

# The Effects of Identity-Based Victimization on Youth: An Intersectional Examination of Mental Health, Academic Achievement, and the Impact of Teacher-Student Relationships

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Boston College  
Lynch School of Education

Department of  
Counseling, Development, and Education Psychology

Counseling Psychology Doctoral Program

THE EFFECTS OF IDENTITY-BASED VICTIMIZATION ON YOUTH:  
AN INTERSECTIONAL EXAMINATION OF MENTAL HEALTH, ACADEMIC  
ACHIEVEMENT, AND THE IMPACT OF TEACHER-STUDENT RELATIONSHIPS

Dissertation  
by  
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of the requirements for the degree of  
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## **Abstract**

### **The Effects of Identity-Based Victimization on Youth: An Intersectional Examination of Mental Health, Academic Achievement, and the Impact of Teacher-Student Relationships**

**Maggi Price**

While a large body of research has established high prevalence rates of discrimination (i.e., unfair treatment because of perceived or claimed membership in a particular identity group) in youth and its negative impact on both mental health and academic outcomes (Fisher, Wallace, & Fenton, 2000; Russel et al., 2012), less is known about the effects of identity-based bullying (i.e., verbal or physical assaults targeting identity(ies)). In addition, very few studies examine both everyday forms of discrimination and identity-based bullying, and even fewer assess the differing experiences of youth with intersectional identities (i.e., multiple oppressed identities; Garnett et al., 2014). Finally, no studies to date have examined the potentially protective role of teacher-student relationships for youth facing identity-based victimization.

The current study sought to examine the impact of identity-based victimization (i.e., discrimination and identity-based bullying) on mental health and academic achievement in a large and diverse sample of youth who were assessed longitudinally. To capture the complexity of the outcomes associated with identity-based victimization for youth with an oppressed gender identity, sexual orientation, and/or race, an intersectional framework was used. Finally, the present dissertation examined the role of teacher-student relationships as a potential source of protection for students facing identity-based victimization.

Results from the present study indicated that identity-based victimization is a pervasive problem that is negatively associated with mental health and academic achievement in adolescents. Findings suggested that intersectional students face a higher risk of experiencing identity-based victimization, and mental health challenges when confronted with above average discrimination. Autonomy-enhancing and positive teacher student relationships had a moderating effect on the association between identity based victimization and mental health for some youth, but not others. Implications of these findings for research, assessment, and intervention are discussed.

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## CHAPTER ONE

### **Introduction**

The increasing recognition of bias-based crime has shed light on the critical need for improved understanding of discrimination and related assaults. According to a recent analysis of FBI and nationally-representative survey data, individuals perceived as LGBTQ, Black, and/or Jewish face the highest risk for hate-motivated assault in the United States (Stotzer, 2012). This report also noted that gay men are at the highest risk for violent crimes, which tend to be more violent and more likely to require hospitalization compared to any other crime. Race-based crime is the highest reported hate crime, and overwhelmingly targets individuals who are perceived as Black. This finding is particularly notable in light of the increasing rate of police brutality against Black people (c.f., Chaney & Robertson, 2013 for a review). In addition, violence against women continues to be highly prevalent, with an estimated one in three women globally experiencing some form of violent victimization throughout the lifespan (Garcia-Moreno et al., 2005). Studies of nationally representative samples of women in the United States indicate that one in three women survive physical violence, and one in ten survive rape (Breiding, Chen, & Black, 2014). Other forms of discrimination are highly common as well (e.g., institutional discrimination, racist remarks), with particularly high rates among sexual and racial minorities (Schmitt, Branscombe, Postmes, & Garcia, 2014). Finally, research suggests that transgender people are especially vulnerable to experiencing repeated bias-related violence across the lifespan, and face a particularly high risk of sexual assault (Stotzer, 2009). In sum, individuals with marginalized identities are at

greater risk for both everyday forms of discrimination, as well as bias-based crime and assault.

Despite the plethora of literature on discrimination in adults, and the availability of hate crime data, relatively less is known about the manifestation of discrimination and bias-based assault in youth (Paradies, 2006). Yet, this area of research is greatly needed given studies indicating that there are behaviors and experiences in childhood shown to predict later violence (e.g., Costa et al., 2015; Theobald & Farrington, 2012). In particular, a substantial research base indicates that bullying perpetration and victimization is a significant predictor of later violence (c.f., Ttofi, Farrington, & Lösel, 2012 for a meta-analytic review). Despite a widespread rise in bullying awareness and prevention, there remains a paucity of research and literature on the relationship between discrimination and bullying (Garnett et al., 2014). In addition, anti-bullying interventions do not often address social identities, and existing literature on identity-based bullying has mostly overlooked potential mechanisms for intervention (Brinkman, 2015), despite growing literature on protective factors associated with discrimination and bullying (e.g., Espelage, Aragon, Birkett, & Koenig, 2008; Goodenow, Szalacha, & Westheimer, 2006)

The current dissertation sought to address this gap in the literature by examining both discrimination and identity-based bullying in youth. In addition, the current study examined the relations between these experiences and psychological and academic outcomes, in order to better understand the experiences of youth who are victimized because of their marginalized identity(ies). In order to formulate hypotheses about assessment and intervention mechanisms, the current project also examined the potential protective role of teacher-student relationships, as previous research suggests that

positive teacher-student relationships mitigate the negative effects associated with discrimination and bullying (Mihalas, Witherspoon, Harper, & Sovran, 2012). Finally, the current dissertation study utilized an intersectional framework to capture the complexity of oppression based on multiple marginalized identities, and to better understand the differences in experiences among oppressed identity groups.

### **Discrimination and Identity-Based Bullying in Youth**

Research suggests that discrimination is highly prevalent (Fisher, Wallace, & Fenton, 2000), and associated with a range of negative mental health (e.g., depression, anxiety; Pascoe & Smart Richman, 2009) and academic outcomes (Dotterer & Lowe, 2015; Dotterer, McHale, & Crouter, 2009; Wong, Eccles, & Sameroff, 2003). However, most studies focus on specific forms of discrimination (e.g., racism) and overlook its role in bullying behavior. Such research is very relevant today given the high rates of violence in schools (Robers, Kemp, & Truman, 2013), increased efforts to prevent violence and bullying in schools (Espelage, Gutsell, & Gutsell, 2015), and the growing recognition of bias-based crime. Research on identity based bullying, or bullying based on the victim's identity(ies), has begun to address this gap in the literature (Brinkman, 2015). Despite this, only one study to date has examined both discrimination and identity-based bullying (Garnett et al., 2014). Furthermore, few studies have examined these phenomena using longitudinal data, thus limiting inferences about directionality between these constructs and associated effects. The current dissertation study added to the existing literature by examining the prevalence of both discrimination and identity-based bullying, as well as psychological outcomes (i.e., depression, wellbeing) and academic achievement using longitudinal data.

### **Intersectional Forms of Discrimination and Bullying**

Despite a national rise in discrimination awareness and prevention efforts, less attention has been paid to understanding victimization related to multiple aspects of one's identity (c.f., Garnett et al., 2014 for an exception). The intersectionality framework captures the patterns of privilege and oppression that result from intersecting social categories (e.g., gender, race; Bowleg, 2012) and can be applied to research to elucidate the unique experiences of different identity groups (Andersen & Collins, 2010; Crenshaw, 1991). Research indicates that there are discrepancies in outcomes across groups who have experienced discrimination and/or identity-based bullying (c.f., Schmitt, Branscombe, Kobrynowicz, & Owen, 2002a; Schmitt et al., 2014 for reviews), and thus it is critical that researchers account for the full spectrum of discriminatory experiences and their intersection with social identities. Enhanced understanding of the complexity of outcomes associated with specific forms of oppression for different groups can provide crucial information to enhance assessment and intervention, and tailor methods for specific subgroups (e.g., youth who are victimized for co-occurring oppressed identities). The current study examined data on everyday discrimination experiences and identity-based bullying, as well as information about the identities that victims associate with these experiences. In addition, the dissertation examined the ways in which these experiences, and academic and psychological outcomes, intersect with various social identities including gender, sexual orientation, and race.

### **The Role of Teacher-Student Relationships**

Research on identity-based bullying is still growing, thus little is known about factors that mitigate its negative effects. However, extant research suggests that teacher-

student relationships and teacher behaviors are associated with both the prevalence and effects of discrimination and bullying. For instance, studies have shown that positive teacher attitudes towards diversity are associated with lower peer discrimination (Bellmore, Nishina, You, & Ma, 2012) and that positive teacher-student relationships can buffer against the negative impact of bullying on academic achievement for boys (Konishi, Hymel, Zumbo, & Li, 2010). Given the saliency of schools and teachers in students' lives and the growth of school-based bullying interventions (Espelage et al., 2015), it is important for researchers to better understand the potential ways that teacher-student relationships might protect against the negative impact of discrimination and identity based bullying and/or reduce its occurrence. The present study sought to enhance this area of knowledge by examining the potential moderating effect of teacher-student relationships on the psychosocial outcomes (i.e., depression, wellbeing, academic achievement) associated with both identity-based bullying and discrimination. Based on findings suggesting that teacher-student relationships may be advantageous for some groups (e.g., boys) and not others, the current study examined whether or not moderating effects differ across identity groups.

### **Current Study**

The current dissertation study synthesized the existing literature on discrimination in youth, identity-based bullying, and teacher-student relationships, using an intersectional lens to illustrate the need for research that encompasses these constructs. Subsequently, data from a large longitudinal dataset of high school students were examined to test the primary research questions (RQs). Results from these analyses will be presented, and implications for findings will be discussed. The final discussion section



will review the existing literature on bullying assessment and anti-bullying interventions, and discuss the implications of the current study's findings for assessment and intervention development and research. The study will conclude with a discussion of future research directions.

**Research questions.** The dissertation study sought to answer the following research questions: 1) How widespread are discrimination and identity-based bullying in the current sample? 1a) How many students have intersectional identities (i.e., multiple oppressed identities)? 1b) Do students with intersectional identities report higher levels of discrimination and identity-based bullying? 2) Is discrimination and/or identity-based bullying associated with depression, well-being, and academic achievement? Given the longitudinal nature of the current study data, analyses also sought to answer 2a) is discrimination associated with later depression, well-being and academic outcomes?

To further examine intersectionality, the current study asked 3) Do students with intersectional identities who have experienced discrimination and/or identity-based bullying have higher levels of negative outcomes? 3a) Among students of Color, does sexual orientation confer additional risk in the context of discrimination and/or identity-based bullying? And 3b) Among students of Color, do cisgender boys and girls face different outcomes in the context of discrimination and/or identity-based bullying?

With respect to the role of teacher-student relationships, the current study asked 4) Do positive and autonomy-enhancing teacher-student relationships buffer against the negative impact of discrimination and identity-based bullying on depression and academic achievement? And 4a) If so, to what extent does this buffering effect differ across identity groups? 4b) Do teachers' provision of structure impact the relationship

between identity-based victimization and outcomes? The longitudinal nature of the data also allowed the present study to answer 4c) Do positive and autonomy-enhancing teacher-student relationships protect students from negative outcomes across time?

## CHAPTER TWO

### Literature Review

#### Prevalence and Effects of Discrimination on Youth

**Discrimination and associated outcomes.** Discrimination can be defined as negative or unfair treatment based on perceived or actual membership in a particular social group (e.g., sexual orientation, race, culture, religion; Brinkman, 2015). The relationship between discrimination and mental health is complex but well-documented. Experts on racism and discrimination note that it can take various forms (e.g., it can be systemic, vague, direct, sudden, vicarious) and can be considered, at minimum, a form of psychological abuse, and thus traumatic (Helms, Nicolas, & Green, 2012). Unlike other forms of trauma, identity-based assault and discrimination are specific to one's personhood and thus may affect one's sense of self, an area that is implicated in a variety of mental health disorders (Bryant-Davis & Ocampo, 2005). In other words, discrimination targets one's identity(ies) or unchanging attribute(s), and thus its effects may manifest differently compared to those associated with other negative experiences that are less central to one's personhood (e.g., loss of a loved one, military trauma).

Multiple meta-analytic reviews of hundreds of empirical studies examining the effects of discrimination conclude that discrimination negatively impacts psychological (e.g., depression, anxiety) and physical (e.g., heart disease, diabetes) well-being (Paradies, 2006; Pascoe & Smart Richman, 2009; Schmitt et al., 2014). Moreover, research suggests that discrimination has a causal effect on well-being, especially among more disadvantaged groups (Schmitt et al., 2014). Results from these reviews also indicate that the association between discrimination and poor mental health is stronger

than its association with indicators of reduced well-being in both cross-sectional and longitudinal studies (Paradies, 2006; Schmitt et al., 2014). In other words, discrimination has been found to be more strongly related to negative outcomes such as depression and anxiety, than to indicators of well-being (e.g., self-esteem). Some experts have suggested that this finding may be explained by one's ability to attribute negative experiences to societal oppression and discrimination, rather than as reflective of an individual's lack of competency (Major, Quinton, & Schmader, 2003).

The majority of the reviewed literature examines racially-motivated discrimination, though there exists a growing literature base on other discrimination experiences (e.g., homophobia, sexism). Research examining multiple forms of oppression suggests that outcomes may differ across forms of discrimination. For instance, in a meta-analysis of over three-hundred studies, Schmitt et al. (2014) found that discrimination based on sexual orientation, mental illness, weight, and disability produced even stronger negative effects compared to those based on sexism and racism. Interestingly, these authors also found that anti-Black discrimination was associated with less severe outcomes when compared with discrimination against other racial groups (e.g., Asians, Arab/Middle Easterners), though the researchers conclude that these differences were fairly small and suggest consistency across racially oppressed groups. Likewise, research suggests that specific outcomes are linked with some forms of discrimination and not others. For instance, in a study examining discrimination and its effects on African American women, Moradi and Subich (2003) found that gender discrimination was uniquely associated with psychological distress, when compared to race-based discrimination. Notably however, there was significant shared variance

between the sexism and racism reported in this study, suggesting that it may be hard for individuals with multiple oppressed identities to distinguish between the motivation(s) for discrimination.

Some experts have attempted to explain cross-group differences by theorizing that individuals with concealable oppressed identities (e.g., sexual orientation, intellectual disability) experience more negative effects as a result of discrimination because they have fewer resources for support, and experience added stress related to the safety of disclosing or concealing their identity(ies) (Chaudoir & Fisher, 2010). Schmitt et al.'s (2014) meta-analytic review partially supported this conjecture, as results indicated that the concealability of an oppressed identity moderated the effect of discrimination on various outcomes (e.g., self-esteem) such that individuals with concealable oppressed identities evidenced lower well-being. However, the authors concluded that concealability does not fully explain the differences in outcomes across oppressed groups. Other literature supports the notion that multiply oppressed groups (e.g., African American women) face a higher risk because of the multiplicative effects of experiencing multiple forms of discrimination (Landrine, Klonoff, Alcaraz, Scott, & Wilkins, 1995). While this theory has not received strong empirical support (e.g., Moradi & Subich, 2003), similar theories and research on intersectionality (reviewed below) have shed light on the complexity of victimization experienced by individuals with multiple stigmatized identities.

**Impact of discrimination on youth.** While most studies on discrimination examine adult samples, literature on youth indicates that such experiences are prevalent, particularly among youth of Color (e.g., prevalence rates of 50% or above; Fisher et al.,

2000; Huynh & Fuligni, 2010) and sexual minorities (Almeida, Johnson, Corliss, Molnar, & Azrael, 2009). For instance, results from studies of nationally representative samples indicate that 87% of African American youth and 90% of Caribbean Black youth experienced at least one discriminatory experience in the last year (Seaton, Caldwell, Sellers, & Jackson, 2008). In addition, research indicates that youth of different races face different types of discrimination. For example, studies suggest that Black youth face significant institutional discrimination (Fisher, Jackson, & Villarruel, 1998), while Asian youth tend to experience more interpersonal forms of discrimination (Grossman & Liang, 2008; B. Liang, Grossman, & Deguchi, 2007). Though there are significantly fewer studies on the impact of discrimination on youth (c.f. Paradies, 2006 for a review), meta-analyses indicate that effect sizes associated with psychological distress in samples of youth who have experienced discrimination are larger than those found in adult samples (Lee & Ahn, 2013; Schmitt et al., 2014). Importantly, reviewed studies also indicate that discrimination has a larger impact on psychological distress compared to self-esteem, a finding that is consistent with stronger associations between negative outcomes and discrimination found in the adult literature (Schmitt et al., 2014). More specifically, discrimination in youth is more strongly correlated with increased psychological distress, compared to reduced self-esteem.

Some authors postulate that children may experience more distress due to discrimination because of their relative lack of coping skills (Schmitt et al., 2014) and others argue that youth are particularly vulnerable to discrimination due to their emerging identity development and limited exploration of group membership (Clark, Anderson, Clark, & Williams, 1999; Phinney & Tarver, 1988). Given the increased vulnerability

youth face in the context of discrimination, research examining protective factors is essential. However, only a limited number of studies have examined factors that enhance or diminish the impact of discrimination in youth. Among studies that have examined moderators associated with racial/ethnic discrimination and psychological distress, findings support the mitigating role of nurturing parents, prosocial friends, strong school performance (Brody et al., 2006), higher parental socioeconomic status (Ríos-Salas & Larson, 2015), self-esteem, cultural orientation (Umaña-Taylor & Updegraff, 2007), ethnic identity (Brown & Chu, 2012), and racial identity (Sellers, Copeland-Linder, Martin, & Lewis, 2006).

#### **The role of academic outcomes and moderators in youth discrimination.**

Given that children in the United States spend most of their time in schools, it is important that research examines the school-related outcomes and protective factors associated with discriminatory experiences. In addition, such research has the ability to inform both the design and examination of school programs aimed at reducing discrimination. Existing studies indicate that racial/ethnic discrimination is negatively related to academic outcomes such as school self-esteem (Dotterer & Lowe, 2015), academic motivation (Wong et al., 2003), school engagement (Dotterer et al., 2009), and academic achievement (Alfaro, Umaña-Taylor, Gonzales-Backen, Bámaca, & Zeiders, 2009). Though research on moderators related to academic outcomes is still growing, extant studies suggest that individual factors (e.g., racial identity; Wong et al., 2003) and school-related variables such as teachers' attitudes towards diversity (Brown & Chu, 2012) impact academic outcomes in the context of discriminatory experiences.

Research examining discrimination experiences motivated by other identities such as sexual orientation and gender identity is growing (e.g., Almeida et al., 2009; Bontempo & D'Augelli, 2002; D'Augelli et al., 2006; Dragowski, Halkitis, Grossman, & D'Augelli, 2011; Greene, Way, & Pahl, 2006). For instance, D'Augelli and colleagues (2002; 2002; 2006; 2011) found that, victimization among LGBT youth motivated by sexual orientation was strongly associated with a variety of serious mental health problems including suicidality, posttraumatic stress, substance abuse, and risky sexual behaviors. Though fewer studies have examined school-related variables associated with gender- or sexual-orientation motivated discriminatory attacks, existing research suggests that such discrimination is associated with decreased school belonging and perceptions of negative school climate, lower academic aspirations, and higher truancy (Sinclair, Bauman, Poteat, Koenig, & Russell, 2012). In addition, school context factors such as having a larger school population, high percentage of college-bound graduates (Szalacha, 2003), and high population of racial/ethnic minority and low income students (Goodenow et al., 2006) are associated with lower rates of LGBTQ victimization.

Though several studies have examined the effects of verbal and physical victimization on LGBTQ youth, additional information about everyday discriminatory experiences faced by this population is needed. Given findings from Schmitt et al.'s (2014) meta-analysis suggesting poorer psychological outcomes for LGBTQ individuals facing discrimination, as well as research identifying higher rates of self-harm and suicidal ideation among victimized LGBTQ youth (Almeida et al., 2009), additional research on the prevalence and impact of gender- and sexual-orientation-motivated discrimination is critical. Moreover, there is very limited literature on youth who



experience discrimination for multiple oppressed identities (see below). Finally, among studies which examine racial/ethnic discrimination, few examine assaults and bullying related to race and ethnicity, but rather examine everyday, or commonplace, experiences. In other words, research capturing the full spectrum of discrimination across identity groups, including both everyday experiences and assaults, is warranted.

### **Identity Based Bullying**

Recent literature has begun to examine the phenomenon of identity-based bullying, which can be defined as any form of bullying occurring because of the youth's actual or perceived social identity(ies) (e.g., racist or sexist remarks, being shoved due to actual or perceived LGBTQ identity; Brinkman, 2015). Unlike everyday forms of discrimination (e.g., receiving poorer service, being treated with less respect, being perceived as less intelligent), identity-based bullying is specific to verbal and/or physical assaults rooted in discrimination (see Figure 1; Brinkman, 2015). Despite a widespread rise in bullying awareness and prevention, there remains a paucity of research and literature on the relationship between discrimination and bullying (Garnett et al., 2014). Research in this area is important given recent findings indicating that more than one-third of bullying victims report experiencing identity-based bullying (Russell, Sinclair, Poteat, & Koenig, 2012).

**Identity-based bullying and LGBTQ youth.** While emerging literature on identity-based bullying is bridging the gap between discrimination and bullying literature, many studies focus exclusively on samples of LGBTQ youth (e.g., Kosciw, Greytak, & Diaz, 2009; LeVasseur, Kelvin, & Grosskopf, 2013; Toomey, Ryan, Diaz, Card, & Russell, 2010). However, research on sexual-minority youth is critical, as findings

suggest that they are 4.4 times more likely to attempt suicide, and twice as likely to report bullying, compared to heterosexual youth (LeVasseur et al., 2013). Research also indicates that gender non-conforming youth (i.e., youth who express their gender in a way that is incongruent with social norms consistent with birth-assigned sex) are more likely to be harassed or victimized due to their sexual orientation and gender expression (Kosciw et al., 2009). These rates are particularly noteworthy in light of Toomey et al.'s (2010) finding that LGBT victimization fully mediates the relationship between gender non-conformity and psychosocial adjustment (i.e., depression and life satisfaction). Despite the importance of examining the prevalence and effects of identity-based bullying in LGBTQ youth, research on bullying motivated by other identities is limited.

**Outcomes associated with identity-based bullying.** Of the extant research on identity-based bullying related to multiple types of oppressed identities, findings suggest that there is a myriad of negative outcomes associated with identity-based bullying. For instance, in a study of a population-based survey of youth, Sinclair et al. (2012) found that victims of identity-based bullying related to race/ethnicity and/or perceived or actual LGBTQ identity reported significantly higher levels of mental health problems (e.g., depression, panic, self-harm, suicidal ideation, suicide attempt) and substance use, and were significantly less likely to plan to go to a 4-year college, compared to their non-victimized counterparts. Similarly, Russel et al. (2012) found that in two large population-based studies, identity-based bullying victims (i.e., youth who experienced harassment or assault due to their sexual orientation, race, religion, gender, and/or a physical or mental disability) faced a much higher risk of poor mental and physical health, as well as worse academic performance and attendance. More specifically,

identity-based bullying victims in this study reported higher levels of substance use (e.g., marijuana, inhalants, alcohol), risky behaviors (e.g., drunk driving, involvement in violent relationships), poor mental health (e.g., depression, suicidal ideation, suicide attempt), truancy, and poor grades (i.e., mostly Cs or below), compared to non-bias based bullying victims. These authors concluded that bias-related motives are under-examined despite their association with significantly elevated risk, even among bullying victims.

**Protective factors associated with identity-based bullying.** Research on protective factors associated with identity-based harassment is extremely limited, though emerging research has examined factors related to both school and family. For example, Goodenow et al. (2006) found that the presence of LGB support groups in schools was related to lower rates of victimization and suicide attempts among LGB youth. Similarly, positive school climate was found to buffer against the psychological outcomes (i.e., depression, suicidality, alcohol use, marijuana use) associated with homophobic teasing in a large subsample of LGBT youth (Espelage et al., 2008).

Unlike school context variables, the moderating effects of family variables have received conflicting support in research. For instance, findings from Poteat, Mereish, DiGiovanni, and Koenig's (2011) examination of over 15,000 adolescents indicated that that parent support does not moderate the relationship between homophobic victimization and negative outcomes (i.e., school belonging, suicidality) in a subsample of LGBTQ youth. Similarly, Espelage et al. (2008) found that in a sample of over 13,000 youth, parental support did not moderate the relationship between homophobic teasing and depression and suicidality in a subsample of LGBT youth. However, parental support was shown to be a significant moderator between homophobic teasing and alcohol and

marijuana use, though this effect was small. Taken together, findings from research studies on protective factors associated with identity-based bullying in LGBTQ youth have more consistently demonstrated that school-context variables seem to buffer against associated negative effects, compared with parenting variables. These findings may be explained by the rejection LGBTQ youth fear or face from their parents (Savin-Williams & Ream, 2003), as well as the tendency for sexual and gender minority youth to rely more heavily on peers than parents (Munoz-Plaza, Quinn, & Rounds, 2002).

Despite these important but limited findings, there is a need for enhanced understanding of factors that might mitigate the negative impact of identity-based bullying on youth so that novel evidence-based interventions targeting identity-based bullying can be developed. In addition, research on protective factors associated with identity-based bullying motivated by non-homophobic bias is lacking. The present study sought to address this need by examining the potential impact of teacher-student relationships on negative outcomes associated with identity-base bullying related to multiple forms of bias (e.g., racism, sexism). Results from these analyses may have implications for school-based anti-bullying interventions.

As aforementioned, most studies on discrimination fail to account for the full spectrum of discriminatory acts, such as bullying behaviors. Likewise, literature on identity-based bullying has almost exclusively focused on bullying acts, without accounting for less explicit forms of oppression such as microaggressions and commonplace discrimination (c.f., Brinkman, 2015; Garnett et al., 2014 for exceptions). The current study sought to bridge these two areas of literature by examining both sets of experiences, providing a more comprehensive picture of the myriad forms of

discrimination faced by youth. Importantly, the current study also examined youth who experienced co-occurring discrimination and/or identity-based bullying for multiple oppressed identities.

### **Intersectional Forms of Discrimination and Bullying**

**Intersectionality theory.** Intersectionality is a theoretical framework that illustrates the ways in which multiple social categories (e.g., race, gender, socioeconomic status, sexual orientation) intersect at the individual level of experience to reflect the multifaceted nature of privilege and oppression at the social-structural level (e.g., racism, heterosexism; Bowleg, 2012). More specifically, the intersectionality perspective posits that a) social identities are not independent, but multiple and intersecting, b) it is crucial to examine people with multiple oppressed identities, and c) multiple individual social identities intersect with macro-level systems (e.g., poverty, racism) to produce disparate outcomes (Bowleg, 2012). Research utilizing this framework ensures that certain types of oppression are not privileged over others, and can identify unique patterns of oppression that may result from various intersections of perceived or claimed identities (Andersen & Collins, 2010; Crenshaw, 1991).

**Discrimination and identity-based bullying research using an intersectional framework.** Research on discrimination or identity-based bullying in youth using the intersectionality framework is sparse but growing, and existing research supports the notion that youth who are victimized due to multiple oppressed identities face a higher risk for mental health problems and experience difficulties specific to their intersecting identities. For instance, Garnett et al. (2014) found that individuals who experienced discrimination based on sexual orientation, or intersectional discrimination and bullying

(measured as racial and weight discrimination with high bullying), were more likely to engage in deliberate self-harm. In addition, youth who experienced intersectional discrimination and bullying had higher rates of suicidal ideation. Similarly, Levasseur, Kelvin, and Grosskopf (2013) found that bullying significantly predicted suicide attempt, and that this effect was significantly stronger for non-Hispanic sexual minority male youth. Findings from a qualitative study on homophobic bullying indicated that LGBTQ youth of Color face additional barriers, including uncertainty about the target of bullying (i.e., their race and/or sexual orientation) and that they experience specific types of homophobia within their family and/or cultural group, in addition to the homophobia experienced in other social contexts (e.g., school; Daley, Solomon, Newman, & Mishna, 2008). Finally, one notable research study suggested that protective factors associated with identity-based bullying may exist for some groups and not others. More specifically, Poteat et al. (2011) found that parent support moderated the relationship between homophobic victimization and suicidality for heterosexual youth, but not for LGBTQ youth. Similarly, this study found that parent support moderated the relationship between general victimization and suicidality for all youth except LGTBQ youth of Color, suggesting that students with multiple oppressed identities have fewer and/or different protective factors.

Research examining the relationship between identity and discrimination experiences points to the importance of examining multiple identities, as well as multiple forms of discrimination and bullying. For instance, findings from studies examining gender and racial discrimination indicate that boys and girls may be affected by these experiences differently. In a study of African American adolescents by Cogburn,

Chavous, and Griffin (2011), racial and gender discrimination were negatively associated with academic achievement for boys, but not girls. In addition, gender and racial discrimination predicted negative psychological outcomes (i.e. depression, self-esteem) for girls, but not boys. These findings are consistent with a study of Latino/a youth indicating that discrimination was positively associated with depression for girls, regardless of enculturation (Umaña-Taylor & Updegraff, 2007). This relationship did not hold for boys with high levels of enculturation, suggesting that protective factors may be different for boys and girls who experience discrimination.

The above findings suggest that different groups of youth may have differential mental health outcomes resulting from their discrimination and/or identity-based bullying experiences, as well as their oppressed social identities. In addition, research suggests that protective factors differ across identity groups. However, there is a paucity of research on school-related variables associated with intersectional discrimination and identity-based bullying. Such research is essential given the saliency of the school environment in the lives of youth. As such, the current study sought to extend existing research on intersectional identity-based bullying and discrimination by examining both mental health and academic outcomes, as well as the potential effects of teacher-student relationships.

### **Teacher-Student Relationships**

**Teacher-student relationships and well-being.** A large literature base has established the importance of teacher-student relationships in the lives of youth. Research indicates that teacher-student relationships are positively associated with psychosocial adjustment and school achievement (c.f., Pianta et al., 2003; Roorda, Koomen, Spilt, &

Oort, 2011 for reviews). Similarly, research suggests that negative teacher-student relationships and negative experiences with teachers (e.g., teacher maltreatment, discrimination) adversely impact student wellbeing in numerous domains (e.g., psychosocial adjustment, academic achievement). Across multiple studies conducted by Kasen and colleagues (2004; 1998; 1990), conflictual teacher-student relationships were associated with a variety of negative outcomes across time, such as verbal and physical aggression, deviance, and substance abuse. Hyman et al. (2004) found that psychological maltreatment (e.g., verbal insults, sexual harassment) and corporal punishment by teachers were associated with increased alienation, misbehavior and violence among students. Similarly, Wei et al. (2010) found that teacher maltreatment (e.g., insults, hitting) positively predicted both verbal and physical bullying behaviors in a large sample of middle school students.

**Teacher discrimination and maltreatment.** Research has also begun to examine the extent to which teachers engage in discrimination against students, as well as the effects of these behaviors on students. Teacher discrimination can manifest in a variety of ways and may include preferential treatment towards socially privileged students (e.g., ignoring Black students when they raise their hands), disproportional discipline of students of a particular group, making racist, sexist and/or homophobic remarks, and/or communicating different academic expectations for particular groups of students (Thomas, Caldwell, Faison, & Jackson, 2009). Thomas et al. (2009) examined a sample of African American and Caribbean Black adolescents and found that teacher discrimination was negatively related to academic achievement. Positive teacher interracial climate, or teacher behavior related to the promotion of positive interracial



climate (e.g., teachers' encouragement of cross-racial friendships) was found to be related to less peer discrimination, especially among Asian youth, in a large sample of diverse high school students (Bellmore et al., 2012). Finally, Niwa, Way, and Hughes (2014) found that in a large sample of diverse adolescents of Color, adult discrimination outside of school was negatively associated with self-esteem, friend and teacher-student relationship quality, and positively related to depression. While this study did not examine the effects of within school discrimination by adults, the authors noted that adolescents report similar levels of adult discrimination both in and outside of school.

**Teacher-student relationships and bullying.** The relationship between teacher-student relationships and student psychosocial and academic wellbeing in the context of both peer and adult discrimination is noteworthy. Similar research has examined the impact of teacher-student relationships on the association between bullying perpetration and/or victimization and student outcomes. For example, in a nationally representative sample of young adolescents, students who reported feeling disempowered in their relationships with teachers were more likely to report bullying behavior and victimization (Nation, Vieno, Perkins, & Santinello, 2008b). Importantly, the predictive power of teacher relationships was much stronger than that of relationships with both parents and friends. These findings are consistent with other research suggesting that positive teacher student relationships are related to lower levels of aggression, particularly among African American and Hispanic children (Meehan, Hughes, & Cavell, 2003). Konishi, Hymel, Zumbo and Li (2010) found that teacher-student relationships were related to both bullying and academic achievement in a sample of almost 30,000 students. More specifically, the authors found that for boys, teacher-student relationship *connectedness*

buffered against the negative impact of bullying on academic achievement. Similarly, findings from a prospective study by Mihalas and Witherspoon (2012) suggested that teacher support moderated the relationship between relational victimization and depression, especially for youth who experienced moderate to severe bullying. Again, this protective effect was significant for teacher relationships, but not parent relationships.

**Facets of teacher-student relationships.** Teacher-student relationships are multifaceted and complex. As such, research has examined many aspects of teacher-student relationships, but the current study focused on three frequently studied constructs, all of which have been operationalized slightly different across studies. These include: 1) *positivity/emotional support* (henceforth referred to as *positivity*), which is often characterized by relatedness and involvement, and involves teacher's expressions of empathy, warmth, and caring toward a student (Raufelder et al., 2013), 2) *provision of autonomy* (henceforth referred to as *autonomy*) often defined by teacher behaviors such as providing a rationale for academic work, utilizing non-controlling communication, and providing students with self-directed learning activities (Evans & Boucher, 2015), and 3) *provision of structure* (henceforth referred to as *structure*) which involves the promotions of students self-efficacy through the provision of clear expectations, consistent conditions, optimal challenge, and feedback (Vansteenkiste et al., 2012).

While the majority of the above reviewed literature examines the role of *positivity*, less research has focused on the role of *structure* and *autonomy* in the context of identity-based victimization. One noteworthy study by Tucker et al. (2002) found that in a sample of low-income African American youth, teacher-student autonomy and

structure was not significantly related to school engagement, but teacher-student involvement (i.e., demonstration of caring and interest in the student) was the strongest predictor of school engagement. In a study examining various types of support (e.g., emotional, informational, instrumental) from teachers, parents, and peers, emotional support from teachers was the sole predictor of social skills and academic success (Malecki & Demaray, 2003). Similarly, Garcia-Reid et al. (2015) found that teacher-student support was a strong predictor for student engagement in a sample of Latino immigrant youth. Previous studies have found that the provision of structure is related to academic engagement (Hospel & Galand, 2016; Lau & Nie, 2009), yet other studies suggest that this effect becomes nonsignificant when other aspects of teacher student relationships are included in analyses (Malecki & Demaray, 2003). However, it is possible that a structured classroom environment provides victimized students with a sense of consistency and safety. Thus, analyses of structure in the current will be exploratory in nature, but no significant buffering effect is expected.

Taken together, the above findings suggest that positive and autonomy-enhancing teacher-student relationships may buffer against the negative academic and psychological outcomes associated with discrimination and bullying, and that these effects may be stronger for some groups (e.g., boys, African American and Latino youth). Given that American youth spend the majority of their time in school and thus may also experience most victimization in school, it is likely that having strong positive relationships in this environment is critical to wellbeing, and more impactful than parent support in the home. In addition, students who lack strong support outside of school may especially benefit from teacher relationships as they may serve as an attachment relationship that fosters

identity-development and a strong sense of self. Such a relationship would thus be particularly protective for those facing identity-based victimization. Finally, the authority that teachers provide may be crucial for students who are marginalized, and may offer a buffering effect that is distinct from peer support.

While no studies to date have examined the potential buffering effects of teacher-student relationships on outcomes associated with identity-based bullying, extant research indicates that LGBT youth experience victimization and insults from school staff and teachers (Chesir-Teran, 2003) and that positive school climate buffers against the psychological and social difficulties experienced by LGBTQ youth (Espelage et al., 2008). The current study addressed this gap in the literature by examining the potential moderating impact of teacher-student relationships on the association between identity-based victimization and academic and psychological outcomes. Furthermore, the present study examined whether or not teacher-student relationships differentially impact some groups (e.g., boys, youth of Color).

## **Summary**

Discrimination occurs when an individual is unfairly treated because of perceived or claimed membership in a particular identity group(s) (e.g., gender, race, culture; Brinkman, 2015). Various types of discrimination (e.g., racism, sexism, homophobia) are prevalent in youth (e.g., Fisher et al., 2000), and associated with a wide variety of negative outcomes such as depression and low academic achievement (Umaña-Taylor & Updegraff, 2007). Most studies on discrimination focus on limited everyday types of discriminatory experiences, and overlook more explicit forms of identity-based assault, thus failing to capture the full spectrum of identity-based victimization. Emerging

literature suggests that identity-based bullying, or bullying targeting the victim's social identity(ies), is both prevalent and deleterious for youth (Russell et al., 2012). Like discrimination, identity-based bullying is associated with poor mental health and reduced academic achievement (Russell et al., 2012; Sinclair et al., 2012; Toomey et al., 2010).

Much of the research on discrimination and identity-based bullying focus on one forms of discrimination/victimization and/or one identity group. Intersectionality theory posits that multiple social categories (e.g., race, gender) intersect in a variety of ways to reflect differing patterns of privilege and oppression (Bowleg, 2012). Intersectionality researchers aim to examine multiple identities and associated experiences, and have done so in novel literature on discrimination and identity based bullying (e.g., Garnett et al., 2014). Findings from these studies suggest that intersectional forms of discrimination are associated with specific outcomes (e.g., self-harm; Garnett et al., 2014), and that these effects may differ across groups (Cogburn et al., 2011).

Protective factors associated with discrimination in youth have been identified in research studies on discrimination (Brown & Chu, 2012; Wong et al., 2003) and bullying in specific identity groups (e.g., LGBTQ youth; Goodenow et al., 2006). These studies point to the importance of school context, and in particular, teacher-student relationships. Research on teacher-student relationships suggests that they are highly influential on student well-being across identity groups (Pianta et al., 2003), and may buffer against the negative effects of discrimination and bullying (Mihalas et al., 2012).

To date, there are no studies examining the association between discrimination, identity-based bullying, and the potential impact of teacher-student relationships. The current study addressed this gap and examined these associations using an intersectional

framework, allowing for the examination of the myriad experiences faced by different identity groups, including those with multiple oppressed identities. This area of research is vital given the dearth of literature on interventions specific to identity-based bullying and discrimination. In addition to informing interventions, results from this study also have the potential to shape school policies, student assessment, and future research on this topic.

**Statement of problem.** The above review indicates that very few studies have examined both everyday experiences of discrimination, as well as identity-based bullying in youth. Given the overlap in these constructs (see Figure 1), the present study will henceforth refer to identity-based bullying and discrimination as *identity-based victimization*. The use of the term reflects the existence of both discrimination and identity-based bullying on a spectrum of discrimination-related victimization that ranges from commonplace experiences (e.g., microaggressions) to more explicit assaultive acts (e.g., racially-motivated physical assault). The literature above suggests that identity-based victimization is associated with a variety of negative outcomes in youth, including both academic and mental health effects. Despite these empirical findings, extant policies and interventions for bullying often overlook the role of identity and discrimination in youth victimization. In addition, research suggests that teacher-student relationships are critical for the development and well-being of some youth, and directly impact student outcomes in the context of identity-based victimization. Given research indicating the lack of protection provided by positive parental relationships in the context of identity-based bullying (Espelage et al., 2008; Poteat et al., 2011), and similar studies supporting the protective role of teacher-student relationships in the context of bullying (e.g.,

Konishi et al., 2010; Meehan et al., 2003; Nation, Vieno, Perkins, & Santinello, 2008a), it is possible that teacher-student relationships are more protective for identity-based victims compared to other types of relationships (e.g., parental, peer). However, there is a paucity of literature on the role of teacher-student relationships in the mitigation of outcomes associated with youth victimization. More specifically, no study to date has examined the ways in which different facets of teacher-student relationships (e.g., autonomy, structure, positivity) affect student mental health and academic functioning in the context of victimization. Thus, the present dissertation study sought to address these two large gaps in the field: 1) the oversight of identity and discrimination in bullying literature and research, and 2) the paucity of information on the potentially protective role of teacher-student relationships in the context of identity-based victimization (see Figure 2).

**Hypotheses.** Analyses of the occurrence of discrimination and identity-based bullying were exploratory in nature (RQ1-1b). Based on existing literature reviewed in the present dissertation, it was expected that a) discrimination and identity-based bullying would be positively associated with depression and negatively associated with well-being and academic achievement both cross-sectionally and across time (RQ2 and RQ2a). It was also hypothesized that b) youth who reported intersectional identities and experiences of identity-based victimization (i.e., identity-based bullying, above average discrimination) would have higher levels of negative outcomes (RQ3), and c) LGBQ students of Color would have higher levels of negative outcomes compared to heterosexual students of Color. Given the complexity of extant research findings related to gender and race, it was hypothesized that d) there would be differences in outcomes

across cisgender boys and girls of Color, but no specific relationships were expected (RQ3b).

Regarding teacher-student relationships, the present study hypothesized that e) positive teacher-student relationships and those that foster autonomy would buffer against the negative psychological and academic effects associated with high discrimination and identity-based bullying both cross-sectionally and across time (RQ4 and RQ4c), while f) teacher-student relationships that provide structure would not have an impact on the relationship between identity-based victimization and outcomes (RQ4b). Given the complexity of extant research findings related to protective factors in victimized youth, cross-group analyses of the moderating effects of teacher-student relationships were exploratory in nature (RQ4a).



## CHAPTER THREE

### **Methodology**

#### **Data**

Data were used from an ongoing longitudinal study titled *Reducing Academic Inequalities Among Diverse Adolescents through Envisioning a Meaningful Future and Postsecondary Planning*. The study is a collaboration between students and faculty at Harvard University, Boston College, and Medford High School (MHS). The data collection methods consist primarily of administering large surveys annually to the entire student body of MHS. Various domains of psychosocial and academic functioning (e.g., school climate, family support, mental health) were assessed in these surveys and the school provides researchers with access to students' academic records and demographic information. To date, the study has collected three waves of data. The current dissertation study analyzed data collected in the annual survey as well as data obtained from the school, during the second and third years of data collection.

#### **Procedures**

Prior to data collection, an introductory letter from the principal and the research team, and informed passive consent materials, were mailed to students' homes. Parents who did not wish for their child to participate were asked to return the signed letter, email a school administrator, or email a member of the research team. This letter was followed by a "robocall" from the principal that described the study and its purpose, encouraged families to look for the letter describing the study, and provided instructions for asking questions and opting out. A robocall is a system that automatically dials every phone number in the schools' student database and plays a recorded message. The robocall

system is regularly used to inform families of important information from the school (e.g., inclement weather days, PTO meetings, events and activities at the school).

The survey took place during a class period. Research assistants arrived at each class with internet enabled electronic tablets, or assisted students in completing the survey on a classroom computer. The study was described to students and they decided whether to participate (i.e., provided informed assent). The usual teacher and a research assistant were present to answer questions and assist students. Data collection occurred during a week towards the end of the school year, minimizing the impact on instruction and allowing students to reflect on the experiences of the prior year. Students were given a \$5 gift card to a coffee shop for participating in the study. In wave one, two students' parents opted out of the survey, and one student chose not to complete the survey after answering most of the questions. No parents or students opted out of the survey at wave two, and one student's parent opted out at wave three.

### **Sample**

The current sample included 986 9-12<sup>th</sup> graders at Medford High School, a public high school in the greater Boston area. Data collection has taken place across three years (i.e., three waves), though data on variables of interest in this study (e.g., discrimination) were only collected during the second and third waves of data collection. Data for both independent variables were collected in wave three, and only one (discrimination) was assessed in wave two. In addition, only 9-11<sup>th</sup> graders completed assessments of the moderators, as 12<sup>th</sup> graders completed a shortened survey due to MHS scheduling constraints. As such, three subsamples were examined in different analyses. For cross-sectional analyses, students who completed the survey during wave three and met

missing data criteria (see Analyses for more details;  $N = 986$ ) were analyzed. For longitudinal analyses, data from a subsample of students who completed the survey during waves two *and* three were analyzed ( $n = 540$ ). Of the 446 students who were not included in longitudinal analyses, over half (52%;  $n = 234$ ) were seniors at wave two and almost one-quarter (24%;  $n = 109$ ) were surveyed at wave three only due to being enrolled in the vocational school, a subpopulation of MHS that had previously not been assessed. Thus, the subsample examined in the longitudinal analyses should be representative of the whole school, as less than one-quarter of these students were excluded due to some form of attrition (e.g., absence, transferring to another school). Finally, for W3 moderation analyses, data from a subsample of 9-11<sup>th</sup> graders were analyzed ( $N = 769$ ).

### **Data Collection Site and Student Demographics**

Medford High School is located in the city of Medford, Massachusetts, a few miles northwest of Boston. MHS consists of approximately 1150 diverse students (61% Non-Hispanic White; 18% Black/African American; 8% Asian; 8% Latino; 3% Native American; 1% multi-ethnic) and reflects significant economic diversity (median household income of \$72,000; 23% free lunch; 5% reduced price lunch; & 45% classified as “high needs” based on MA Dept. of Elementary & Secondary Education data). While the median household income of \$72,000 is above the national average, Medford is located in the Boston area, which is among the top ten cities in the US with the highest cost of living. For example, groceries are 25.8% above the national average, utilities are 44.4% above and health care costs are 26.3% above the national averages (Rapacon, 2014), reflecting a range of economic realities for families in Medford. MHS is the only

high school in the district, making it representative of the diverse working- to middle-class community. Demographics for the current study sample are described below and detailed in Table 1.

### **School Context**

MHS is notable because of its numerous student organizations and affinity groups that are popular among students. Currently, MHS has a Gay Straight Alliance (GSA), a Black Student Union (BSU), an Arabic Club, and an Asian Club. The GSA has existed for over 20 years at MHS and in the past 10 years, has grown significantly in popularity. Recent meetings were attended by 30-40 students; the GSA organizes various school functions (e.g., dances) such as the annual “It Gets Better” assembly that presents LGBTQ- and diversity-inclusive themes for freshman students. According to the former director of the GSA and teacher, the growing presence of the GSA has resulted in reduced anti-LGBTQ bullying and harassment (personal communication, October 18, 2016). This anecdotal observation is consistent with research indicating that the presence of a GSA is associated with reduced LGBTQ-victimization and fewer reported homophobic remarks in school (Kosciw, Palmer, Kull, & Greytak, 2012; Marx & Kettrey, 2016; Szalacha, 2003). However, some research suggests that the presence of a GSA is unrelated to homophobic victimization (Poteat, Sinclair, Digiovanni, Koenig, & Russell, 2013; Walls, Kane, & Wisneski, 2010) and in some cases, may even confer additional risk for LGBTQ students (Worthen, 2014).

In contrast, the BSU began in the fall of 2016 in response to an anti-Black slur heard in the hall by students the previous spring, after which a group of Black female students requested that a BSU be created. According to the BSU coordinator and

guidance counselor, meetings typically involve about 15 female students, and when the BSU began, one of the BSU flyers was protested and removed by a MHS faculty member (personal correspondence, October 25, 2016). While the BSU at MHS has not been in existence long enough for associated benefits to be observed, and no research to date has examined BSUs in high schools, research on Black affinity groups and spaces in universities (e.g., Black culture centers, BSUs) suggest that students that access these resources evince increased academic engagement (Guiffida, 2003), social integration (Museus et al., 2008), personal identity (Patton, 2006), and academic achievement (Johnson, 2011). While informal interviews with the leaders of the Asian and Arabic clubs were requested, they were unable to participate.

MHS grievance materials also indicate that the school abides by the Section 504 Title IX regulations and procedures, which states that the school “does not discriminate on the basis of sex or disability” (US Department of Health and Human Services, 2006). In addition, in 2010 Medford Public Schools implemented a Bullying Prevention and Intervention Plan including assessment (e.g., forms for reporting bullying), prevention (e.g., curriculum and resources for teachers and students), and intervention rules (e.g., a list of potential consequences) and regulations to address bullying and cyberbullying (Belson & Nelson, 2010). Notably, however, sexual harassment is the only identity-based category listed in the “bullying report form” (other examples include intimidation, stalking, and physical violence) and discrimination is not mentioned in the plan.

## Variables and Measures

**Independent variables.** Students responded to all survey questions using a 5-point Likert scale ranging from (1) *Strongly Disagree* to (5) *Strongly Agree*, excluding the identity-based bullying item (see Appendix A for measures of independent variables). The primary independent variables include perceived discrimination and identity-based bullying. The current study examined perceived experiences of discrimination using data from the Everyday Discrimination Scale (EDS), a 9-item scale measuring encounters with discrimination in the respondent's day-to-day life that has evidenced strong reliability in previous research ( $\alpha = .88$ ; Williams, Yu, Jackson, & Anderson, 1997) as well as the current study (W2  $\alpha = .83$ ; W3  $\alpha = .85$ ). The EDS was administered in both waves 2 and 3 (see Appendix D for a listing of which measures were administered at which waves). The EDS also asks respondents to identify the identity(ies) associated with perceived discrimination from 14 options (e.g., gender, race, age; see item 181 in Appendix A). The EDS has been established as a reliable measure of discrimination for a multitude of races (e.g., Asian, African American, White) in studies of adults (e.g., Barnes et al., 2004; Bernstein, Park, Shin, Cho, & Park, 2011; Gyll, Matthews, & Bromberger, 2001; Krieger, Smith, Naishadham, Hartman, & Barbeau, 2005) and Black adolescents (Clark, Coleman, & Novak, 2004; Guthrie, Young, Williams, Boyd, & Kintner, 2002). Despite reliability within racial groups, psychometric studies indicate that there are some differences across races, which authors posit may be attributable to different experiences and/or conceptualizations of discrimination (Kim, Sellbom, & Ford, 2014; Lewis, Yang, Jacobs, & Fitchett, 2012).

Identity-based bullying was measured in wave 3, using an item derived from the Boston Youth Survey, which was listed after the EDS and written as follows: “In the past 12 months have you ever been bullied or assaulted because of any of (those reasons)?” (Almeida et al., 2009; Garnett et al., 2014). Students responded to this question by marking “yes” or “no” (see Appendix A).

**Intersectional identity.** The present study examined the ways in which intersectional identity impacts the relationship between identity-based victimization and outcomes. Thus, three primary categories of identity were examined: 1) gender identity, 2) sexual orientation, and 3) race/ethnicity. These variables measured the student’s self-identified social identities assessed in the survey (see Appendix B for specific items). The gender identity (#226) and race/ethnicity (#228) questions allowed students to mark more than one category, while the sexual orientation item (#227) limited students to one response. The gender identity item was derived from the widely used Gay, Lesbian, and Straight Education Network (GLSEN) Local School Climate Survey (Kosciw, Greytak, Bartkiewicz, Boesen, & Palmer, 2011) and the sexual orientation item was derived from the Boston Youth Survey (Almeida et al., 2009; Garnett et al., 2014). Both of these items were administered in wave 3 only. For the present study, gender identity was re-categorized into: 1) cisgender boy (if a student marked only “male”), 2) cisgender girl (if a student marked only “female), and 3) gender non-conforming (if a student marked “transgender,” “transgender male-to-female,” “transgender female-to-male,” or “other” and the written response was indicative of a gender non-conforming category such as “agender”). Sexual orientation was re-coded into 1) heterosexual (if a student marked “heterosexual) and 2) LGBTQ (if a student marked any response other than

“heterosexual”). Race was re-coded into: 1) White and 2) of Color (if a student marked any category other than White). If a student endorsed more than one of the “2” or “3” categories above (e.g., 3 – gender non-conforming and 2- of Color) they were categorized as having an *intersectional identity*. In other words, *intersectional identity* was dichotomously coded as: 1) non-intersectional identity and 2) intersectional identity.

**Outcome variables.** The primary outcomes included academic performance, depression, and well-being (see Appendix C). Data for these variables are available from both waves 2 and 3. Academic performance was measured using grade point average (GPA) data provided by MHS. Depression was measured using the 10-item Major Depressive Disorder (MDD) subscale from the Revised Child Anxiety and Depression Scale, which has been shown to be a reliable measure in previous research ( $\alpha = .76$ ; Chorpita, Yim, Moffitt, Umemoto, & Francis, 2000) as well as the current study (W2  $\alpha = .87$ ; W3  $\alpha = .87$ ). Well-being was assessed using the Well-being subscale from the Mental Health Inventory which has evidenced strong reliability in other studies ( $\alpha = .92$ ; Heubeck & Neill, 2000) as well as in the current study (W2  $\alpha = .89$ ; W3  $\alpha = .89$ ).

**Moderators.** Teacher-student relationships (TSR) were examined in both waves of data analyzed in the present study, and were measured using three scales assessing: 1) *positivity*, 2) *structure*, and 3) *autonomy*. TSR *positivity* was comprised of seven of nine items from the Positive Student-Teacher Relationships subscale of the School Climate Measure, which evidenced strong reliability in previous research ( $\alpha = 0.92$ ; Zullig, Koopman, Patton, & Ubbes, 2010) as well as the current study (W2  $\alpha = .92$ ; W3  $\alpha = .92$ ). Due to survey length limitations, this subscale was shortened for the current study by only including items with high factor loadings (i.e., above 0.7; Shevlin & Miles, 1998).



found in previous psychometric studies (Zullig et al., 2014, 2010). The Positive Student-Teacher Relationships subscale measures students' perception of teacher involvement. Example items include: "my teachers care about me" and "teachers understand my problems."

Students' perceptions of teachers' provision of *structure* and *autonomy* support were each measured using six of eight items from the Teacher's Provision of Structure and Teacher's Support for Autonomy subscales of the (Belmont, Skinner, Wellborn, & Connell, 1988). These subscales have evidenced strong reliability in previous research (Structure  $\alpha = 0.76$ ; Autonomy  $\alpha = 0.79$ ; Belmont et al., 1988) and were modified to be shorter in the present study by removing redundant items, due to survey length limitations. One item in the *autonomy* subscale ("My teachers are always getting on my case about schoolwork") disproportionately impacted the overall reliability of the scale and was weakly correlated with the other indicators across both waves. For these reasons, the item was removed from subsequent analyses, and the subscale's reliability improved (W2  $\alpha = 0.67$ ; W3  $\alpha = 0.59$ ). In the present study, reliability for the *structure* scale was also adequate (W2  $\alpha = 0.73$ ; W3  $\alpha = 0.64$ ). Items in both scales were modified to reflect students' perceptions of their MHS teachers in general (i.e., "my teacher" changed to "my teachers," to align with the *positivity* scale. Example items for *structure* include: "in my classes, if I can't solve a problem, my teachers show me different ways to try" and "my teachers don't make it clear what they expect of me in class." Example items for *autonomy* include: "my teachers give me a lot of choices about how I do my schoolwork" and "my teachers don't explain why what I do in school is important to me" (see Appendix C for more details).

## Analyses

**Preliminary analyses.** All analyses were conducted using SPSS version 23 software. Prior to conducting the primary analyses, data was examined to assess for missing values, data distribution patterns, and basic group comparisons (e.g., examining differences across gender using MANOVAs). In addition, correlations among all study variables were calculated to examine the basic interrelations among the measured constructs. Descriptive statistics related to demographic information were examined including gender, sex, race, ethnicity, sexual orientation, free-lunch status, and age.

**Missing Data.** 1061 students completed at least part of the wave 3 survey. Forty-two of those students stopped at or around the place where the primary independent variable items (i.e., discrimination, identity based bullying) began, and thus were removed from analyses due to missing data for both independent variables. An additional thirty-three participants provided invalid student IDs, and thus their school data, including GPA, could not be identified. Given that GPA is a primary dependent variable and cannot be imputed, these students were excluded from the current sample. Thus, the final study sample included 986 participants.

Notably, forty students did not endorse any sexual orientation. As such, analyses examining the role of LGBQ identity included 946 students (i.e., those 40 students were treated as missing for those analyses). Similarly, 31 of these 40 students were also excluded (i.e., treated as missing) from analyses examining intersectionality. Nine of the 40 students with missing sexual orientation, however, identified as both a person of Color and a cisgender girl, and thus were coded as intersectional. Thirty-five students were missing a self-identified gender category and thus their genders were imputed from the

school data, which identified students as “male” or “female” (see Table 1 for more details). Similarly, 34 students did not provide a response to the race item on the survey, and thus their race was imputed from the school data.

Maximum likelihood estimation using expectation maximization (EM) algorithm was used to handle the remaining missing data, as it has been recommended for longitudinal data analysis (c.f., Ibrahim & Molenberghs, 2009) and has been shown to be superior to multiple imputation because of its efficiency and ability to avoid potential conflict between the analysis and imputation models (Allison, 2012). Twelve or fewer participants had missing data on any given scale, and 95 participants did not respond to the Identity Based Bullying (IBB) item. While it is unclear why these participants did not answer this item, results from t-tests suggest that EDS scores were significantly lower for students who missed this item, compared to those who endorsed it, suggesting that these participants may have interpreted this item as inapplicable to them, as they did not endorse significant discrimination. In other words, if a student did not indicate on the EDS that they “agreed or strongly agreed” with any of the EDS items (1-5) and thus did not endorse responses on EDS item 6 (see Appendix A), they appeared to be less likely to respond to the IBB question. Thus, IBB was treated as “yes” if a student endorsed it, and “no” if a student marked “no” or did not answer it. Missing Value Analysis (MVA) was run to examine patterns of missing data for all items associated with independent, dependent, and moderator variables. Results indicated that all missing data was missing completely at random (MCAR). As such, data were imputed for all participants with missing data on any scale in the full sample, as the pattern of missing data determines the appropriateness of using imputation methods, rather than the proportion (Dong & Peng,

2013; Schlomer, Bauman, & Card, 2010). In other words, experts argue that imputation methods are preferable to deletion (e.g., listwise deletion) when data are MCAR, as such procedures retain the maximum amount of statistical power (Schlomer et al., 2010).

### **Primary analyses.**

***RQ1) How widespread are discrimination and identity-based bullying in the current sample?*** To answer this question, descriptive statistics measuring the occurrence of discrimination experiences and associated identities were assessed. More specifically, results included frequency rates of students who reported experiencing discrimination and/or identity based bullying, as indicated by a response of agree to strongly agree on any EDS item, and/or a “yes” on the identity-based bullying item. The current study also answered question ***1a) How many students have intersectional identities (i.e., multiple oppressed identities)?*** by examining the gender identity, sexual orientation, and race that each student identified in the survey (see Appendix B for specific items). Similarly, the present study conducted logistic regressions and a t-test to answer ***1b) Do students with intersectional identities report higher levels of discrimination and identity-based bullying?*** Finally, the present study examined incidence rates and cross-group (e.g., across gender, across racial group) differences in identity-based bullying and discrimination experiences.

***RQ2) Is discrimination and/or identity-based bullying associated with depression, well-being, and academic achievement?*** Several steps were taken to answer this question. Given that identity-based bullying was only measured in wave 3, identity-based bullying and discrimination was examined in separate models. If preliminary correlation analyses suggested that the dependent variables (DVs; wellbeing, depression,

GPA) were correlated, a one-way MANOVA including identity-based bullying as the independent variable (IV) and well-being, depression, and GPA as the dependent variables was run. A MANOVA would allow for the examination of the individual impact of identity-based bullying on each DV, as well as its impact on the composite of DVs. To examine the potential discrepancies in outcomes across groups, the present study also ran separate two-way ANOVAS specifying gender, race, and sexual orientation as predictors. Similar analyses were run to examine the impact of discrimination on outcomes, but the longitudinal nature of the IV (discrimination) provided information about its predictive strength. In other words, to answer ***RQ2a) is discrimination associated with later depression, well-being, and academic outcomes?*** The current study conducted a MANCOVA examining the relationship between wave 2 discrimination experiences and wave 3 levels of all DVs, while controlling for W2 levels of each DV. This analysis also tested *hypothesis a)* discrimination would positively predict later depression and negatively predict well-being and academic achievement.

The current study also examined a subsample of identity-based victimization survivors and ran a series of ANOVAs and MANOVAs using a dichotomous measure of intersectionality (i.e., non-intersectional identity, intersectional identity) as a fixed factor to answer ***RQ3) Do students with intersectional identities who have experienced identity-based victimization have higher levels of negative outcomes compared to non-intersectional students?*** These analyses also addressed *hypothesis b)* youth who have intersectional identities and report experiencing identity-based victimization (i.e., identity-based bullying, above average discrimination) would have higher levels of negative outcomes compared to non-intersectional youth. To answer ***3a) Among***

*students of Color, does sexual orientation confer additional risk in the context of discrimination and/or identity-based bullying?* and *3b) Among students of Color, do cisgender boys and girls face different outcomes in the context of discrimination and/or identity-based bullying?* the present study ran two-way factorial ANOVAs examining the potential interaction of race and gender on outcomes in the subsample of youth who reported IBB and discrimination (separately). RQ3b examined the potential interaction between race and sexual orientation on outcomes in the same subsamples. These analyses addressed both *hypothesis c)* LGBTQ students of Color would have higher levels of negative outcomes compared to heterosexual students of Color and *hypothesis d)* there would be differences in outcomes across cisgender boys and girls of Color, but no specific relationships were expected.

Moderating analyses were conducted to answer questions ***RQ4) Do positive and autonomy-enhancing teacher-student relationships moderate the relationship between identity-based victimization and outcomes?*** and ***4b) Do teachers' provision of structure moderate the relationship between identity-based victimization and outcomes?*** The three facets of teacher-student relationships (i.e., autonomy, structure, positivity) were examined as separate moderators, because they were hypothesized to alter the direction or strength of the relationship between the IV and DVs in the current study. In other words, research suggests that discrimination and identity-based bullying directly impact psychosocial outcomes, but that teacher-student relationships may moderate this relationship such that outcomes are different for individuals with stronger teacher-student relationships. Moderation was tested separately for each IV and each DV. Several steps were taken in each analysis including 1) transforming (i.e., standardizing or coding) the

IV and moderator (e.g., positive teacher-student relationships), 2) creating interaction terms (i.e., multiplying the IV and moderator), and 3) running a hierarchical regression in which the first step involves entering the coded or standardized predictors and moderators, and the second step involves entering the interaction term. For moderating analyses specifying identity-based bullying as the IV, only wave 3 data for the moderator and DVs were used (see Figure 2). Models measuring the impact of discrimination in wave 2 were run in a similar way to the discrimination MANOVAS described above, to test *hypothesis e* (positive teacher-student relationships and those that foster autonomy would buffer against the negative psychological and academic effects associated with discrimination and identity-based bullying both cross-sectionally and across time) and examined question *4c) Do positive and autonomy-enhancing teacher-student relationships moderate the relationship between discrimination and negative outcomes across time?* In other words, moderating analyses involving discrimination controlled for W2 levels of the DVs (see Figure 3). Finally, if support for hypothesis e was found, the study would also answer *4a) If so, to what extent does this effect differ across identity groups?* by adding separate interaction terms including race, gender, and sexual orientation to the above moderation analyses.

## CHAPTER FOUR

### Results

#### Preliminary Analyses

The current study sample consisted of 986 students who were diverse with respect to grade, gender, sexual orientation, race, intersectional identity, socioeconomic status, and GPA (see Table 1 for descriptive statistics). Five-hundred and forty of these students completed surveys during both waves 2 and 3, and were comparable in demographic breakdown to the larger sample. Outcome variables were examined for normality, and results indicated that GPA was significantly negatively skewed. As such, GPA was transformed using square root transformation, which is recommended for moderately negatively skewed data (Howell, 2007). Depression and well-being exhibited normal distribution patterns. Additional assumptions were tested (e.g., normality of variances) prior to subsequent analyses, the results of which are described below.

#### Primary Analyses

Descriptive analyses were run to examine RQ1, RQ1a, and RQ1b. **RQ1) *How widespread are discrimination and identity-based bullying (IBB) in the current sample?*** Results indicated that 144 (14.6%) students reported experiencing IBB, and levels of discrimination were similar across waves (range 5-25; W2  $M(SD) = 12.4(4.5)$ ; W3  $M(SD) = 13.2(4.5)$ ). **1a) *How many students have intersectional identities (i.e., multiple oppressed identities)?*** Three-hundred and seventy-seven students identified as two or more oppressed categories (i.e., intersectional; see Table 1 for more detailed information about endorsed identity categories). **1b) *Do students with intersectional identities report higher levels of discrimination and identity-based bullying?*** A series of logistic



regressions were run to examine whether intersectional students were more likely to experience IBB. First, sensitivity, specificity, and positive predictive value of the logistic regression models were examined. Results indicated that the overall model was statistically reliable in distinguishing between students who did and did not report IBB ( $\chi^2(1) = 29.1, p < .001$ ) and correctly classified 85.7% of the cases (see Table 5 for subsample sizes). Intersectional students were 174% more likely (i.e., more than twice as likely) to report IBB compared to non-intersectional students (Wald = 20.3,  $\text{Exp}(B) = 2.74, p < .001$ ). Further analysis indicated that a student's likelihood of experiencing IBB increased by 59% with every additional oppressed identity category ( $\text{Exp}(B) = 1.59, p < .001$ ). This model was also statistically reliable in distinguishing between students who did and did not report IBB ( $\chi^2(1) = 20.7, p < .001$ ) and correctly classified 85.4% of the cases. With respect to discrimination, a t-test was run to examine mean level differences across intersectional and non-intersectional groups. Intersectional students experienced significantly higher levels of discrimination ( $M(SD) = 13.9(4.7)$ ) compared to non-intersectional students ( $M(SD) = 12.8(4.4)$ ;  $t(1, 953) = 3.73, p < .001$ ).

**RQ2) Is discrimination and/or identity-based bullying associated with depression, well-being, and academic achievement?** The relationship between IVs and DVs were tested after bivariate correlation analyses were run, to ensure that DVs were moderately correlated, and that IVs and DVs were correlated with each other. Results of these analyses suggest that IBB and EDS were significantly ( $p < .05$ ) correlated with all outcomes in the expected ways (see Table 2 for more details). In other words, both IBB and EDS were negatively correlated with well-being and GPA and positively correlated with depressive symptoms. Though depressive symptoms and well-being were

moderately correlated with each other ( $r = -.56, p < .001$ ), neither was moderately correlated with GPA. As such, subsequent analyses examined mental health (i.e., depression and well-being) and academic performance (GPA) separately.

***Identity based bullying.*** To examine the relationship between IBB and outcomes, a MANOVA specifying IBB as the independent variable, and depression and well-being as the outcomes, was run. Preliminary results from this analysis suggested that the model violated the assumption of homogeneity of variances (Box's M tests was significant  $p < .001$ ), and thus Pillai's trace was used as it the most robust MANOVA test statistic and does not require this assumption to be met (Mertler & Vannatta, 2005). MANOVA results indicated that IBB significantly accounted for 5.3% of the variance in depressive symptoms and well-being ( $F(3, 982) = 27.6, p < .001$ ; Pillai's trace = .058, partial  $\eta^2 = .053$ ). In other words, IBB survivors experienced significantly higher levels of depressive symptoms and lower well-being compared to those who did not report IBB (see Table 3 for group means). A separate ANOVA was run to examine the effect of IBB on GPA. Results indicated that the model met the assumption of homogeneity of variances (Levene's test was non-significant) and that IBB significantly accounted for 0.4% of the variance in GPA;  $F(1, 984) = 3.90; p < .05$ ; partial  $\eta^2 = .004$ , with IBB victims exhibiting lower GPAs.

***Discrimination.*** Similar analyses were run to examine the relationship between discrimination and outcomes. To fit the requirements of the analyses, the discrimination variable was recoded from a continuous variable to a dichotomous variable, by recoding students into "below average discrimination" and "above average discrimination" groups based on whether or not their score was above or below the group mean ( $M = 13.2$ ). After

recoding, 476 were coded as experiencing “above average discrimination” and 510 were coded as experiencing “below average discrimination.” The MANOVA model specifying discrimination as the independent variable and depression and well-being as the outcomes met the assumption of homogeneity of variances (Box’s M test was non-significant), and thus Wilk’s lambda was used to interpret results (Mertler & Vannatta, 2005). Results indicated that discrimination significantly accounted for 9% of the variance in depression and well-being;  $F(2, 983) = 48.96, p < .001$ ; Wilk’s  $\Lambda = .91$ , partial  $\eta^2 = .091$ . ANOVA results examining the relationship between discrimination and GPA indicated that the model violated the assumption of equality of variances across groups (Levene’s  $F(1, 984) = 15.1, p < .001$ ). As such, a non-parametric test called the Kruskal-Wallis test was used, which is recommended for data that violate this assumption (Howell, 2007). Results from this analysis indicated that students with above average levels of discrimination had significantly lower GPAs compared to below average discrimination students ( $\chi^2(1) = 33.3, p < .001$ ;  $\eta^2 = .034$ ).

**Group differences.** To examine cross-group differences, two-way MANOVAS specifying both mental health variables as outcomes, and EDS or IBB as primary independent variables, in addition to membership in marginalized identity groups (i.e., students of Color, cisgender girls, and LGBQ students), were run. Similar ANOVAs examining the relationship between discrimination and IBB (separately) and GPA across groups were also run. Of the twelve analyses run, only one model had a significant interaction effect (see Table 4). More specifically, a statistically significant interaction between the effects of discrimination and sexual orientation on mental health was found (Box’s M test  $p < .001$ ;  $F(2, 941) = 3.064, p < .05$ , Pillai’s trace = 3.06, partial  $\eta^2 = .006$ ),

indicating that LGBQ students report significantly more depressive symptoms and lower levels of well-being in the context of discrimination (see Figures 4 and 5; see Table 5 for subgroup means). Notably however, results from this model also indicated that the separate main effects of sexual orientation and discrimination on mental health were also significant, and each individually accounted for more variance in the combined outcomes than the interaction effect (see Table 4 for details). Examination of Figures 4 and 5 suggest that there are significant differences across LGBQ and heterosexual students with respect to well-being but not depression, such that LGBQ students have lower levels of well-being regardless of discrimination, and a positive relationship between discrimination and depression. Follow-up analyses included separate ANOVAs within the subsample of LGBQ youth ( $n = 215$ ). Results from these analyses confirmed a non-significant relationship between discrimination and well-being ( $F(1, 214) = 1.01, p = .32$ ) and a significant and positive relationship between discrimination and depressive symptoms ( $F(1, 214) = 9.78, p < .005$ ). In addition, a t-test was run to examine mean differences in well-being across LGBQ and heterosexual students, which confirmed that LGBQ students have significantly lower levels of well-being ( $M = 30.1, SD = 8.7; t(944) = 5.6, p < .001$ ) compared to heterosexual students ( $M = 33.4, SD = 7.2$ ). Despite the absence of statistically significant differences in mental health across race and gender in the context of discrimination, analyses indicated that individual factors (e.g., IBB, gender, race) were separately and significantly related to mental health outcomes (see Table 4 for factorial ANOVA results, and Table 5 for means across groups).

**RQ2a) Is discrimination associated with later depression, well-being, and academic outcomes?** A MANCOVA (with depression and well-being specified as

outcomes) and an ANCOVA (with GPA specified as the outcome) examining the relationship between wave 2 discrimination experiences and wave 3 levels of all DVs, while controlling for wave 2 levels of each DV were run. Preliminary examination of these models indicated that they met the assumption of homogeneity of regression coefficients, as evidenced by a non-significant interaction between covariates and the predictor. Results indicated that discrimination was not significantly associated with mental health ( $F(2, 535) = 0.49, p = .61$ ; Wilk's  $\Lambda = .998$ , partial  $\eta^2 = .002$ ) or GPA ( $F(1, 537) = 1.17, p = .279$ , partial  $\eta^2 = .002$ ) after controlling for wave 2 levels of these outcomes. Notably however, when covariates (i.e., wave 2 levels of outcomes) were not included in the models, wave 2 discrimination was significantly related to wave 3 mental health ( $F(2, 537) = 17.71, p < .001$ ; Wilk's  $\Lambda = .938$ , partial  $\eta^2 = .062$ ) and GPA ( $F(1, 536) = 24.14, p < .001$ , partial  $\eta^2 = .043$ ). This is also important when considering that wave 2 and wave 3 levels of discrimination (measured continuously) are only moderately correlated ( $r = .49, p < .001$ ) and above and below average discrimination group variables (measured dichotomously, and used in current (M)ANCOVAs) are even less correlated across waves ( $r = .395, p < .001$ ).

**RQ3) Do students with intersectional identities who have experienced identity-based victimization have higher levels of negative outcomes compared to non-intersectional students?** ANOVAs (with GPA as outcome) and MANOVAs (with depression and well-being as outcomes) were run to examine differences in outcomes across intersectional and non-intersectional students who have experienced discrimination or IBB. In other words, these analyses separately examined subsamples of students who fell into the above average discrimination category ( $n = 461$ ) and who

reported experiencing IBB ( $n = 144$ ). To ensure adequate statistical power, a priori power analyses were run with G\*Power, which indicated a minimum sample size of 128 for models with 1 outcome, and 158 for models with 2 outcomes. Thus, results of the analyses examining mental health among IBB victims in analyses associated with RQ3, 3a, and 3b should be interpreted with caution.

Results from the ANOVA examining differences in mental health outcomes for intersectional ( $n = 203$ ) and non-intersectional students ( $n = 258$ ) who experienced above average discrimination indicated that intersectional identity was significantly related to worse mental health outcomes ( $F(2, 458) = 15.38, p < .001$ , Wilk's  $\Lambda = .937$ , partial  $\eta^2 = .063$ ), but not GPA ( $F(1, 459) = .151, p = .697$ , partial  $\eta^2 = .000$ ; see Table 5 for group means on all outcomes). Seven of the students who reported IBB did not report sexual orientation and thus were not included in the analysis as their intersectional-status could not be determined. Among those included in the analysis ( $n = 137$ ), intersectional students ( $n = 83$ ) did not have significantly different mental health outcomes ( $F(2, 134) = 2.05, p = .133$ , Wilk's  $\Lambda = .970$ , partial  $\eta^2 = .030$ ) or GPAs ( $F(1, 135) = 2.56, p = .110$ , partial  $\eta^2 = .019$ ) compared to non-intersectional students ( $n = 54$ ).

**3a) Among students of Color, does sexual orientation confer additional risk in the context of discrimination and/or identity-based bullying?** A two-way factorial ANOVA was run to answer this question. Similar to the preceding analysis, the subsample of youth who reported above average discrimination ( $n = 461$ ) or IBB (including only those who also reported sexual orientation;  $n = 131$ ) were analyzed to examine whether or not there was a significant interaction between sexual orientation and race, and its relation with mental health and GPA among those who experienced above

average discrimination. Results suggested that among those who reported above average discrimination, race and sexual orientation did not significantly interact in relation to mental health ( $F(2, 452) = 0.32, p = .727$ , Wilk's  $\Lambda = .999$ , partial  $\eta^2 = .001$ ) or GPA ( $F(1, 453) = 0.18, p = .674$ , partial  $\eta^2 = .000$ ). Among students who reported IBB, these interactions were also non-significant for mental health outcomes ( $F(2, 129) = 0.32, p = .728$ , Wilk's  $\Lambda = .995$ , partial  $\eta^2 = .005$ ) and GPA ( $F(1, 130) = 0.04, p = .847$ , partial  $\eta^2 = .000$ ). In other words, no significant differences in outcomes across 1) LGBTQ students of Color, 2) heterosexual students of Color, 3) LGBTQ White students and 4) heterosexual White students were found in the context of identity based victimization.

**3b) Among students of Color, do cisgender boys and girls face different outcomes in the context of discrimination and/or identity-based bullying?** Results from a two-way factorial ANOVA suggested that among those who reported above average discrimination, there were no significant interactions between gender and race in relation to mental health ( $F(2, 455) = .54, p = .586$ , Wilk's  $\Lambda = .979$ , partial  $\eta^2 = .021$ ) or GPA ( $F(1, 456) = .15, p = .778$ , partial  $\eta^2 = .000$ ). Similarly, there was no significant interaction between gender and race relative to mental health ( $F(2, 133) = 1.45, p = .237$ , Wilk's  $\Lambda = .979$ , partial  $\eta^2 = .021$ ) or GPA ( $F(1, 134) = .15, p = .703$ , partial  $\eta^2 = .001$ ) among those who reported IBB. Taken together these results indicate that no significant differences in outcomes across 1) cisgender girls of Color, 2) cisgender boys of Color, 3) cisgender White girls and 4) cisgender White boys were found in the context of identity based victimization.

Moderating analyses were conducted to answer questions **RQ4-4b**. Prior to running these analyses, correlations between the three teacher relationship moderator

variables (positivity, autonomy, structure), independent variables (IBB, discrimination), and outcomes (depression, well-being, and GPA) for both waves were run. Results indicated that W3 moderators were significantly correlated with both the independent and dependent variables in expected ways such that all teacher student relationship variables (i.e., autonomy, positivity, and structure) were negatively correlated with depression, and positively correlated with well-being (Table 6), but only positivity and structure were positively and significantly correlated with GPA. Moderation analyses allow for singular outcomes, and thus separate moderation analyses were run for each outcome (depression, well-being, and GPA). These analyses were run using the SPSS PROCESS macro, which automatically centers variables, creates interaction terms, adjusts for heteroscedasticity, and utilizes bootstrapping methods (Hayes, 2013).

**RQ4) Do positive and autonomy-enhancing teacher-student relationships moderate the relationship between identity-based victimization and outcomes?**

Moderation analyses examining the impact of discrimination included both autonomy and positivity specified as moderators were run. Results indicated that discrimination, with both autonomy and positivity specified as moderators, significantly accounted for 18% of the variance in depression ( $F(5, 760) = 37.7, p < .001, R^2 = .182$ ), but only autonomy significantly moderated this relationship ( $b = .34, t(760) = 3.4, p < .001$ ; see Figure 6). These results suggest that students with high levels of teacher support for autonomy have lower levels of depressive symptoms across levels of discrimination, though these students exhibit a steeper positive slope compared to students with average or low levels of discrimination. In addition, results suggest that for students with high levels of discrimination, autonomy and depression are unrelated. Similar results were found for



well-being, whereby the overall model accounted for 21% of the variance in wellbeing ( $F(5, 760) = 36.2, p < .001, R^2 = .214$ ), and only autonomy was a significant moderator in this model ( $b = -.26, t(760) = -2.5, p < .05$ ; see Figure 7). Similar to the above results on autonomy and depression, this model also suggests that students with high levels of autonomy support exhibit a steeper drop (i.e., slope) in wellbeing when faced with high levels of discrimination. When comparing results in figures 6 and 7, it appears that there are less profound changes in wellbeing across levels of discrimination, compared to depression, suggesting that the relationship between well-being and discrimination is weaker than the relationship between discrimination and depression. This was confirmed in a one-way ANOVA comparing depression and wellbeing across low ( $>1$  SD below mean), average (1 SD above or below mean) and high discrimination ( $>1$  SD above mean) groups. Results suggested that there were significant differences across levels of discrimination for both outcomes, however discrimination appeared to be related to more variance in depression ( $F(2, 983) = 48.2, p < .001$ ), compared to wellbeing ( $F(2, 983) = 24.1, p < .001$ ). Neither autonomy nor positivity significantly moderated the relationship between discrimination and GPA.

***Identity based bullying.*** Due the categorical nature of IBB, autonomy and structure were treated as individual moderators in analyses examining the impact of IBB. Results indicated that positivity significantly moderated the relationship between IBB and depression, ( $b = .31, t(762) = 2.1, p < .05$ ), with the overall model accounting for 10% of the variance in depression ( $F(3, 762) = 24.3, p < .001, R^2 = .101$ ). Analysis of Figure 8 suggests that students' levels of depression are strongly and negatively related to teacher positivity among those who did not report IBB. Among those who did report IBB, teacher

positivity appears to be unrelated to depression. Teacher positivity did not significantly moderate the relationship between IBB and wellbeing or GPA, and autonomy did not significantly moderate any of the models specifying IBB as the predictor.

**RQ4b Does teachers' provision of structure moderate the relationship between identity-based victimization and outcomes?** Results from moderation analyses mirroring those above indicated that structure did not significantly moderate any of the assessed relationships. Follow-up analyses indicated that the variance of the structure scale was relatively limited in range (range = 2-4.5) and had a somewhat smaller standard deviation ( $SD = .46$ ) compared to the comparably constructed teacher support for autonomy scale (range = 1-5,  $SD = .59$ ). While it is possible that non-significant findings may be related to limited variance in this scale, its distribution does not appear to differ greatly from that of the teacher support autonomy scale which was implicated in multiple significant findings.

**RQ4a) If significant moderations are found, to what extent does this effect differ across identity groups?** the three significant moderation results above were examined for group differences across gender, race, and sexual orientation. More specifically, the moderation analyses with significant interaction effects were re-run to include covariates.

***Discrimination, autonomy, and depression.***

*Race.* Results indicated that there were significant group differences across race ( $b = 1.82$ ,  $t(764) = 3.33$ ,  $p < .001$ ), gender ( $b = 2.70$ ,  $t(739) = 5.02$ ,  $p < .001$ ), and sexual orientation ( $b = 3.74$ ,  $t(736) = 5.22$ ,  $p < .001$ ) when examining autonomy as a moderator between discrimination and depression. To explore these differences further, separate

moderation analyses were run for each subsample. Results indicated that autonomy significantly moderated the relationship between discrimination and depression for students of Color ( $n = 383$ ;  $b = .29$ ,  $t(379) = 2.88$ ,  $p < .005$ ) but not for White students ( $n = 386$ ;  $b = .16$ ,  $t(382) = 1.50$ ,  $p = .14$ ). Examination of Figure 9 suggests that students of Color experience similar levels of depression in the context of high discrimination (i.e. more than 1 SD above the mean), regardless of autonomy support. This finding is in contrast with results for White students illustrated in Figure 10.

*Gender.* Autonomy significantly moderated the relationship between discrimination and depression for both cisgender girls ( $n = 390$ ;  $b = .29$ ,  $t(386) = 3.27$ ,  $p < .005$ ) and boys ( $n = 354$ ;  $b = .26$ ,  $t(350) = 2.20$ ,  $p < .05$ ), but examination of Figures 11 and 12 indicate that overall, girls experience higher levels of depression and larger changes in depression in the context of discrimination. In addition, for boys with high levels of discrimination, autonomy and depression appear to be unrelated, which was confirmed in a follow-up correlation analysis ( $\alpha = .06$ ,  $p = .68$ ).

*Sexual orientation.* Similarly, autonomy significantly moderated the relationship between discrimination and depression for both LGBQ youth ( $n = 171$ ;  $b = .42$ ,  $t(167) = 2.76$ ,  $p < .01$ ) and heterosexual youth ( $n = 570$ ;  $b = .19$ ,  $t(566) = 2.21$ ,  $p < .05$ ). Examination of Johnson-Neyman significance regions indicate that for heterosexual youth, autonomy is only a significant moderator for youth with autonomy levels in the top 72.5% (compared to 97% of heterosexual youth), suggesting that autonomy does not impact levels of depression related to discrimination among LGBQ youth with very low autonomy (i.e., 1 standard deviation below the mean or lower). Figures 13 and 14 illustrate this relationship, and also suggest that similar to gender, individuals in the

oppressed group (i.e., LGBTQ) have higher levels of depression overall, and that autonomy is unrelated to depression in the context of high discrimination, particularly for LGBTQ youth and youth of Color.

***Discrimination, autonomy, and wellbeing.***

*Race.* Results examining the moderating effect of autonomy on discrimination and wellbeing indicated that there were significant differences across race ( $b = -1.74$ ,  $t(764) = -3.27$ ,  $p < .005$ ). However, examination of moderation effects within subsamples of youth of Color and White youth failed to find significant moderating effects, though results for autonomy as a moderator in youth of Color approached significance ( $b = -.28$ ,  $t(379) = 1.81$ ,  $p = .07$ ).

*Gender.* Significant differences in moderation across gender were also found ( $b = -3.10$ ,  $t(739) = -5.97$ ,  $p < .001$ ). Further analyses indicated that autonomy was a significant moderator for cisgender girls ( $b = -.23$ ,  $t(764) = -2.07$ ,  $p < .005$ ; see Figure 15) but not cisgender boys ( $b = -.15$ ,  $t(350) = -1.18$ ,  $p = .24$ ). Examination of figure 15 suggests that average and low levels of autonomy may reduce the negative relationship between discrimination and girls' wellbeing, but girls with low autonomy have relatively low wellbeing across levels of discrimination. Examination of individual slopes also suggests that girls with high levels of autonomy may be more susceptible to reduced wellbeing in the context of moderate to high discrimination, and have relatively low but stable levels of wellbeing across levels of discrimination (i.e., a flat slope for girls with low levels of autonomy).

*Sexual orientation.* Autonomy was not a significant moderator when sexual orientation was added as a covariate to the moderation model ( $b = -.15$ ,  $t(736) = -1.72$ ,  $p$

= .09). This non-significant moderation effect was confirmed in the examination of moderation in subsamples of LGBQ ( $b = -.35$ ,  $t(167) = -1.84$ ,  $p = .07$ ) and heterosexual youth ( $b = -.09$ ,  $t(566) = -.90$ ,  $p = .37$ ). These findings suggest that for LGBQ youth, autonomy does not affect the relationship between discrimination and wellbeing.

***Identity-based bullying, teacher positivity, and depression.***

*Race.* Results from analyses examining teacher positivity as a moderator of IBB and depression indicated significant group differences across race ( $b = 2.06$ ,  $t(761) = 3.62$ ,  $p < .001$ ), with further examination suggesting non-significant moderation for students of Color ( $b = .05$ ,  $t(379) = .24$ ,  $p = .81$ ). Examination of this model among White youth indicated that teacher positivity was a significant moderator ( $b = .65$ ,  $t(379) = 2.63$ ,  $p < .01$ ; see Figure 16). To better understand this finding, a linear regression was run examining the impact of teacher positivity on depression within the subsample of White youth who reported IBB and who completed the positivity subscale (i.e., they were in grades 9-11 at W3;  $n = 51$ ) and results indicated a non-significant relationship ( $b = .19$ ,  $t(50) = 1.36$ ,  $p = .18$ ). In other words, results suggest that positivity did not reduce the strength of the relationship between IBB and depression for White youth.

*Gender.* Similarly, significant gender differences were found ( $b = 2.13$ ,  $t(736) = 3.70$ ,  $p < .001$ ) with further examination suggesting non-significant moderation for cisgender boys ( $b = .04$ ,  $t(350) = .12$ ,  $p = .91$ ) and significant moderation for cisgender girls ( $b = .57$ ,  $t(379) = 3.34$ ,  $p < .005$ ). Results from a linear regression examining the relationship between positivity and depression within the subsample of girls who reported IBB and who completed the positivity subscale (i.e., they were in grades 9-11 at W3;  $n = 78$ ) suggested a non-significant relationship ( $b = .15$ ,  $t(77) = .66$ ,  $p = .51$ ). In other words,

results suggest that positivity did not appear to reduce the strong relationship between IBB and depression for girls.

*Sexual orientation.* Finally, positivity was not a significant moderator when sexual orientation was added as a covariate to the moderation model ( $b = .31$ ,  $t(733) = 1.95$ ,  $p = .051$ ). In other words, positivity did not appear to affect the relationship between IBB and depression for heterosexual or LGBQ youth.

**RQ4c) Do positive and autonomy-enhancing teacher-student relationships moderate the relationship between discrimination and negative outcomes across time?** This question was answered with moderation analyses, and each moderation model controlled for wave 2 levels of the outcome. Only discrimination as an independent variable was examined, as IBB was not assessed in wave 2. Results indicated that the model accounted for 36% of the variance in wave 3 depression ( $F(6, 533) = 47.3$ ,  $p < .001$ ,  $R^2 = .358$ ), with both wave 2 positivity ( $b = -.03$ ,  $t(533) = -2.58$ ,  $p < .05$ ) and autonomy ( $b = .22$ ,  $t(533) = 2.00$ ,  $p < .05$ ) significantly moderated the relationship between wave 2 discrimination and wave 3 depression. Examination of teacher positivity as a single moderator in Figure 18 indicates that at high levels of wave 2 positivity, discrimination and depression are unrelated. This figure may also suggest that individuals with lower levels of positivity are more vulnerable to depression in the face of discrimination, with youth with low levels of positivity exhibiting the strongest vulnerability (as indicated by the steep slope; Figure 18). In addition, it appears that for youth with high levels of wave 2 discrimination, positivity and depression are unrelated. Examination of autonomy as a singular moderator in Figure 19 suggests that autonomy does not have a strong impact on the relationship between discrimination and depression,

suggesting that it may only have a strong moderating effect when included in a model with positivity as a second moderator. Neither positivity nor autonomy were found to significantly moderate the relationship between wave 2 discrimination and wave 3 wellbeing or GPA.

## CHAPTER FIVE

### **Discussion**

Results of the present dissertation study indicated that identity-based victimization, including both discrimination and identity-based bullying, is a notable problem negatively associated with mental health and academic achievement in adolescents. Findings suggested that intersectional students face a higher risk of both experiencing identity-based victimization, and suffering from poorer mental health when confronted with above average discrimination. In addition, analyses revealed that LGBTQ youth are a particularly vulnerable group. These youths exhibited low levels of well-being across levels of discrimination, and did not appear to benefit from positive teacher student relationships when faced with identity based bullying.

Autonomy-enhancing and positive teacher student relationships appeared to be a buffer against the negative impact of identity based victimization on mental health for some youth. In other words, most youth experiencing low to average levels of discrimination seem to benefit from autonomy-enhancing teacher student relationships (i.e., exhibit lower levels of depression and/or higher wellbeing), but when faced with high levels of discrimination, this effect is only present for White youth. In contrast, teacher student relationship positivity was not associated with lower depression for White youth and girls who experienced identity-based bullying. Lastly, teacher relationship positivity appeared to be a stronger protective factor over time, whereas teacher support for autonomy was a stronger buffer in cross-sectional analyses. The following discussion will review the findings in more detail, and contextualize them within the extant



literature. The study will conclude with a discussion of limitations, and implications for practice and research.

### **Negative Mental Health and Academic Impact of Identity Based Victimization**

Correlation coefficients and incidence rates in the current study were comparable to those found in similar studies with adolescent samples (e.g., Garnett et al., 2014; Schmitt et al., 2014), suggesting that findings from this study may be generalizable to other adolescent samples. Results supported *hypothesis a) discrimination and identity-based bullying would be positively associated with depression and negatively associated with well-being and academic achievement* cross-sectionally, but not longitudinally. Notably, however, discrimination was significantly correlated with later indicators of mental health and academic achievement in expected ways. This finding is consistent with a large literature base concluding that discrimination and identity-based bullying are associated with reduced well-being, higher levels of depression (Paradies, 2006; Russell et al., 2012; Schmitt et al., 2014; Sinclair et al., 2012) and poorer academic achievement (Alfaro et al., 2009). Results from the current study were also consistent with previous research indicating a stronger relationship between discrimination and depression, and a weaker, but still significant, relationship between discrimination and well-being (see Table 5; Major et al., 2003).

### **Students with Oppressed Identities Face a Higher Risk**

**Intersectional students.** Students with intersectional identities were more likely to experience identity-based victimization and suffer from its consequences. Thus, partial support was also found for *hypothesis b) youth who have intersectional identities and report experiencing identity-based victimization would have higher levels of negative*

*outcomes compared to non-intersectional youth.* More specifically, youth with intersectional identities who experienced above average levels of discrimination had worse mental health than non-intersectional youth with similar levels of discrimination. This finding is consistent with previous research indicating that intersectional youth face a higher risk of mental health problems (Garnett et al., 2014; LeVasseur et al., 2013) and mirrors recent research concluding that intersectional youth experience the most discrimination and the worst outcomes (Byrd & Carter Andrews, 2016). While the current study cannot make inferences about the cause for this finding, research suggests that individuals with intersectional identities may experience more distress due to uncertainty about the target of mistreatment (Moradi & Subich, 2003), and may experience identity based victimization as more pervasive due to experiencing it in multiple contexts (Daley et al., 2008). While some research supports the notion that the effects of intersectional victimization are additive or multiplicative, such that the number of identities one is victimized for predicts negative outcomes (Grollman, 2012; Kosciw et al., 2009), others have failed to find such an effect (Cogburn et al., 2011). Though the current study did not examine motivations for victimization and thus cannot make assertions about this phenomenon, it is likely that intersectional youth in the current sample experienced discrimination motivated by multiple identities (Bravo, n.d.).

**LGBQ students.** Notably, LGBQ youth had significantly lower levels of well-being compared to heterosexual youth, regardless of discrimination level. This finding is consistent with other research which has found significantly higher levels of mental health difficulties in LGBTQ youth (LeVasseur et al., 2013) and reduced indicators of well-being (e.g., self-esteem; Bos et al., 2008). Importantly however, previous research

has found a significant negative relationship between discrimination and mental health in LGBTQ samples, though most of the research has examined exclusively LGBTQ samples (Huebner, Rebchook, & Kegeles, 2004; Mays & Cochran, 2001), or examined indicators of mental health impairment (e.g., depression, suicidality) rather than well-being (Garnett et al., 2014; Poteat et al., 2011). Consistent with theories used to explain the relatively weaker impact of discrimination on wellbeing (c.f., Paradies, 2006 for a review), it is possible that LGBQ youth's levels of wellbeing are relatively stable in the face of discrimination as they are able to attribute discriminatory experiences to societal oppression (e.g., homophobia, misogyny) rather than to their individual attributes (Major et al., 2003). Moreover, research on nationally representative samples indicates that sexual minorities generally have more mental health problems (e.g., substance use disorders, suicidality, affective disorders) compared to heterosexual individuals (Cochran, 2001; Gilman et al., 2001; Sandfort, de Graaf, Bijl, & Schnabel, 2001).

This trend may best be explained by *minority stress theory*, which posits that the excess in prevalence of mental health disorders in sexual minorities results from their stressful social environment, which is characterized by prejudice, discrimination, and stigma (Meyer, 2003). Minority stress encapsulates both explicit discrimination experiences, as well as psychological processes (e.g., internalized homophobia, chronic vigilance to rejection or victimization) and behaviors (e.g., attempts to conceal their sexual orientation) associated with oppressive environments. Though minority stress theory is partially applicable to other minority groups (e.g., people of Color), it is important to note that LGBQ youth were the only subsample in the current study with a concealable stigmatized identity. Schmitt et al.'s (2014) meta-analytic review produced

larger effect sizes for the negative impact of discrimination on the wellbeing of individuals with concealable identities. Similarly, research suggests that individuals with concealable stigmatized identities (e.g., sexual minorities, socioeconomically disadvantaged people) experience worse mental health (e.g., anxiety, depression) and reduced self-esteem compared to minorities with non-concealable identities (e.g., racial minorities; Frable, Platt, & Hoey, 1998). Empirical support and theory suggests that this is because individuals with concealable stigmatized identities cannot readily identify similar others and thus have limited access to social support, and face additional stress and uncertainty regarding the safety of disclosing and/or concealing their identity(ies) (Chaudoir & Fisher, 2010). Taken together, it is possible that the reduced wellbeing found across levels of discrimination in the current subsample of LGBTQ youth can be explained by other manifestations of oppression that were not captured in the present study.

**Students of Color and Cisgender Girls.** No differences in outcomes were found across gender or sexual orientation among students of Color (i.e., no support for *hypotheses c and d*), which is inconsistent with previous research suggesting differing outcomes across demographic subgroups (e.g., gender among youth of Color; Cogburn et al., 2011). However, descriptive statistics indicated that across categories of victimization, girls and intersectional students had worse mental health compared to boys and non-intersectional students (respectively), and youth of Color and LGBTQ students exhibited both poorer mental health and academic achievement compared to their counterparts (Table 5). Results related to academic achievement are consistent with a large body of research documenting lower academic performance in Latino and African

American youth, which is attributable to a variety of factors such as structural inequality (e.g., fewer resources for schools populated by mostly students of Color) and stereotype threat (Bali & Michael Alvarez, 2003; Brown, Bigler, & Chu, 2010; Oates, 2009).

Similarly, research on academic performance and sexual orientation indicates that LGBTQ youth tend to have poorer GPAs, lower expectations for academic success, and higher truancy, which has been found to be partially attributable to higher rates of peer victimization (Aragon, Poteat, Espelage, & Koenig, 2014) and mental health problems (Oswalt & Wyatt, 2011).

Findings pertaining to mental health are consistent with a large body of research documenting worse mental health (e.g., higher rates of depression) in LGBTQ youth compared to heterosexual youth (Meyer, 2003; Remafedi, French, Story, Resnick, & Blum, 1998) and girls compared to boys (Essau, Conradt, & Petermann, 2000; Nolen-Hoeksema & Girgus, 1994). Notably, findings from epidemiological studies on the prevalence rates of psychiatric disorders across racial groups are mixed (J. Liang, Matheson, & Douglas, 2016). More specifically, research examining diverse samples of youth have found lower rates of mental health disorders in youth of Color compared to White youth (Cuffe, Moore, & McKeown, 2005; Roberts, Roberts, & Xing, 2006) or no differences across racial groups (Angold et al., 2002; Costello, Farmer, Angold, Burns, & Erkanli, 1997). Importantly however, these differing rates can be partially explained by cultural differences in symptom manifestation and expression (J. Liang et al., 2016).

### **Teacher Student Relationships**

**Autonomy-enhancing teacher student relationships are protective for some students.** Partial support was provided for *hypothesis e) positive teacher-student*

*relationships and those that foster autonomy would buffer against the negative psychological and academic effects associated with discrimination and identity-based bullying both cross-sectionally and longitudinally.*

**Depression.** Findings suggested that autonomy-enhancing teacher relationships mitigated the negative impact of discrimination on depression for students experiencing low to average levels of discrimination, but not for those with above average levels of discrimination. Further examination confirmed this finding for most subgroups, excluding White youth, who appeared to experience this protective effect across discrimination levels. Longitudinal analysis results indicated that teacher support for autonomy significantly moderated discrimination and later depression, though it appeared to be less protective than positivity across time.

These findings mirror extant research demonstrating the significance of teacher-student relationships, and highlight the importance of those that promote autonomy and self-efficacy. The non-significant findings related to academic performance are consistent with previous research that has failed to find a significant relationship between autonomy-promoting teacher relationships and school engagement (Tucker et al., 2002). The notable buffering effects of autonomy-supporting teacher relationships on depression and well-being are also consistent with studies indicating that teacher support for autonomy is associated with lower levels of depression and anxiety (Chirkov & Ryan, 2001; Way, Reddy, & Rhodes, 2007; Yu, Li, Wang, & Zhang, 2016), higher emotional regulation skills, and fewer emotional problems (Tang et al., 2013). Importantly, no study to date has examined the possible buffering effect of teacher support for autonomy in the context of discrimination. Thus, the present study adds important information to the

literature, suggesting that this facet of teacher-student relationships is protective for students facing low to moderate levels of discrimination.

It is possible that autonomy-enhancement is particularly important in the face of discrimination as it teaches students that they are capable of independent and efficacious action in academic contexts, which may generalize to the interpersonal and social environments in which they experience victimization. However, these relationships may not be as advantageous for the most marginalized students (i.e., those who experience high levels of discrimination and belong to oppressed groups) because the negative impact of the discrimination they face outweighs the benefits accrued from autonomy-promoting relationships. It is also possible that some of the discrimination students experience occurs within student-teacher relationships, and thus may reduce some of the benefits associated with these relationships. This is a particularly important consideration in light of research indicating that teacher discrimination is associated with higher substance use (Respress, Small, Francis, & Cordova, 2013), lower self-esteem (Fisher et al., 2000), and poorer academic achievement (Thomas et al., 2009).

*White students.* The current study found that unlike other subgroups, White students experiencing high levels of discrimination appeared to benefit from autonomy enhancing relationships with respect to depression. White students also reported higher well-being, lower depression, and higher GPAs than students of Color in both below and above average discrimination groups in the current sample. This may result from the benefits they derive from White privilege, such as the social messages they receive that they are capable, efficacious, competent, and belong in educational settings (McIntosh, 1990), which are consistent with White Western culture, and the autonomy-enhancing

messages they receive from teachers. It is also important to note that Medford High School staff are primarily White, which may increase White students' feelings of empowerment and belonging. This is congruent with minority stress theory and related research, which posits that wellbeing is related to social support networks, and the extent to which one is in contact with similar others (Meyer, 2003).

***Wellbeing.*** Autonomy-enhancement significantly moderated the relationship between discrimination and wellbeing, and results suggested that students with high levels of autonomy support experienced a more pronounced dip in wellbeing when faced with discrimination, compared to those with low or moderate levels of autonomy support. It is possible that these students are more vulnerable to discrimination because they have embraced the message that they are capable of acting independently, and thus feel helpless and/or unsupported when faced with discrimination. This is consistent with literature indicating that higher autonomy is often associated with lower connectedness (i.e., the capacity for empathy and relating to others; Bekker & Van Assen, 2008). Thus, it is possible that students feel less connected when their autonomy is enhanced, which becomes a risk factor in the context of discrimination. No study to date has examined the relationship between discrimination and teacher support for autonomy, and thus results from this study may be the first to suggest that in the context of discrimination, there are important differences in the relationship between teacher support for autonomy and wellbeing.

***Girls.*** Autonomy-enhancing teacher-student relationships appeared to be protective across levels of discrimination for boys. In contrast, results suggested that girls experiencing low support for autonomy have low levels of wellbeing regardless of



discrimination. This finding may suggest that autonomy-enhancing teacher-student relationships are particularly important for girls' well-being. Notably however, previous research on the mental health impact of teacher support for autonomy has failed to find gender differences (Chirkov & Ryan, 2001; Way et al., 2007; Yu et al., 2016). Thus, results from this study may suggest that high autonomy support is a particularly important protective factor for girls facing discrimination, and that autonomy support is more strongly related to wellbeing for girls compared to boys, independent of discrimination level.

Despite the observed protective effect, findings also indicated that girls with high support for autonomy have a steep drop in wellbeing in the context of discrimination, which may suggest that this subgroup of girls is particularly vulnerable when faced with discrimination. This is consistent with studies indicating that girls are more vulnerable to adversity compared to boys, and thus tend to exhibit higher rates of mental health difficulties when faced with stressors (Hamilton, Stange, Abramson, & Alloy, 2015; Rudolph & Flynn, 2007). Research also suggests that females tend to exhibit higher levels of connectedness, and lower levels of autonomy, compared to males (Bekker & Van Assen, 2008). Taken together, this may indicate that the enhanced autonomy experienced by the subsample of girls in the present study may be associated with lower levels of interpersonal connectedness, which may make them feel especially alienated when faced with discrimination. In addition, girls may be at risk for specific types of discrimination (e.g., sexual harassment) that may have specific associations with moderators and outcomes. While the present study did not assess perceived motivation for discrimination, research indicates that females are at a higher risk for both

experiencing gender discrimination and being negatively impacted by it (e.g., lower wellbeing, higher depression; Cogburn et al., 2011; Schmitt, Branscombe, Kobrynowicz, & Owen, 2002b). Thus, the current study results may also point to a unique interaction between gender discrimination, teacher student relationships, and wellbeing.

**Positive teacher student relationships are protective for some students experiencing identity-based bullying.** Teacher-student relationships characterized by emotional support and positivity were associated with lower levels of depressive symptoms among those who did not report identity-based bullying, but did not impact depression for girls and White identity-based bullying victims. Results related to sexual orientation were non-significant, indicating that positivity was unrelated to mental health for LGBTQ youth. However, results suggested that for students of Color and boys experiencing identity-based bullying, positive teacher-student relationships diminished its negative impact.

***Students of Color.*** Importantly, extant research on protective factors associated with IBB has focused exclusively on LGBTQ youth (e.g., Espelage et al., 2008; Goodenow et al., 2006; Poteat et al., 2011) and it appears that no studies to date have examined the potentially protective role of teacher-student relationships for students experiencing identity-based victimization. Of the limited literature that exists on the relationship between teacher-student relationships and discrimination, a recent study found that teacher's *critical awareness* (i.e., knowledge that mitigates bias, such as education about the historical context of marginalized students) is associated with lower reports of discrimination (López, 2017). In addition, Niwa et al. (2014) found that students experiencing adult discrimination outside of school have worse relationships

with teachers. This is consistent with research demonstrating that youth of Color tend to have less positive teacher-student relationships (e.g., higher conflict, higher teacher-reported dependency; Hughes, Cavell, & Willson, 2001; Mantzicopoulos & Neuharth-Pritchett, 2003; Saft & Pianta, 2001). However, previous research has also demonstrated that positive teacher-student relationships are more beneficial for children of Color than White children (Burchinal, Peisner-Feinberg, Pianta, & Howes, 2002; Meehan et al., 2003), which is congruent with current study findings. Taken together, this may suggest that these positive relationships are particularly valued and helpful when they exist.

***Cisgender boys.*** Similar to student of Color, research suggests that boys tend to have lower quality teacher-student relationships (Ewing & Taylor, 2009; Hamre & Pianta, 2001; McCormick & O'Connor, 2015). Yet, most research on gender differences in outcomes associated with teacher-student relationships suggests that girls benefit more from close teacher relationships, and researchers postulate that this is related to lower expectations in school for boys to form close relationships with teachers (Baker, 2006; Ewing & Taylor, 2009; McCormick & O'Connor, 2015). In contrast, some authors suggest that boys may actually benefit more from positive teacher-student relationships because they face a higher risk for poor school outcomes (e.g., discipline, low grades; McCormick & O'Connor, 2015), which has been partially supported by a study suggesting that teacher-student relationship quality was more strongly related to later discipline for boys (Hamre & Pianta, 2001). While the research on teacher-student relationships and gender is mixed, studies have consistently found that girls are more susceptible to depression and other negative outcomes when faced with discrimination (Cogburn et al., 2011; Lorenzo-Blanco, Unger, Ritt-Olson, Soto, & Baezconde-

Garbanati, 2011) and are less likely to benefit from protective factors (Umaña-Taylor & Updegraff, 2007). Though the current study did not find that discrimination impacted mental health differentially across gender, it is possible that boys are better able to utilize the protection derived from positive teacher-student relationships.

**Positive teacher-student relationships are protective over time.** Results from longitudinal analyses indicated that both positive and autonomy-enhancing teacher-student relationships at wave 2, moderated the relationship between wave 2 discrimination and depressive symptoms. This finding suggested that these facets of teacher-student relationships diminished depressive symptoms across time. Further examination indicated that positivity was a stronger longitudinal protective factor than autonomy. This finding is consistent with the growing body of research indicating that teacher-student relationships characterized by warmth and emotional support better predict positive outcomes compared to other facets of teacher student relationships (Garcia-Reid et al., 2015; Malecki & Demaray, 2003; Tucker et al., 2002). Notably, positivity did not moderate the relationship between discrimination and outcomes in cross-sectional analyses, while autonomy did. Thus, it is possible that positive teacher-student relationships have a more profound long-term effect on depression compared to autonomy, while autonomy is helpful for students in the moment. However, autonomy was a significant moderator when included in a model with positivity, suggesting that both factors are benefit students facing discrimination across time. This finding is consistent with longitudinal research demonstrating that autonomy is positively associated with mental health (Yu et al., 2016), and that teacher-student support is

associated with later academic engagement (Rudasill, Niehaus, Buhs, & White, 2013) and prosocial behavior (De Laet et al., 2014).

**Teacher provision of structure is unrelated to the impact of identity-based victimization.** Results fully supported *hypothesis f) teacher-student relationships that provide structure would not have an impact on the relationship between identity-based victimization and outcomes*. This finding is compatible with other studies that have found a nonsignificant effect of teacher provision of structure when other aspects of teacher students relationships were included in analyses (e.g., Malecki & Demaray, 2003; Tucker et al., 2002), though structure was treated as a separate moderator in the current study. Importantly however, a handful of studies have found that structure predicts academic engagement independent of autonomy (Hospel & Galand, 2016; Lau & Nie, 2009; Wang & Eccles, 2013). In sum, while other studies suggest that the provision of structure impacts academic engagement, current study findings suggest that it is far less important for mental health and academic achievement in the context of discrimination.

### **Implications for Practice**

**Focus on vulnerable students.** Rates of discrimination in the present study were comparable to those found in similar studies (Fisher et al., 2000; Huynh & Fuligni, 2010), though rates of identity-based victimization were slightly higher than those found in nationally representative samples (Garnett et al., 2014). This is particularly notable given that MHS has a large and active GSA, which some research indicates is associated with reduced homophobic victimization (Kosciw et al., 2009; Marx & Kettrey, 2016). The current study examined identity-based bullying for multiple identities, and thus it is unclear if rates of homophobic victimization are consistent with other studies. However,

findings suggest that LGBTQ youth are a particularly vulnerable group (i.e., more likely to experience IBB and discrimination compared to heterosexual students). Given research that supports the utility of GSAs, it is important that the MHS GSA continues to be widely supported. However, findings from the current study indicate that the existence of a GSA is simply not enough to combat the negative effects associated with the identity-based victimization that LGBTQ youth face.

Findings indicated that unlike White students, youth of Color benefit from strong teacher-student relationships even when faced with identity-based bullying. Given that these students also face an increased risk for identity-based victimization, it is especially important for teachers and school staff to provide students of Color with support. This may take the form of establishing and promoting school-based affinity groups for different races and cultures (e.g., Black Student Union; Guiffida, 2003; Patton, 2006),

**Policy.** The current study found that youth with marginalized identities (e.g., intersectional students) were both more likely to experience identity-based victimization, and suffer from its consequences. These findings highlight the importance of targeting vulnerable groups for assessment (e.g., in health monitoring surveys, during guidance counselor visits) and intervention, which may be accomplished through law and policy reform (Kosciw et al., 2011; Russell et al., 2012). For instance, schools should establish and publicize a harassment policy that specifically includes sexual orientation, gender identity (Garnett et al., 2014; O'Shaughnessy, Russell, Heck, Calhoun, & Laub, 2004), and race. These policies should also outline and consistently implement specific disciplinary actions for those who enact bullying or harassment (Ttofi & Farrington, 2012). Given that the current bullying report forms at MHS do not include inquiries about

motivation (e.g., identity) for bullying, the extant reporting system should be changed to better identify the motivations for aggression so that school administrators can both accurately recognize these problems at school, and address them appropriately.

**School-based intervention.** Findings from meta-analytic reviews consistently find that anti-bullying interventions are minimally effective in reducing bullying behaviors (Ferguson, Miguel, Kilburn, & Sanchez, 2007; Ttofi & Farrington, 2012). Those that are more successful tend to be long-term and intensive (Farrington & Ttofi, 2009) and focus on youth who are deemed to have a high risk of violence (Ferguson et al., 2007). Research also suggests that the incorporation of parents is crucial in bullying reduction interventions, and should include parent contact (e.g., student-teacher conferences, parent education, phone calls to parents) in both prevention and intervention efforts (Ayers, Wagaman, Geiger, Bermudez-Parsai, & Hedberg, 2012; Ttofi & Farrington, 2012).

Importantly however, existing bullying intervention and prevention programs rarely address issues of identity, bias, or discrimination, and thus no research exists on the effectiveness or best practices associated with identity-based victimization interventions. To address this gap in the literature, Brinkman (2015) notes that research on anti-bullying research should be integrated with that on prejudice reduction in youth. A recent meta-analysis of this literature suggests that the most effective programs for prejudice reduction in adolescents involves the encouragement of empathy and perspective taking, and includes intergroup contact (Beelmann & Heinemann, 2014).

**Teachers, support staff, and curriculum.** Results of the current study suggest that while teacher student-relationships have a mitigating impact on students

experiencing low to moderate levels of discrimination, they are far less protective for students experiencing high levels of discrimination and/or identity-based bullying. While some teachers may help students through the provision of emotional warmth and support, or by enhancing academic autonomy, it is possible that teachers may not intervene or explicitly address victimization. This suggestion is supported by research indicating that students who report teachers or staff intervening to stop negative comments based on sexual orientation report safer school climates and less harassment (O'Shaughnessy et al., 2004). Thus, professional development and other teacher education programs should train teachers to intervene when they observe identity-based victimization. This should also involve special attention for targeted students (e.g., LGBTQ students, students of Color), such as having teachers provide regular check-ins, and learning and implementing intervention techniques that go beyond showing sympathy.

Research also suggests that students who know where to go for support with issues related to sexual orientation or gender identity feel safer at school and are less likely to be harassed (O'Shaughnessy et al., 2004). As such, it is important for school staff and teachers to openly support and offer help to students with marginalized identities. In addition, schools should train mental health, guidance, and peer counselors on the prevalence and risks associated with identity-based victimization, as well as appropriate education and referrals they can make for marginalized and targeted students.

Studies also indicate that student-teacher racial match is associated with closeness (Yiu, 2013) and more positive teacher assessments of students (Saft & Pianta, 2001; Zimmerman, Khoury, Vega, Gil, & Warheit, 1995). Across these studies, there is a large proportion of racial mismatch between teachers and students (i.e., mostly White teachers,



and mostly students of Color), and African American children tend to have overall poorer teacher-rated outcomes (e.g., higher dependency, more problem behaviors, poorer school adjustment; Bates & Glick, 2013; Pianta et al., 2003; Zimmerman et al., 1995). This is particularly noteworthy in light of a recent study that found that Black teachers were closer with Black students compared to students of other races (Yiu, 2013). Given that the vast majority of teachers in MHS are White, and that the largest racial minority group is Black, hiring more Black teachers would likely improve teacher-student relationships.

Reducing identity-based victimization and its negative impact may also be enhanced through the implementation of inclusive curriculum. This may involve curriculum highlighting important people (e.g., authors, historical figures) of Color and/or LGBTQ individuals, as well as education about sexual orientation, gender identity, race, and culture (O'Shaughnessy et al., 2004). In addition, didactics should incorporate explicit discussions on prejudice and harassment, as research suggests that simply expressing positive attitudes about marginalized identities is not sufficient in combatting bias (Aboud & Fenwick, 1999).

### **Limitations and Suggestions for Future Research**

The current study is one of the first to examine the incidence rates and effects of a range of identity-based victimization experiences in youth, and the first to assess the protective role of teacher student relationships in the context of discrimination and identity-based bullying. However, there are a number of important study limitations that should be addressed in future research. The remainder of the current study will outline these limitations as well as their relevance to future research, and end with a summary of important conclusions.

**Additional methods.** The current study was limited to survey data collected from youth, which while important, provides only a limited understanding of student experiences and the larger context of youth's lives. Future studies should consider incorporating qualitative methods to more deeply examine students' experiences of discrimination, and inquire about their ways of coping and healing. Surveying or interviewing other important figures in youth's lives (e.g., teachers, parents, mentors) could also provide meaningful information that would help researchers, providers, and policy-makers better understand how to help youth facing identity-based victimization. Additional information gathered may pertain to teachers' perspectives of students' experiences (e.g., how aware they are of the level of discrimination or identity-based bullying occurring in the school), teachers' perspectives of their relationships with students (e.g., positivity, closeness), and the ways in which parents or mentors help students understand or overcome difficult experiences.

**Experiences of gender non-conforming youth.** Though gender non-conforming (GNC) youth were incorporated in analyses that were not specific to gender (, the current study did not include these youth in a handful of analyses e.g., examining whether outcomes were worse across gender) due to their relatively small sample size, and associated statistical power limitations. This is a notable limitation given the growing body of research indicating that GNC youth face a particularly high risk of victimization and poor outcomes (Kosciw et al., 2009; Toomey et al., 2010). Future research should examine a larger sample that allows for subgroup analyses and/or conduct additional qualitative assessments of the experiences of these youths.

**Nuanced assessment of victimization.** Despite the relative detail in which the current study examined identity-based victimization, additional research would benefit from a more complex assessment of these experiences. More specifically, researchers have found that the Everyday Discrimination Scale is a better measure of discrimination in some racial groups compared to others (Kim et al., 2014; Lewis et al., 2012), which is consistent with previous research indicating that different identity groups face distinctive types of discriminatory and victimization experiences (e.g., Bellmore et al., 2012). In addition, the current study was limited in its use of a single-item identity-based bullying measure. Thus, the current study did not fully capture the myriad experiences that diverse youth face. Future research should incorporate multiple measures of discrimination (e.g., peer discrimination, teacher discrimination) and victimization specific to different identity groups in order to better assess the complexity of these phenomena, and better understand the ways in which they differ across subgroups. Research on discrimination also indicates that the contexts in which individuals have these experiences are relevant to understanding its impact (e.g., intersectional youth may experience discrimination in more environments), and thus future studies should inquire about this as well (Daley et al., 2008).

**Additional schools and larger sample size.** Though the current study was strengthened by its assessment of a diverse high school population across two years, generalizations that can be made from current findings are limited. While the current study sample is reflective of the larger population of the United States with respect to racial and gender diversity, future research would benefit from examining multiple schools and/or nationally representative samples. Such research would help determine

whether or not the current study findings could be replicated in a more generalizable sample, and thus have important implications for the policy and practice suggestions outlined above.

**Examination of additional protective factors and outcomes.** The current study found that youth experiencing the most severe forms of victimization (i.e., high discrimination, identity-based bullying) are less likely to be protected from poor mental health by teacher-student relationships. Thus, future studies should expand their examination of protective factors to better determine the ways in which the most marginalized and targeted youth can be helped. This should include the examination of other factors that previous studies have found to be associated with positive youth outcomes such as racial or ethnic identity (Brown & Chu, 2012; Dotterer et al., 2009; Parham & Helms, 1985), mentoring relationships (B. Liang, Spencer, Brogan, & Corral, 2008), parenting relationships (Dotterer & Lowe, 2015; Hill & Wang, 2015; Wang, Hill, & Hofkens, 2014), and sense of purpose (Blattner, Liang, Lund, & Spencer, 2013). Finally, the current study used GPA to measure academic achievement. Given the high correlation between year 1 and year 2 GPA, it is possible that the relative lack of significant findings related to GPA was attributable to its limited variability within the sample, and across time. Future studies may consider using alternative measures of academic achievement (e.g., test scores) which may also be more sensitive to the effects of discrimination (e.g., stereotype-threat).

## **Conclusions**

The current study adds to the extant literature on the impact of identity-based victimization in a number of important ways. First, it uses an intersectional framework to

capture the complexity of the relationship between identity(ies) (i.e., race, gender, and sexual orientation), identity-based victimization, and associated moderators and outcomes. Second, it examines a more comprehensive range of identity-based victimization experiences, including both everyday discrimination experiences, and more severe forms of identity-based assault. Finally, it is novel in its analysis of teacher-student relationships as a protective factor for youth facing identity-based victimization.

Results from the present study shed light on the pervasive presence of identity-based victimization in a large and diverse public school. Findings indicated that youth with multiple oppressed identities faced a higher risk of victimization, and that victimization was associated with both poorer mental health and worse academic outcomes. LGBTQ youth were also identified as a particularly vulnerable group of students who experienced both more victimization, and worse mental health. Finally, results indicated that positive and autonomy-enhancing teacher student relationships were helpful for students experiencing relatively less victimization, but were less protective for the most marginalized youth.

In addition to the important research implications outlined above, the present study findings support the implementation and examination of changes in practice and policy. More specifically, the most vulnerable students (e.g., LGBTQ, intersectional) should be targeted for support and interventions, and school policies for discrimination and bullying should be developed and/or improved to address issues of identity and prejudice. Finally, school staff and teachers should be trained to identify and effectively intervene when identity-based victimization occurs, and change curriculum to incorporate lessons on prejudice, and better represent marginalized groups.

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**Figure 1.**

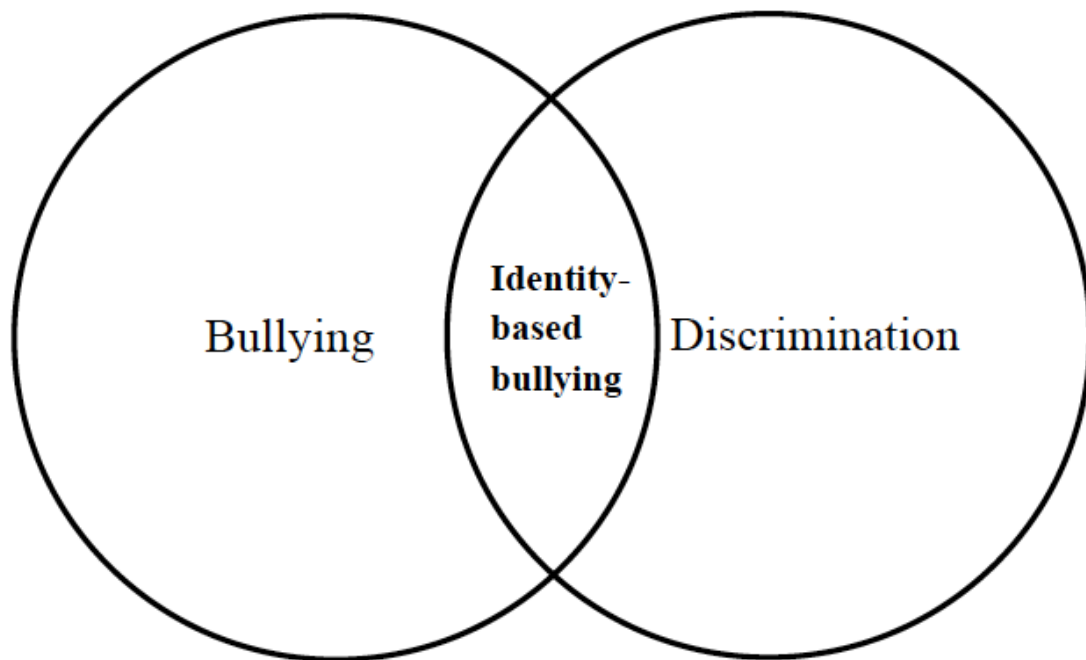
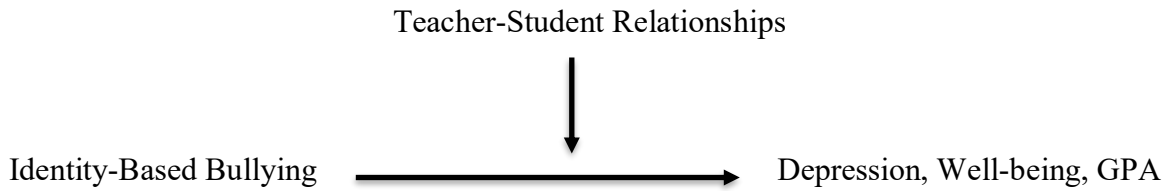
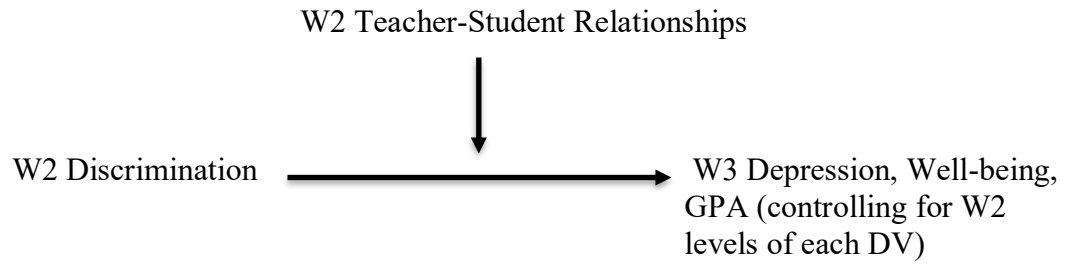


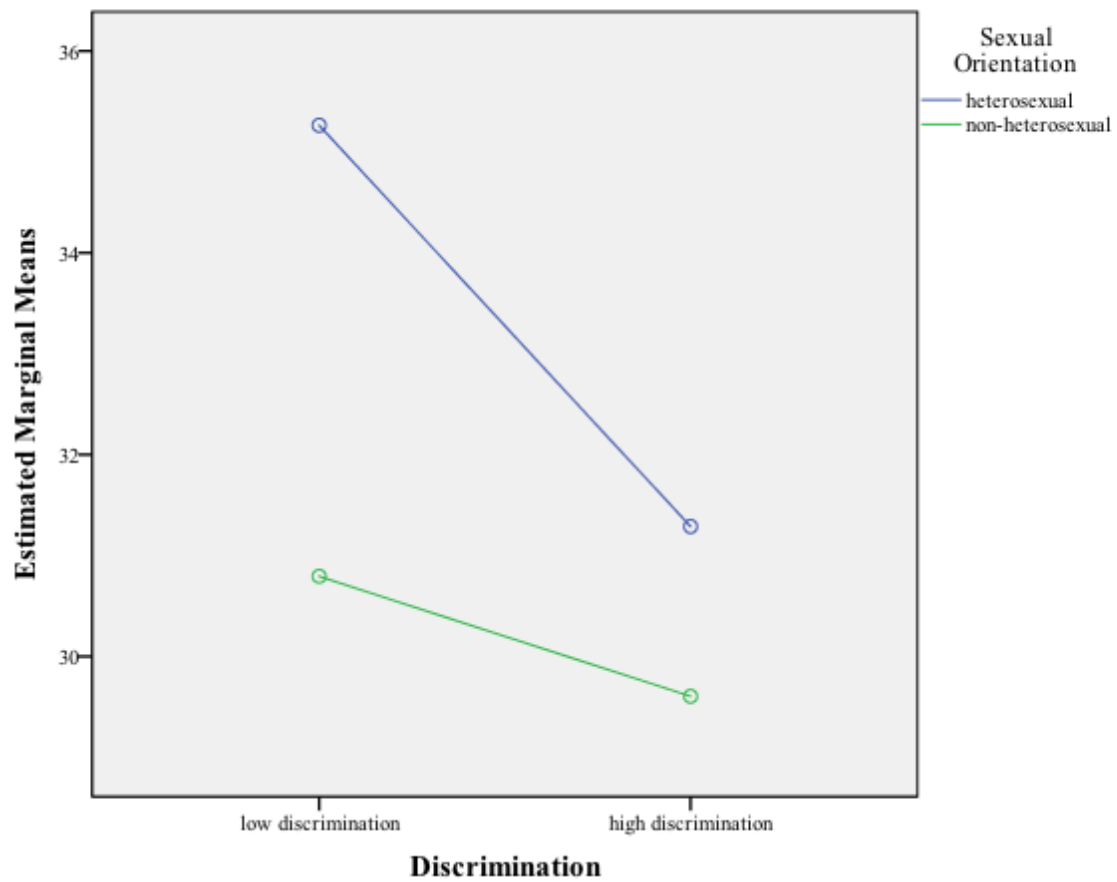
Figure 1.1: The Relation of Bullying, Discrimination, and Identity-Based Bullying

**Figure 2.****Hypothesized Moderating Relationship between Identity-Based Bullying and Outcomes (*W3 Data only*)**

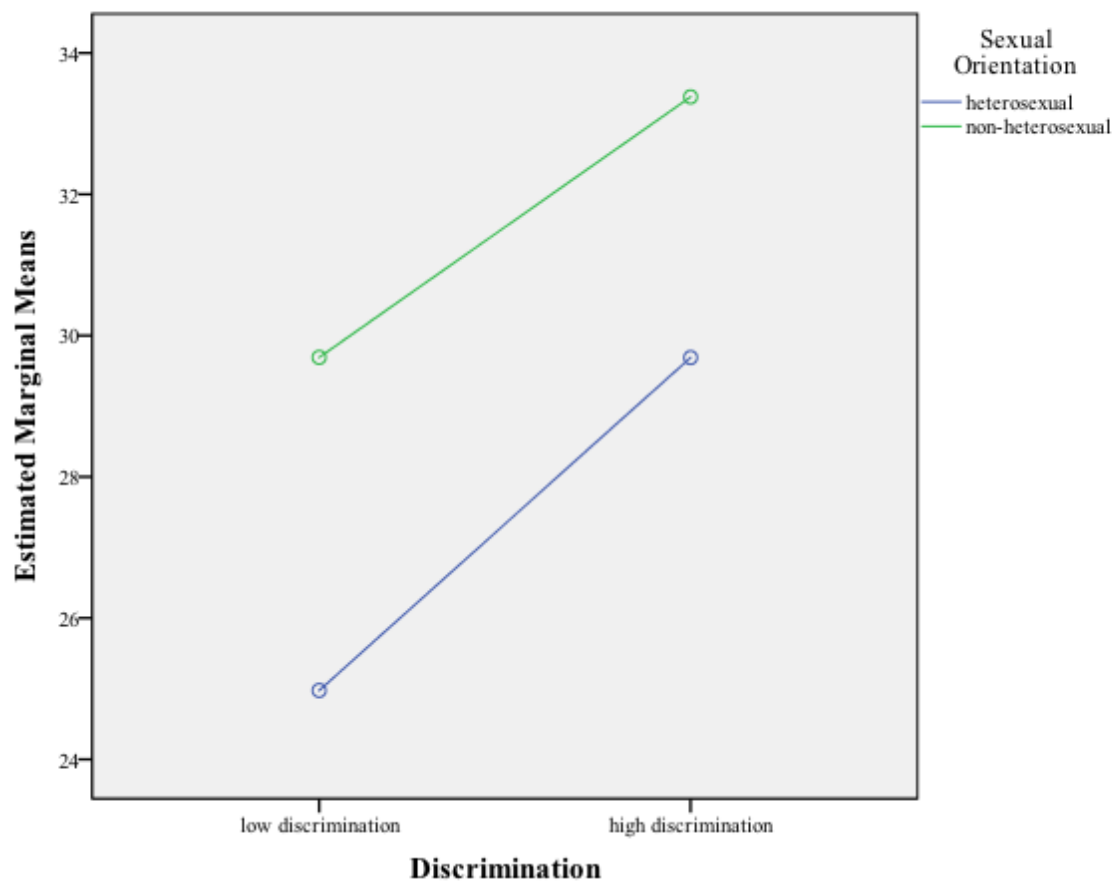
**Figure 3.**  
**Hypothesized Moderating Relationship between Discrimination and Outcomes Across Time**



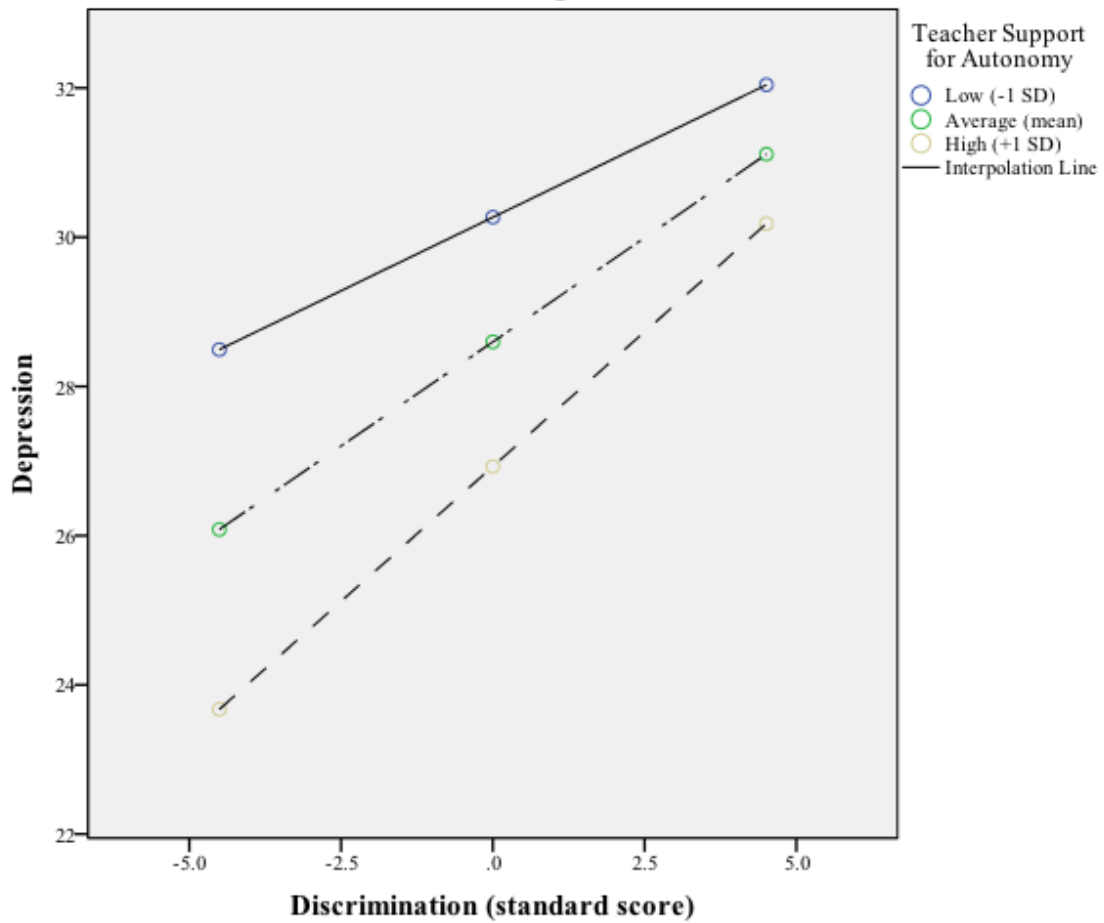
**Figure 4. Well-being in the Context of Discrimination Across Heterosexual and Non-heterosexual Students**



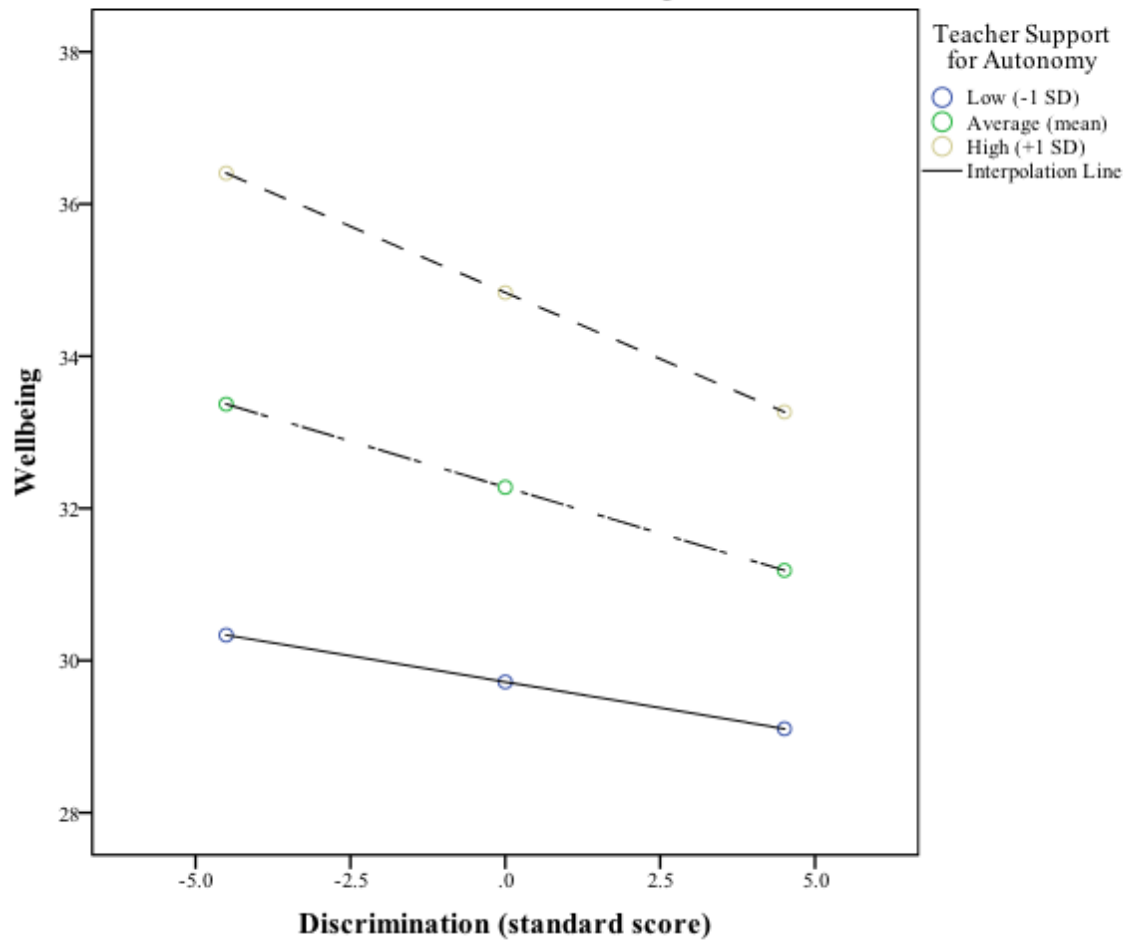
**Figure 5. Depression in the Context of Discrimination Across Heterosexual and Non-heterosexual Students**



**Figure 6. Teacher Support for Autonomy as a Moderator of Discrimination and Depression**

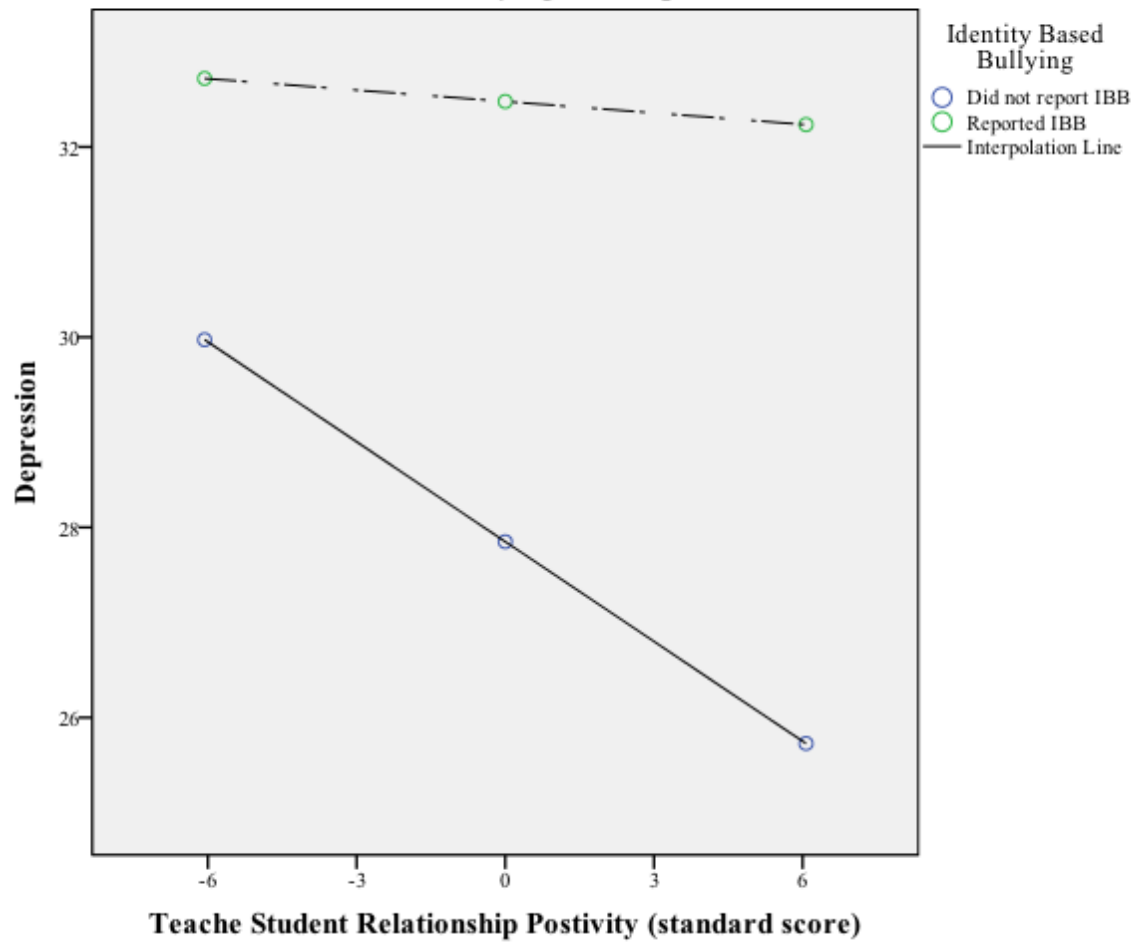


**Figure 7. Teacher Support for Autonomy as a Moderator of Discrimination and Wellbeing**

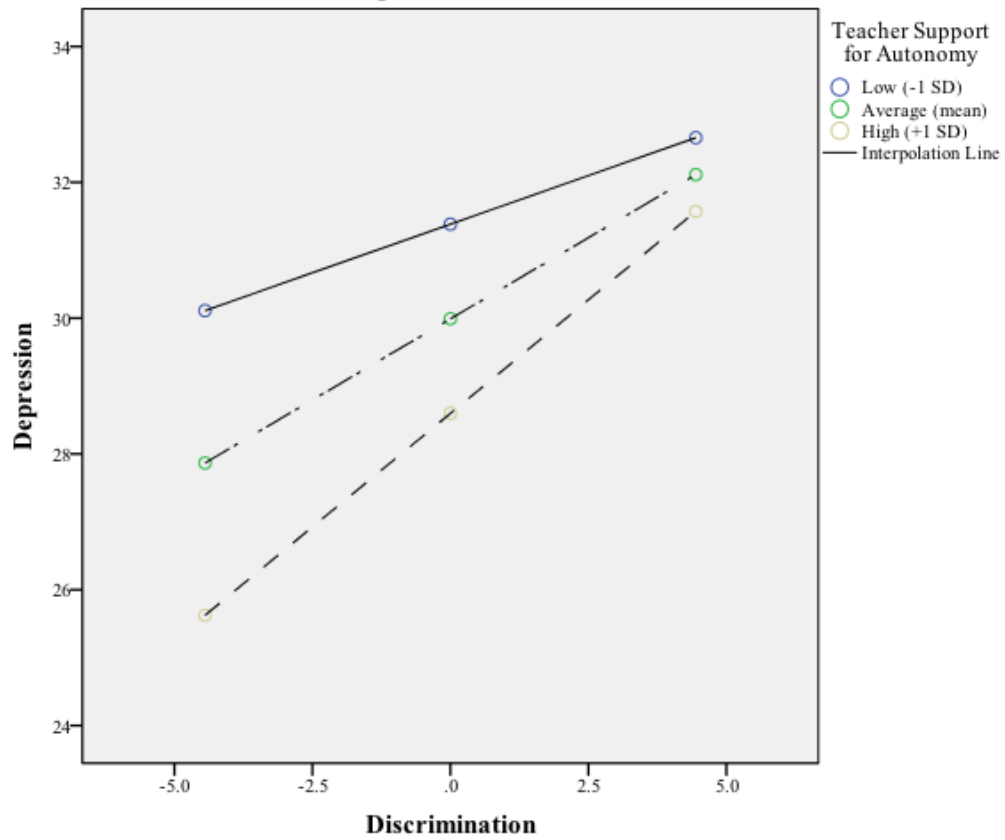




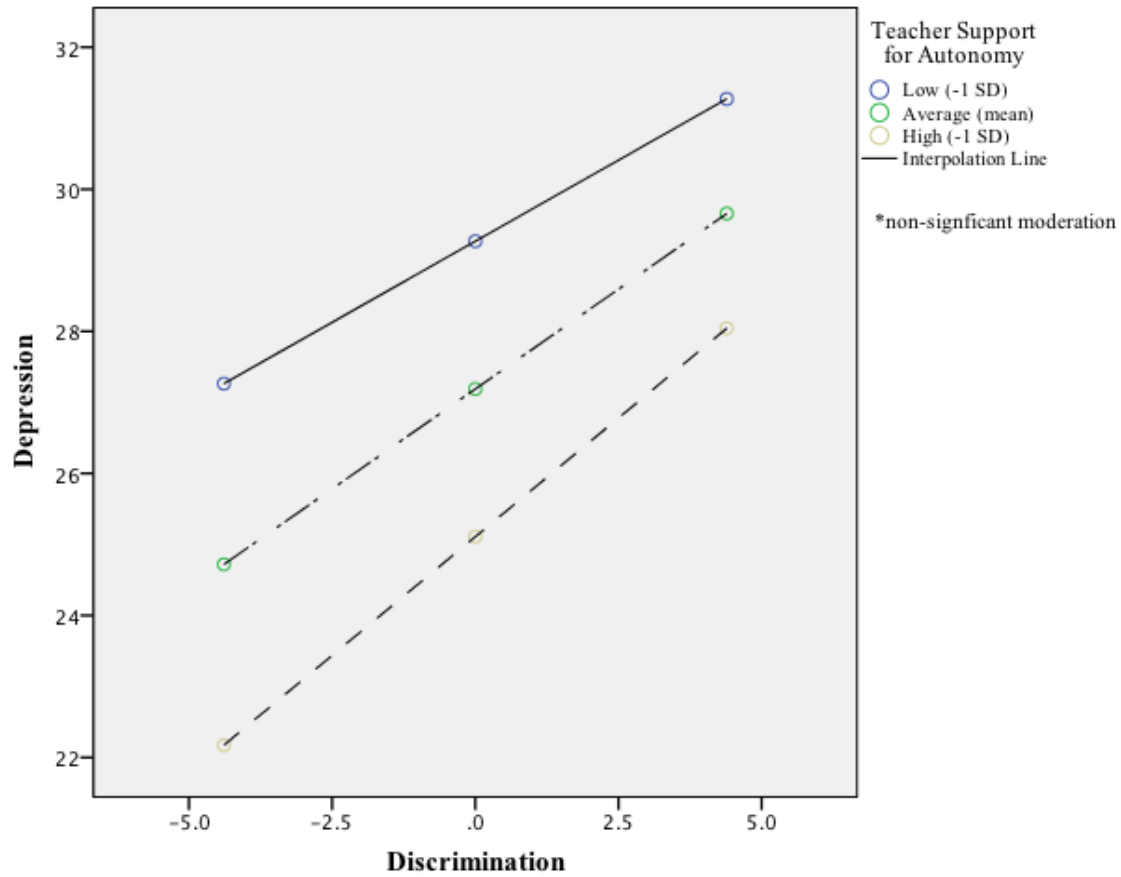
**Figure 8. Teacher Student Relationship Positivity as a Moderator of Identity-Based Bullying and Depression**



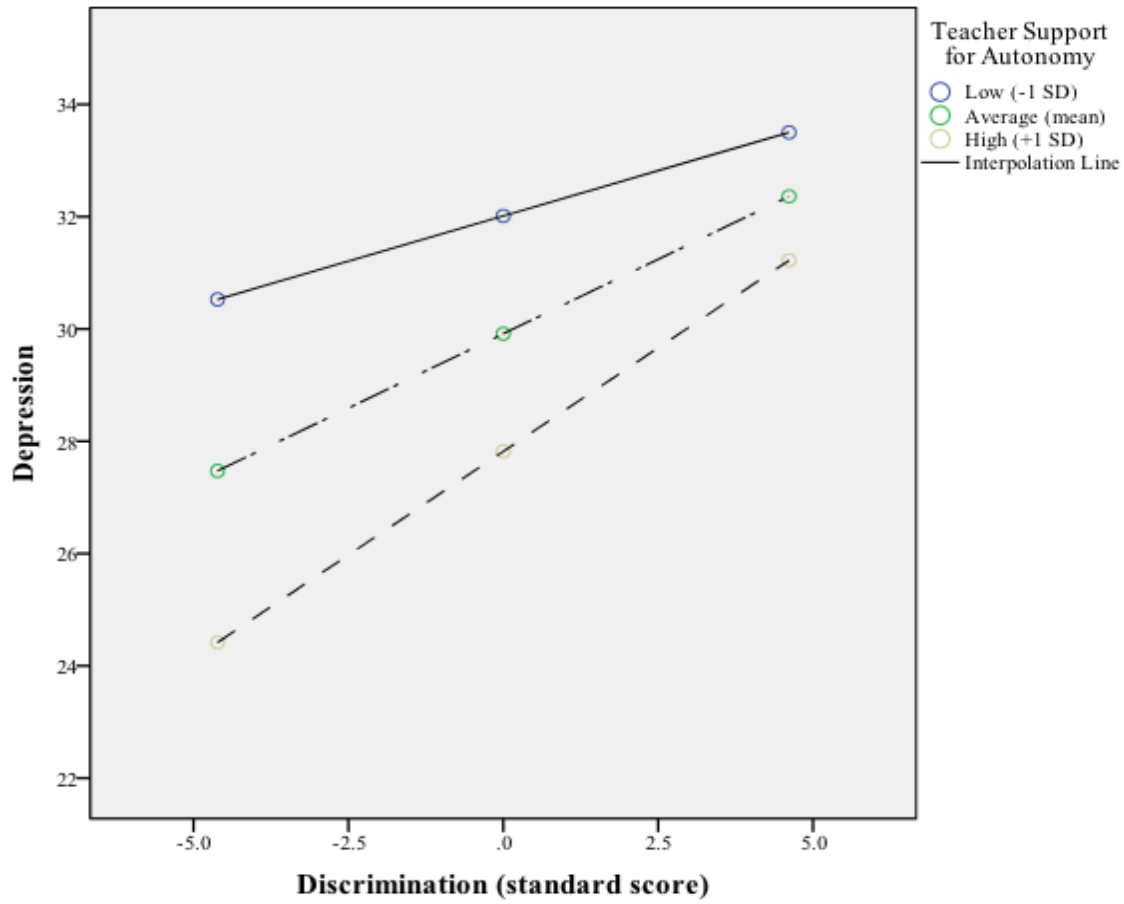
**Figure 9. Teacher Support for Autonomy as Moderator of Discrimination and Depression for Students of Color**



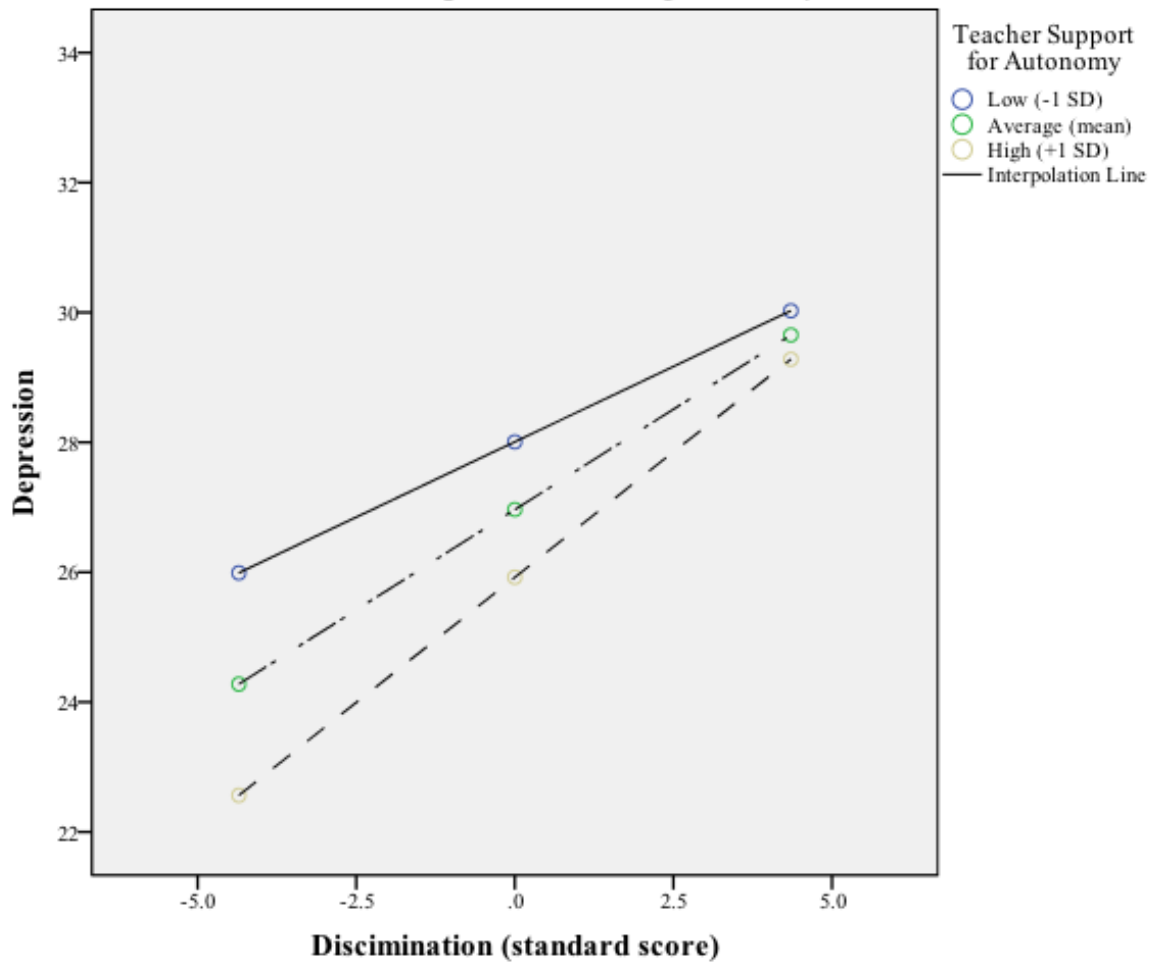
**Figure 10. Teacher Support for Autonomy as Moderator of Discrimination and Depression for White Students\***



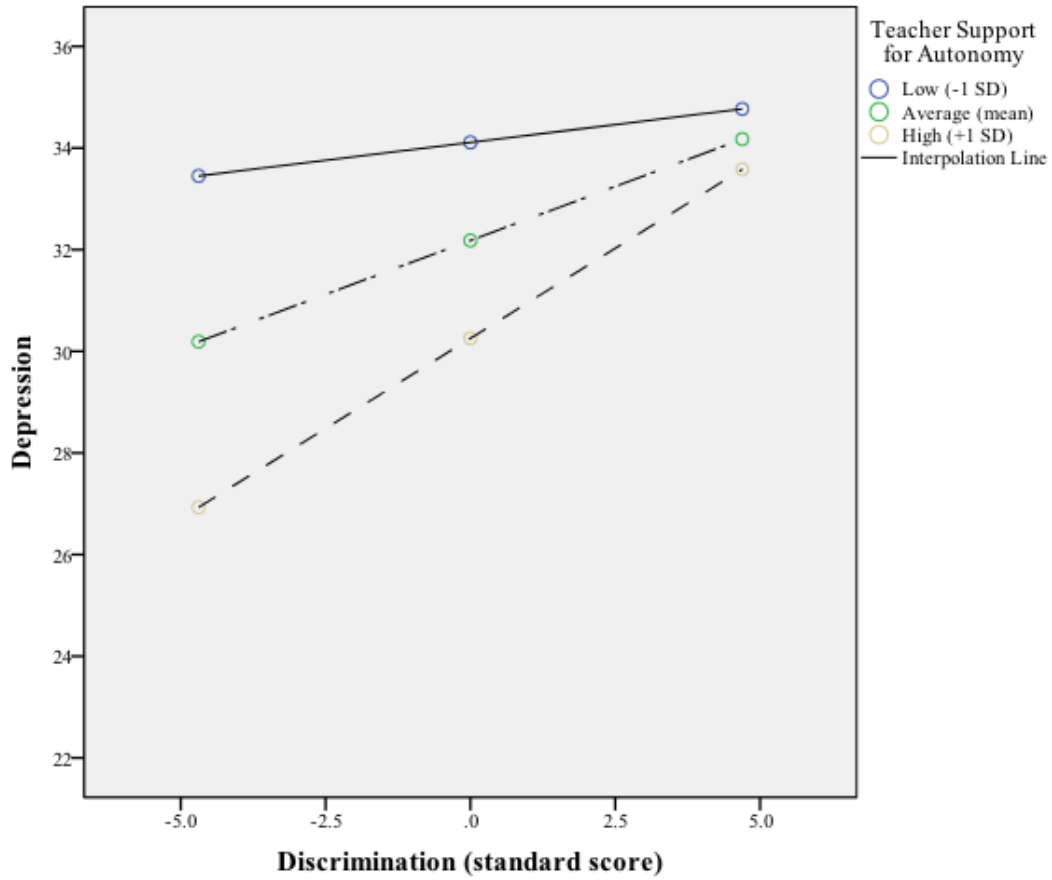
**Figure 11. Teacher Support for Autonomy as a Moderator of Discrimination and Depression for Cisgender Girls**



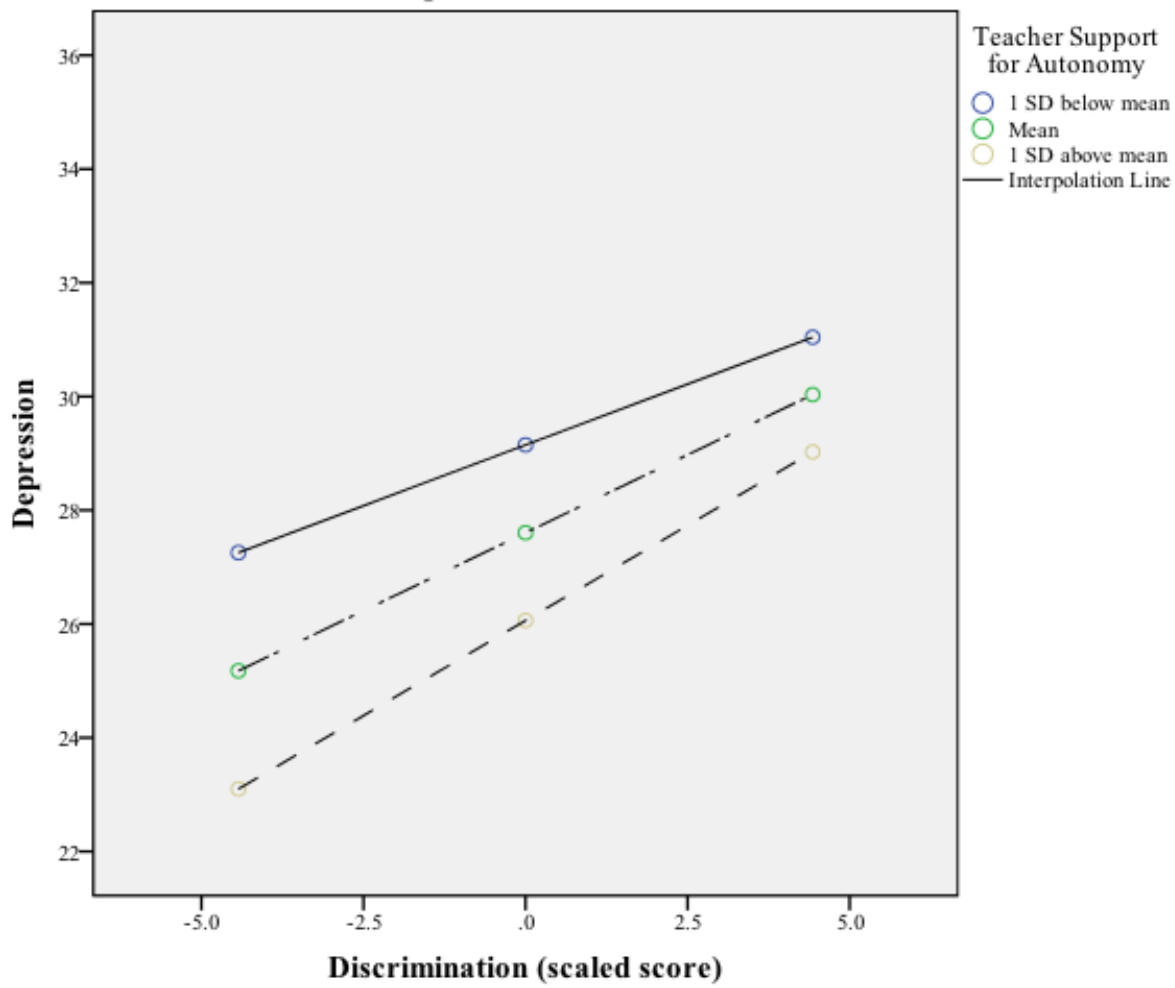
**Figure 12. Teacher Support for Autonomy as Moderator of Discrimination and Depression for Cisgender Boys**



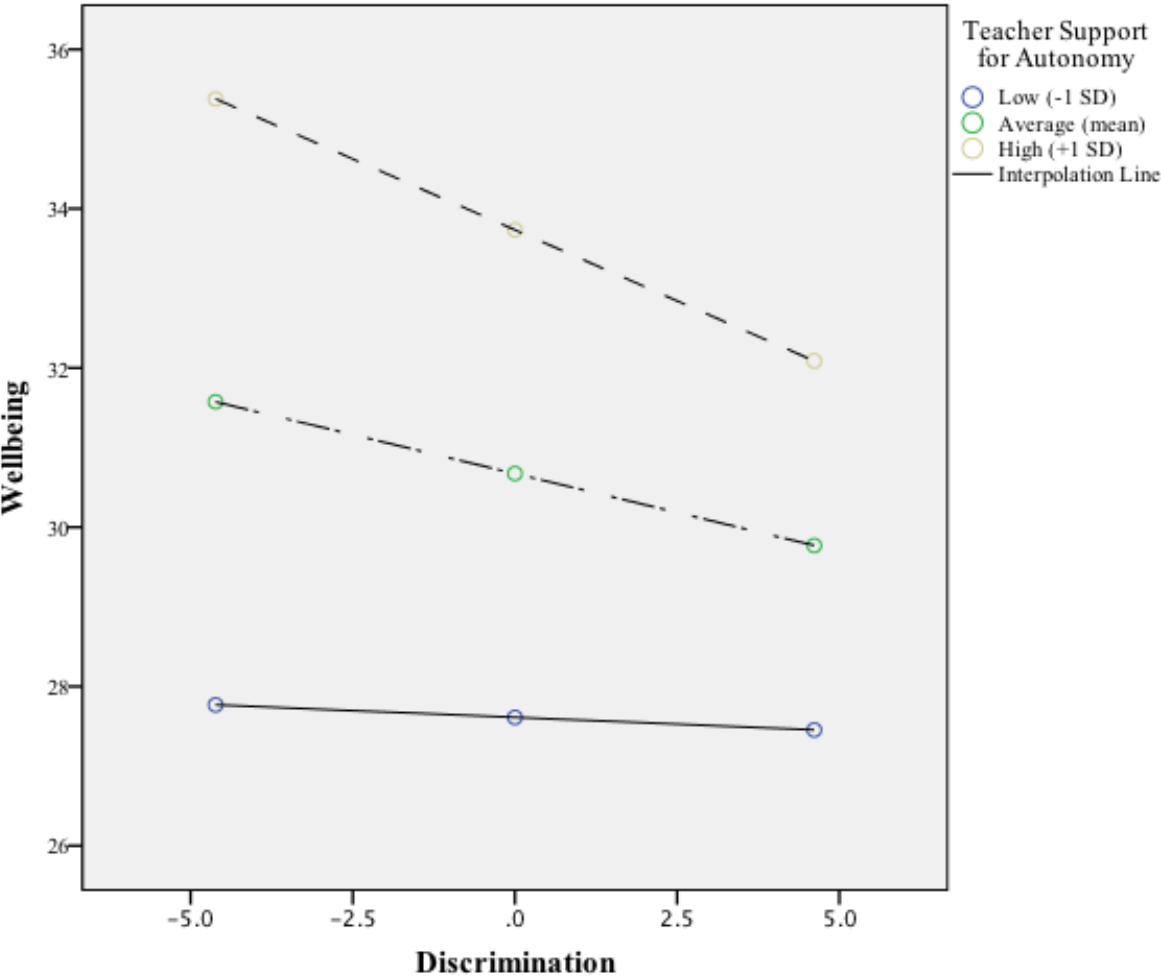
**Figure 13. Teacher Support for Autonomy as Moderator of Discrimination and Depression for Non-heterosexual Youth**



**Figure 14. Teacher Support for Autonomy as Moderator of Discrimination and Depression for Heterosexual Youth**

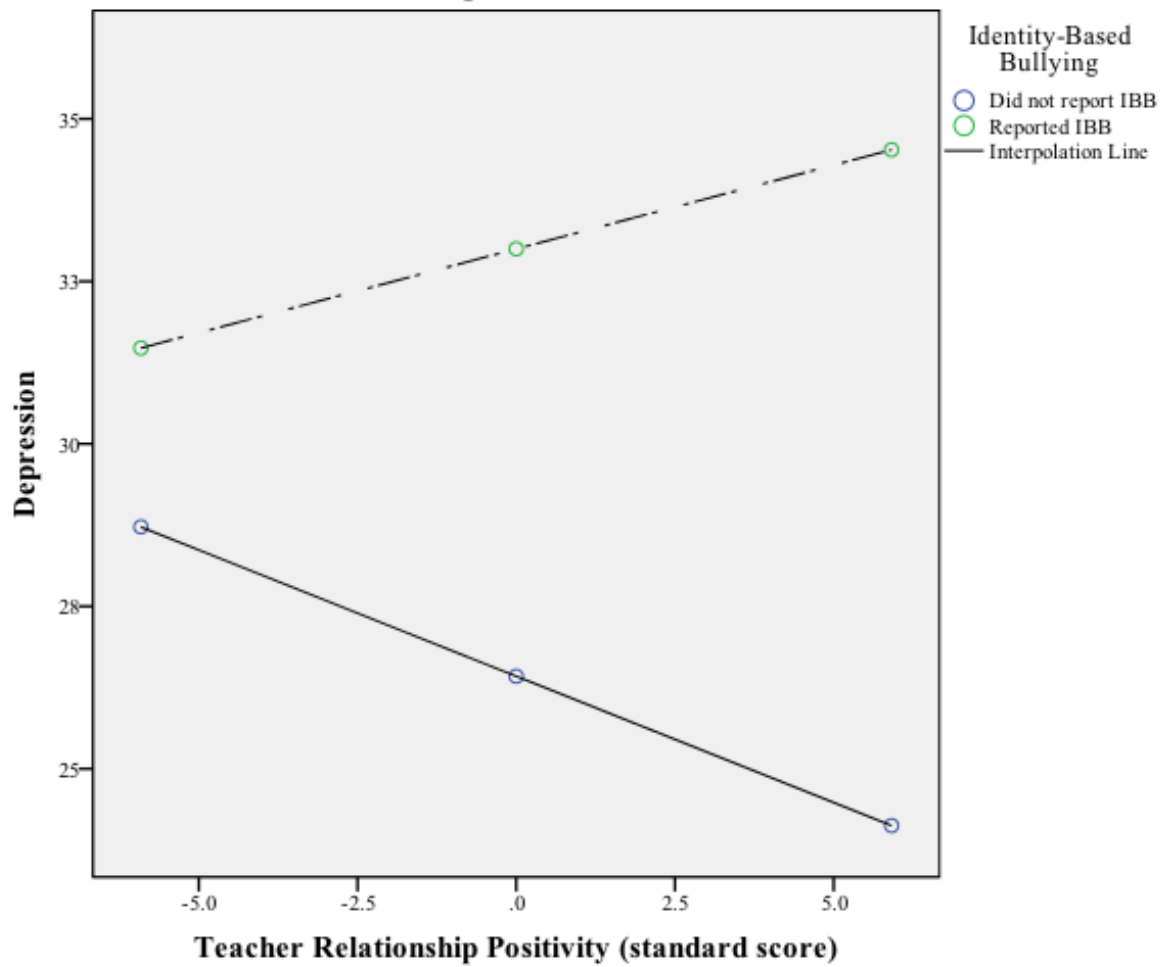


**Figure 15. Teacher Student Autonomy as a Moderator of Discrimination and Wellbeing for Girls**

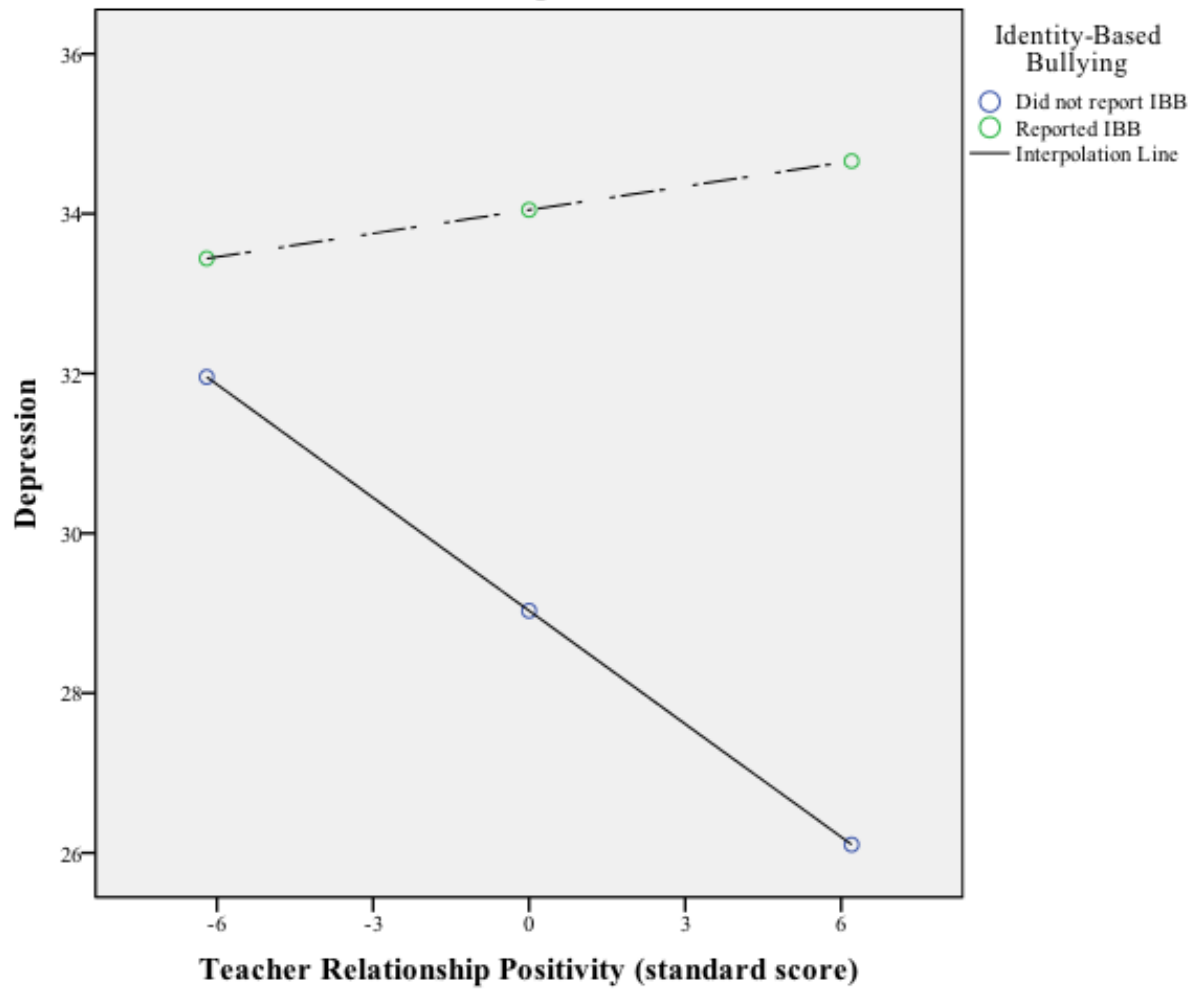




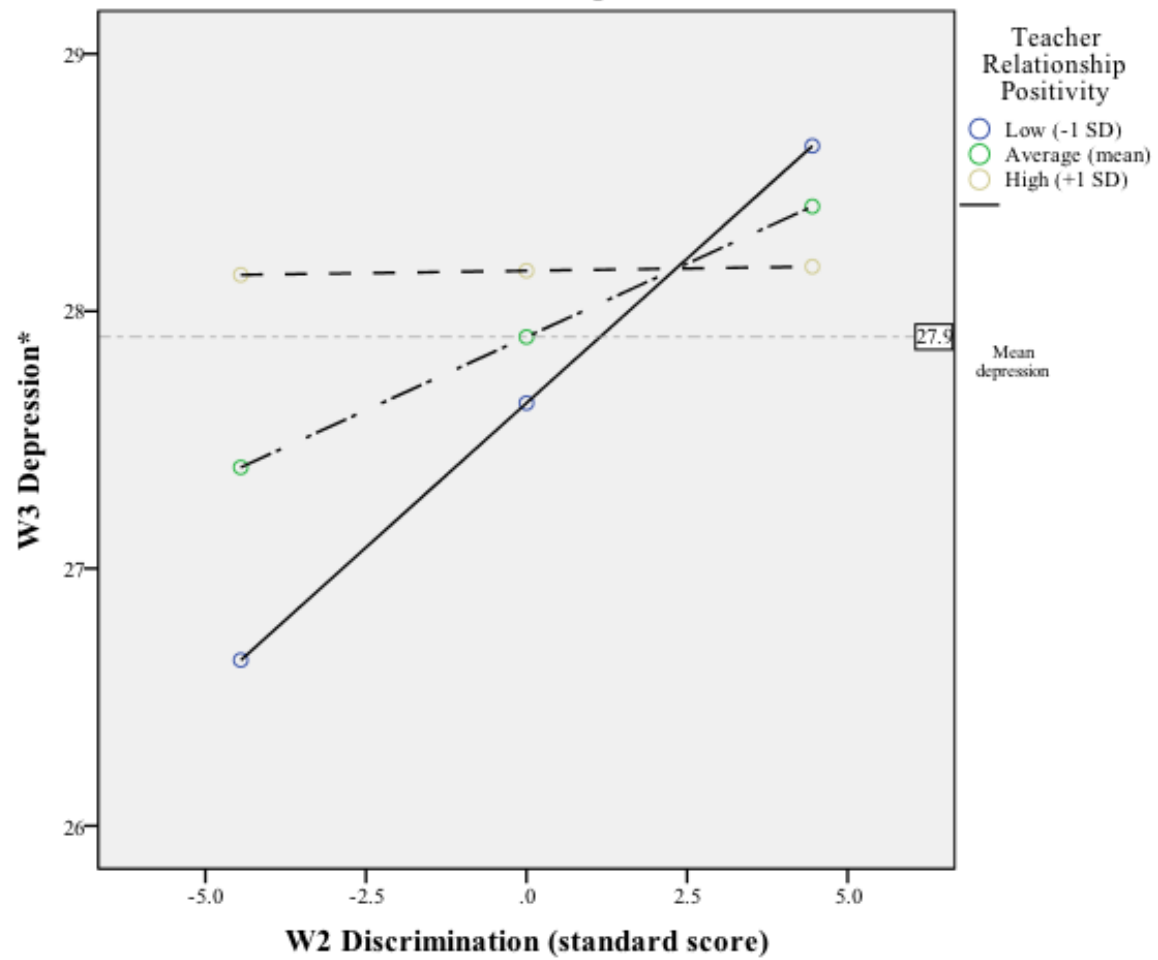
**Figure 16. Teacher Relationship Positivity as Moderator of Identity-Based Bullying and Depression for White Youth**



**Figure 17. Teacher Relationship Positivity as Moderator of Identity-Based Bullying and Depression for Girls**

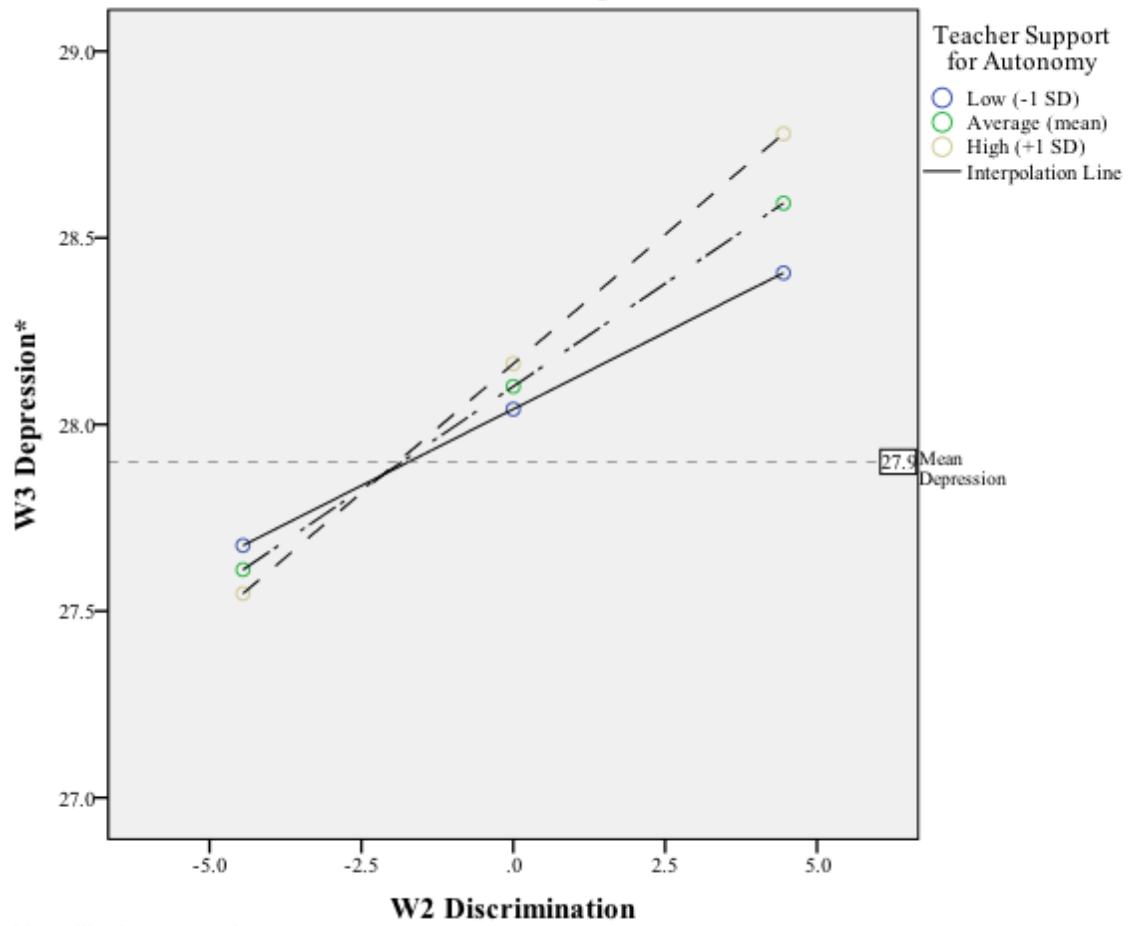


**Figure 18. Teacher Relationship Positivity as a Moderator of W2 Discrimination and W3 Depression**



\*Controlling for W2 depression

**Figure 19. Teacher Support for Autonomy as a Moderator of W2 Discrimination and W3 Depression**



**Table 1. Sample Demographics (Wave 3)**

<b>Gender Identity <sup>a</sup></b>	<b><i>n</i></b>
Cisgender boy	440
Cisgender girl	514
Gender-non-conforming (GNC)	32
14 of these students endorsed at least one transgender category (see options 3-5 on #226, Appendix B)	
10 of these students marked only "other" and a text-response that indicated GNC (e.g., agender, gender fluid)	
6 marked both "cisgender boy" and "cisgender girl"	
2 marked "other" and did not provide write-in answer	
<b>Race<sup>b</sup></b>	<b><i>n</i></b>
Person of Color (PoC)	501
Multiracial w/ White	102
White only	485
Individual racial categories endorsed (students can select more than one)	
White or European Am.	587
Black or African Am.	125
Haitian	80
Caribbean	52
Latino or Hispanic	92
Brazilian or Portuguese	120
Asian	83
Asian Am.	61
Native Am.	26
<b>Sexual Orientation</b>	<b><i>n</i></b>
Heterosexual	730
LGBQ	216
<i>Missing</i>	40
<b># of Oppressed Identities<sup>c</sup></b>	<b><i>n</i></b>
3 IDs	91
2 IDs	286
1 ID	418
0 IDs	191
<b>Intersectionality (dichotomous)</b>	<b><i>n</i></b>
Non-intersectional <sup>d</sup>	578
Intersectional (2-3 oppressed identities) <sup>e</sup>	377
<b>Intersectionality by category</b>	<b><i>n</i></b>
LGBQ + cisgirl only	55
LGBQ + GNC only	7

LGBQ + PoC only	34
PoC + cisgirl <sup>f</sup>	183
PoC + GNC only	6
All 3 <sup>g</sup>	91
<b>Socioeconomic Status</b>	<b><i>n</i></b>
Eligible for free or reduced-price lunch	409
Not eligible for free/reduced price lunch	577
<b>GPA</b>	<b><i>n</i></b>
Range	0-4.4
Mean (SD)	2.75 (0.90)
<b>Grade</b>	<b><i>n</i></b>
9	268
10	304
11	197
12	217

<sup>a</sup>27 students did not endorse any gender category, and 8 marked "other" and provided an invalid response (e.g., "dragon"); for these 35 students school data were used to identify gender (school data included "M" and "F" categories only)

<sup>b</sup>29 students did not select any racial category, school data imputed

<sup>c</sup>May represent miscount, includes 40 students w/ missing sexual orientation who had data on race and gender

<sup>d</sup>9 of these students were missing sexual orientation but identified as both gender and racial minorities, included in intersectional category

<sup>e</sup>31 students excluded from analyses on intersectionality because missing sexual orientation

<sup>f</sup>Excluding 31 with missing sexual orientation, including 9 with missing sexual orientation who endorsed POC and Gender Minority)

<sup>g</sup>Includes 14 GNC-identified students

**Table 2. Bivariate Correlations Between Independent (IV) and Dependent Variables (DV)**

		1	2	3	4
IVs	1. Identity-Based Bullying (IBB)				
	2. Discrimination	.29**			
DVs	3. Well-being	-.20**	-.25**		
	4. Depression	.21**	.37**	-.56**	
	5. GPA	-.08*	-.20**	-0.00	-.06*

\*\* Correlation is significant at the 0.01 level (2-tailed).

\* Correlation is significant at the 0.05 level (2-tailed).

**Table 3. Means and Standard Deviations for W3 Outcomes Across Victimization Groups**

Group	<i>n</i>	Depression	Wellbeing	GPA
Reported IBB*	144	32.2(8.6)	29.1(8.9)	2.58(.90)
Did not report IBB*	842	27.4(7.7)	33.3(7.3)	2.77(.91)
W3 Above Average Discrimination	476	30.5(7.9)	30.9(7.7)	2.57(.94)
W3 Below Average Discrimination	510	25.9(7.5)	34.4(7.2)	2.91(.83)
W2 Above Average Discrimination	243	30.1 (7.6)	31.5 (7.6)	2.61(.94)
W2 Below Average Discrimination	297	26.4 (7.4)	34.3 (7.2)	2.96(.74)

\*Measured in W3 only



**Table 4. RQ2 Results from (M)ANOVAs Examining Identity Group Differences *Discrimination***

IVs	DV(s)	Wilk's $\Lambda$	$F$	df, error df	$p$	partial $\eta^2$
Discrimination	Mental Health	0.896	54.8	2, 949	<.001	0.104
Gender		0.939	30.9	2, 949	<.001	0.061
Discrimination* Gender		0.998	1.1	2, 949	0.334	0.002
Discrimination	Mental Health	0.919	43.3	2, 981	<.001	0.081
Race		0.993	3.5	2, 981	<.05	0.007
Discrimination* Race		0.999	0.4	2, 981	0.652	0.001
		<b>Pillai's trace</b>	$F$	df, error df	$p$	partial $\eta^2$
Discrimination	Mental Health	0.053	26.4	2, 941	<.001	0.053
Sexual Or.		0.056	37.8	2, 941	<.001	0.056
<b>Discrimination * Sexual Or.</b>		<b>0.006</b>	<b>3.1</b>	<b>2, 941</b>	<b>&lt;.05</b>	<b>0.006</b>
		<b>Type III Sum of Squares</b>	<b>F</b>	<b>df, error df</b>	<b><math>p</math></b>	<b>partial <math>\eta^2</math></b>
Discrimination	GPA	3.181	31.7	1, 950	<.001	0.032
Gender		1.526	15.2	1, 950	<.001	0.016
Discrimination* Gender		0.151	1.5	1, 950	0.220	0.002
Discrimination	GPA	2.542	23.5	1, 982	<.001	0.023
Race		1.479	13.7	1, 982	<.001	0.014
Discrimination* Race		0.202	1.9	1, 982	0.172	0.002
Discrimination	GPA	3.363	30.5	1, 942	<.001	0.031
Sexual Or.		0.231	2.1	1, 942	0.148	0.002
Discrimination* Sexual Or.		0.284	2.6	1, 942	0.109	0.003
		<b>Pillai's trace</b>	$F$	df, error df	$p$	partial $\eta^2$
IBB	Mental Health	0.040	20.0	2, 949	<.001	0.040
Gender		0.036	17.6	2, 949	<.001	0.036
IBB*Gender		0.006	2.8	2, 949	0.063	0.006
IBB	Mental	0.052	26.7	2, 981	<.001	0.052

Race	Health	0.003	1.3	2, 981	0.268	0.003
IBB*Race		0.002	1.0	2, 981	0.353	0.002
IBB	Mental Health	0.039	19.1	2, 941	<.001	0.039
Sexual Or.		0.029	14.1	2, 941	<.001	0.029
IBB*Sexual Or.		0.003	1.6	2, 941	0.197	0.003
		<b>Type III Sum of Squares</b>	<b>F</b>	<b>df, error df</b>	<b><i>p</i></b>	<b>partial <math>\eta^2</math></b>
IBB	GPA	0.437	4.2	1, 950	<.05	0.004
Gender		0.362	3.5	1, 950	0.061	0.004
IBB*Gender		0.187	1.8	1, 950	0.178	0.002
IBB	GPA	0.248	2.2	1, 982	0.135	0.002
Race		1.510	13.6	1, 982	<.001	0.014
IBB*Race		0.084	0.8	1, 982	0.385	0.001
IBB	GPA	0.161	1.4	1, 942	0.235	0.001
Sexual Or.		0.145	1.3	1, 942	0.26	0.001
IBB*Sexual Or.		0.016	0.1	1, 942	0.709	0.000

**Table 5. Means and Standard Deviations for W3 Outcomes Across Identity and Victimization Groups**

<b>Victimization Group</b>	<b>Identity</b>	<b>Depression</b>	<b>Wellbeing</b>	<b>GPA</b>
Reported IBB	Cisgirl (n = 90)	33.1(8.5)	27.1(9.0)	2.63(.98)
	Cisboy (n = 48)	30.0(8.6)	32.8(8.1)	2.53(.79)
Did not report IBB	Cisgirl (n = 424)	28.5(7.6)	32.2(7.1)	2.95(.85)
	Cisboy (n = 392)	26.0(7.5)	34.8(6.9)	2.63(.88)
Above Average Discrimination	Cisgirl (n = 240)	32.2 (7.3)	29.2 (7.8)	2.75 (.92)
	Cisboy (n = 220)	28.5 (7.7)	32.8 (7.3)	2.42 (.90)
Below Average Discrimination	Cisgirl (n = 275)	26.8 (7.3)	33.2 (7.2)	3.02 (.82)
	Cisboy (n = 220)	24.4 (7.1)	36.4 (6.4)	2.82 (.80)
Reported IBB	PoC (n = 86)	32.2(8.6)	29.0(9.0)	2.41(.92)
	White (n = 58)	32.1(8.6)	29.3(8.9)	2.82(.85)
Did not report IBB	PoC (n = 415)	28.5(7.4)	32.7(7.3)	2.66(.98)
	White (n = 427)	26.3(7.9)	34.0(7.2)	2.88(.79)
Above Average Discrimination	PoC (n = 286)	31.0(7.6)	30.8(7.9)	2.57(.94)
	White (n = 190)	29.8(8.3)	31.1(7.6)	2.75(.83)
Below Average Discrimination	PoC (n = 215)	26.7(7.2)	33.8(7.3)	2.84(.92)
	White (n = 295)	25.3(7.6)	34.9(7.2)	2.96(.76)
Reported IBB	LGBQ (n = 47)	35.1(8.5)	28.1(9.5)	2.59(.97)
	Heterosexual (n = 87)	31.1(8.6)	29.1(8.8)	2.62(.87)
Did not report IBB	LGBQ (n = 169)	30.8(8.7)	30.7(8.4)	2.72(1.02)
	Heterosexual (n = 643)	26.6 (7.2)	34.0(6.7)	2.78(.90)
Above Average Discrimination	<b>LGBQ (n = 119)</b>	<b>33.4(8.4)<sup>1</sup></b>	<b>29.6(8.5)<sup>1</sup></b>	2.44(.97)
	<b>Heterosexual (n = 338)</b>	<b>29.7(7.4)<sup>1</sup></b>	<b>31.3(7.4)<sup>1</sup></b>	2.62(.93)
Below Average Discrimination	<b>LGBQ (n = 97)</b>	<b>29.7(8.9)<sup>1</sup></b>	<b>30.8(8.9)<sup>1</sup></b>	3.00(1.0)
	<b>Heterosexual (n = 392)</b>	<b>25.0(6.8)<sup>1</sup></b>	<b>35.3(6.5)<sup>1</sup></b>	2.91(.78)
Reported IBB	Intersectional (n = 83)	33.6(8.5)	28.1(9.3)	2.49(.95)
	Non-intersectional (n = 54)	30.6(8.7)	29.7(8.5)	2.74(.85)
Did not report IBB	Intersectional (n = 294)	29.7(7.9)	31.1(7.6)	2.83(.98)
	Non-intersectional (n = 524)	26.2(7.3)	34.6(6.7)	2.75(.86)
Below Average Discrimination	Intersectional (n = 174)	28.0(7.9)	31.9(7.7)	2.99(.94)
	Non-intersectional (n = 320)	24.7(7.0)	35.7(6.6)	2.88(.78)
Above Average Discrimination	<b>Intersectional (n = 203)<sup>2</sup></b>	<b>32.8(7.8)<sup>2</sup></b>	<b>29.2(8.2)<sup>2</sup></b>	2.56(.98)
	Non-intersectional (n = 258)	29.0(7.5)	32.1(7.0)	2.57(.92)

<sup>1</sup>Significant interaction between the interaction of discrimination and sexual orientation on mental health (Box's M test  $p < .001$ ;  $F(2, 941) = 3.064$ ,  $p < .05$ , Pillai's trace = 3.06, partial  $\eta^2 = .006$ )

<sup>2</sup>Intersectional identity was a significant predictor of worse mental health outcomes ( $F(2, 458) = 15.38$ ,  $p < .001$ , Wilk's  $\Lambda = .937$ , partial  $\eta^2 = .063$  among those who reported above average discrimination)

**Table 6. Correlations between W2 and W3 Predictors, Moderators, and Outcomes**

	1	2	3	4	5	6	7	8	9	10	11	12	13	14
<i>W2 Moderators</i>														
1 Structure														
2 Autonomy	.45**													
3 Positivity	.44**	.59**												
<i>W2 Predictor</i>														
4 Discrimination	-.27**	-.24**	-.35**											
<i>W2 Outcomes</i>														
5 Depression	-.32**	-.39**	-.45**	.48**										
6 Wellbeing	.26**	.39**	.46**	-.36**	-.66**									
7 GPA	.20**	.05	.11*	-.24**	-.13**	.09*								
<i>W3 Moderators</i>														
8 Structure	.35**	.27**	.25**	-.20**	-.21**	.14**	.18**							
9 Autonomy	.21**	.51**	.33**	-0.08	-.26**	.32**	-.10	.30**						
10 Positivity	.18**	.34**	.44**	-.21**	-.33**	.40**	.05	.22**	.58**					
<i>W3 Predictors</i>														
11 Discrimination	-.24**	-.17**	-.25**	.49**	.31**	-.25**	-.21**	-.29**	-.20**	-.24**				
12 IBB	-.07	-.18**	-.16**	.16**	.17**	-.17**	-.07	-.11**	-.08*	-.16**	.29**			
<i>W3 Outcomes</i>														
13 Depression	-.23**	-.23**	-.25**	.33**	.59**	-.38**	-.06	-.19**	-.27**	-.24**	.37**	.21**		
14 Wellbeing	.12**	.30**	.26**	-.26**	-.46**	.54**	-.07	.13**	.36**	.42**	-.25**	-.20**	-.56**	
15 GPA	.19**	.07	.08	-.23**	-.10*	.08	.91**	.09*	-.02	.08*	-.17**	-.06*	.05	-.00

\* Correlation is significant at the 0.05 level (2-tailed).

\*\* Correlation is significant at the 0.01 level (2-tailed).

**Appendix A.****Items from the Everyday Discrimination Scale and the Identity-Based Bullying Item**

In your day-to-day life, indicate the extent to which you agree that the following things happened to you.

	Strongly Disagree	Disagree	Neither	Agree	Strongly Agree
175. You were treated with less courtesy or respect than other people.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
176. You received poorer service than other people at stores and restaurants.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
177. People acted as if they think you are not smart.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
178. People acted as if they are afraid of you.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
179. You were threatened or harassed.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

180. If you agreed or strongly agreed with any of these 5 questions, tell us which of the following do you think is the main reason for these experiences?

- ☐ Your ancestry or national origins
- ☐ Your gender
- ☐ Your race
- ☐ Your age
- ☐ Your religion
- ☐ Your height
- ☐ Your weight
- ☐ Some other aspect of your physical appearance
- ☐ Your sexual orientation
- ☐ Your gender presentation or identity
- ☐ Your education or income level
- ☐ A physical disability
- ☐ Your shade of skin color
- ☐ Other (please specify) \_\_\_\_\_

181. In the past 12 months have you ever been bullied or assaulted because of any of those reasons?

- ☐ Yes
- ☐ No

**Appendix B.****Demographic Variable Items in Survey used to Measure Intersectionality\***

**226. Below is a list of terms that people often use to describe their gender. Please check all those terms that apply to you.**

- ☐ Male
- ☐ Female
- ☐ Transgender
- ☐ Transgender Male-to-Female
- ☐ Transgender Female-to-Male
- ☐ If none of these terms apply to you, please tell us how you describe your gender:

**227. Which of these best describes you?**

- ☐ Heterosexual
- ☐ mostly heterosexual bisexual
- ☐ mostly homosexual
- ☐ homosexual/ gay or lesbian
- ☐ not sure

**228. What is your race or ethnic background? Fill in all that apply.**

- ☐ White or Euro-American (not Latino or Hispanic)
- ☐ Black or African American (not Latino or Hispanic)
- ☐ Haitian Descent
- ☐ Caribbean Descent
- ☐ Latino or Hispanic (not Brazilian or Portuguese)
- ☐ Brazilian or Portuguese
- ☐ Asian
- ☐ Asian American
- ☐ Pacific Islander
- ☐ Native American

\*Items 226 and 228 allowed students to select all that applied (i.e., multiple categories), item 227 required students to select only 1 response

**Appendix C.****Moderator and Outcome Variable Items**

Instrument/Subscale	Item
<b><u>Moderators</u></b>	
<b>Teacher-Student-Relationships</b>	
School Climate Measure - Positive Student-Teacher Relationships Subscale (Zullig, et al., 2010)	1 Teachers understand my problems.
	2 Teachers and staff seem to take a real interest in my future.
	3 Teachers are available when I need to talk to them.
	4 It is easy to talk with teachers.
	5 Teachers at my school help me with my problems.
	6 My teachers care about me.
	7 My teacher makes me feel good about myself.
Teacher's Provision of Structure - <i>Student Report of Teacher Context-Short Form</i> (Belmont et al., 1988)	1 Every time I do something wrong, my teachers act differently.
	2 My teachers keep changing how they act towards me.
	3 My teachers don't make it clear what they expect of me in class.
	4 In my classes, my teachers show me how to solve problems for myself.
	5 In my classes, if I can't solve a problem, my teachers show me different ways to try.
	6 In my classes, my teachers make sure I understand something before they go on.
Teacher's Support for Autonomy - <i>Student Report of Teacher Context-Short Form</i> (Belmont et al., 1988)	1 My teachers give me a lot of choices about how I do my schoolwork.
	2 My teachers are always getting on my case about schoolwork.
	3 It seems like my teachers are always telling me what to do.
	4 My teachers listen to my ideas.
	5 My teachers talk about how I can use the things we learn in school.
	6 My teachers don't explain why what I do in school is important to me.
<b><u>Outcomes</u></b>	
<b>Well-being</b>	
Mental Health Inventory - Well- Being subscale (Huebeck & Neil, 2000)	1 For the most part, I have been happy, satisfied, or pleased have you been with your personal life
	2 My daily life been full of things that were interesting to me
	3 I feel relaxed and free of tension
	4 I have generally enjoyed things
	5 When I got up in the morning I expect to have an interesting day

- 6 during the past month, I have felt calm and peaceful
- 7 during the past month, I was able to relax without difficulty?
- 8 living has been a wonderful adventure for me
- 9 How much of the time, during the past month, have you felt cheerful, light-hearted?
- 10 I am a happy person

**Depression**

RCADS depression subscale  
(Chorpita et al., 2009)

- 1 I feel sad or empty
- 2 Nothing is much fun anymore
- 3 I have trouble sleeping
- 4 I have problems with my appetite
- 5 I have no energy for things
- 6 I am tired a lot
- 7 I cannot think clearly
- 8 I feel worthless
- 9 I feel like I don't want to move
- 10 I feel restless

**\*All items answered on 5-point Likert scale (1=Strongly Disagree, 2=Disagree, 3=Neither, 4=Agree, 5=Strongly Agree)**



**Appendix D.****Scales Organized by Wave**

<b>Type of Var.</b>	<b>Measure</b>	<b>Wave 2</b>	<b>Wave 3</b>
<b>IVs</b>	Everyday Discrimination Scale (EDS)	x	x
	Identity-based Bullying (IBB)		x
<b>DVs</b>	Wellbeing MHWB1-10	x	x
	Depression (RCADS)	x	x
	GPA	x	x
<b>Moderators</b> 9 <sup>th</sup> -11 <sup>th</sup> graders only	Positive Teacher-Student Relationships	x	x
	Teacher Support for Autonomy	x	x
	Teacher Provision of Structure	x	x