.389
Categorical Traditional Bullying 2 or more times	.050	.047	.286
Categorical Cyber Bullying 1 time	-.007	.081	.928
Categorical Cyber Bullying 2 or more times	.058	.114	.614

*** $p < .001$. ** $p < .01$. * $p < .05$.

Categorical Regression Table 6

Negative Binomial Regression of Delinquency on Traditional Bullying, Cyberbullying, and controls, including Self-Efficacy (N = 2,767).

Variable	<i>B</i>	<i>SE</i>	<i>Sig.</i>
Male	-.005	.028	.849
Black	.109	.033	.001***
Other Race/Ethnicity	.056	.038	.146
Age	-.025	.018	.170
W1_Parental Monitoring	.147	.024	.000***
W1 Impulsivity	-.076	.019	.000***
W1 Anger	.011	.015	.443
W1 Par. Attachment	.150	.017	.000***
W1 Del. Peers	.097	.042	.021*
W1 School Safety	.069	.015	.000***
W1 Victimization Frequency	.013	.006	.021*
W1 Self Esteem	.374	.021	.000***
W1 Opportunity Awareness	.048	.021	.020*
Self-Efficacy	.061	.012	.000***
Categorical Traditional Bullying 2 or more times	.051	.059	.389
Categorical Traditional Bullying 1 time	.050	.047	.286
Categorical Cyber Bullying 2 or more times	-.007	.081	.928
Categorical Cyber Bullying 1 Time	.058	.114	.614
Fatalism	.038	.025	.139

*** $p < .001$. ** $p < .01$. * $p < .05$.

Categorical Moderation Analysis – Traditional Bullying**Categorical Regression Table 7**

Negative Binomial Regression of Delinquency on Fatalism and Categorical Traditional Bullying, Interaction term and controls (N = 2,870).

Variable	<i>B</i>	<i>SE</i>	<i>Sig.</i>
Male	.012	.056	.825
Black	.416	.067	.000***
Other Race/Ethnicity	.232	.079	.003**
Age	-.096	.037	.009**
W1_Parental Monitoring	-.252	.047	.000***
W1 Impulsivity	-.002	.038	.965
W1 Anger	.235	.029	.000***
W1 Par. Attachment	-.112	.033	.001***
W1 Del. Peers	.514	.077	.000***
W1 School Safety	.027	.030	.371
W1 Victimization Frequency	.052	.009	.000***
W1 Self Esteem	-.049	.041	.246
Fatalism	.032	.028	.258
W1 Opportunity Awareness	-.005	.041	.912
W1 Self Efficacy	-.038	.038	.327
Categorical Traditional Bullying 2 or more times	.066	.220	.765
Categorical Traditional Bullying 1 time	-.160	.337	.636
Fatalism X Traditional Bullying 1 time	.100	.105	.344
Fatalism X Traditional Bullying 2 or more times	-.021	.068	.759

*** $p < .001$. ** $p < .01$. * $p < .05$.

Categorical Moderation Analysis – Cyberbullying**Categorical Regression Table 8**

Negative Binomial Regression of Delinquency on Fatalism, Categorical Cyberbullying, Interaction term and controls (N = 2,767).

Variable	<i>B</i>	<i>SE</i>	<i>Sig.</i>
Male	.003	.057	.965
Black	.434	.069	.000***
Other Race/Ethnicity	.266	.081	.001***
Age	-.099	.037	.009**
W1_Parental Monitoring	-.245	.048	.000***
W1 Impulsivity	-.004	.039	.925
W1 Anger	.241	.030	.000***
W1 Par. Attachment	-.114	.034	.001***
W1 Del. Peers	.586	.081	.000***
W1 School Safety	.021	.030	.491
W1 Victimization Frequency	.051	.010	.000***
W1 Self Esteem	-.060	.043	.165
Fatalism	.030	.026	.258
W1 Opportunity Awareness	-.008	.042	.852
W1 Self Efficacy	-.037	.039	.342
Categorical Cyber Bullying 2 or more times	-.224	.706	.751
Categorical Cyber Bullying 1 time	-.497	.463	.283
Fatalism X Cyber Bullying 1 time	.221	.137	.109
Fatalism X Cyber Bullying 2 or more times	.076	.209	.717

*** $p < .001$. ** $p < .01$. * $p < .05$.