The Role of School Practices in Supporting Marginalized Students

by

Larissa Michelle Gaias

A Dissertation Presented in Partial Fulfillment
of the Requirements for the Degree
Doctor of Philosophy

Approved April 2018 to the
Graduate Supervisory Committee:

Sarah Lindstrom Johnson, Co-Chair
Larry Dumka, Co-Chair
Jonathan Pettigrew
Rebecca White

ARIZONA STATE UNIVERSITY

May 2018
ABSTRACT

Across the globe, schools are seen as an essential context for building socio-emotional capacities in adolescents, particularly for marginalized youth, who have been systematically and historically excluded from accessing opportunities and resources typically available to members of different social groups (Gil-Kashiwabara, Hogansen, Geenen, Powers, & Powers, 2007). However, despite this ideal, education has not yet reached its potential in promoting equal outcomes for all children and adolescents (American Psychological Association Presidential Task Force on Educational Disparities, 2012; Burkham & Lee, 2002; Gurria, 2016; Hampden-Thompson & Johnston, 2006). There exists a need to identify school practices that may enhance socio-emotional development and have implications for reducing disparities in academic achievement, educational attainment, and other indicators of well-being.

The aim of this dissertation, therefore, is to explore school and classroom practices that may be particularly effective in supporting the socio-emotional development of marginalized adolescents. I focus on two distinct populations: youth affected by violence in Colombia, and students of color within the United States. In Study 1, I explore whether three aspects of school climate – safety, connectedness, and services – buffer the negative implications of violence exposure for adolescent development in a Colombian sample. In Study 2, I determine how culturally responsive teaching practices in schools with high concentrations of students of color in the United States can be integrated into our current conceptualization of what constitutes high quality teaching, by examining profiles of teaching practices and associations between these profiles and teacher and classroom characteristics and student behaviors.
ACKNOWLEDGMENTS

Thank you…

To Sarah… for taking me in right as the hardest parts of graduate school were about to begin, for validating and working through every challenge, for celebrating every success, for always caring about the so-what and guiding me through the science and art of balancing research and application

To Larry… for being a constant mentor with great wisdom and reflection, for always seeing the bigger picture and pushing me and every student to see and speak to that bigger picture

To Rebecca… for always pushing me to think deeper, for holding me accountable to rigorous research, in-depth theorizing, and social justice

To Jonathan… for teaching me new perspectives when I needed them the most, for establishing a strong grounding in prevention science, for sharing stories of international work and life

To Rick, Tashia, Jodi, Michelle, Megan, Manuela, Leigh and the entire KP/Lives/LINK team… for giving me a supportive home base through all my wanderings through grad school, for always listening, always encouraging, always working together

A Mafe, Gustavo, Princess, Saskia, Rosa, y todo los colegios que me dieron la bienvenida en Colombia… por su aporte inestimable en la experiencia más estimulante y desafiante en mi vida – El primero estudio de este tesis no existiría sin ustedes

To Jessika, Katrina, and Catherine… for including and welcoming me into the Double Check project and team – Study 2 of this dissertation would not exist without your prior work, generosity, mentorship, and dedication to equity
To all of the undergraduate research assistants who contributed to these projects... for your hard and detail-oriented work, your dedication is very much appreciated.

To all my friends, especially in this context -- Diana, Naomi, Becca, Kat, Chanler, Michelle, and every FHD graduate student... for all the late nights, long talks, rants and celebrations, for sharing school and life, for constantly supporting one another, for building community.

To TAZ... for keeping me afloat, literally.

To all of my previous teachers and educators at Ross, Bowdoin, CIEE, and beyond... for building a strong foundation of learning that drives my intellectual curiosity, critical thinking, and constant motivation to ask and answer questions.

To Grandmother... for demonstrating strength and resilience, for forging the way for all of us to succeed, for keeping up with every detail.

To Mom, Dad, and Alina... for keeping my life in balance and perspective, for bearing with the distance, for all of the sacrifices you made so I could live such a fulfilled life, for caring so deeply about every endeavor, for sharing your passion for education, teaching, and learning.

To Jason... for the endless and unwavering support, patience, and selflessness you have shown me, for listening to every detail of every conversation, email, and statistical analysis I needed to process, for never questioning what I was doing, where I was going, or how I was getting there, just making sure I got there with a full stomach and a charged phone battery.
# TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>LIST OF TABLES</td>
<td>viii</td>
</tr>
<tr>
<td>LIST OF FIGURES</td>
<td>ix</td>
</tr>
<tr>
<td>GENERAL INTRODUCTION</td>
<td>1</td>
</tr>
<tr>
<td>STUDY 1: IMPROVING DEVELOPMENTAL OUTCOMES FOR ADOLESCENTS</td>
<td>7</td>
</tr>
<tr>
<td>AFFECTED BY VIOLENCE: THE ROLE OF SCHOOL CLIMATE</td>
<td>10</td>
</tr>
<tr>
<td>Effects of Violence Exposure on Adolescent Development</td>
<td>10</td>
</tr>
<tr>
<td>Political violence</td>
<td>10</td>
</tr>
<tr>
<td>Community violence</td>
<td>13</td>
</tr>
<tr>
<td>Preventing the Consequences of Violence Exposure: The Role of School Climate</td>
<td>14</td>
</tr>
<tr>
<td>Safety</td>
<td>16</td>
</tr>
<tr>
<td>Connectedness</td>
<td>17</td>
</tr>
<tr>
<td>Services</td>
<td>18</td>
</tr>
<tr>
<td>Present Study</td>
<td>19</td>
</tr>
<tr>
<td>Method</td>
<td>20</td>
</tr>
<tr>
<td>Participants and Procedure</td>
<td>20</td>
</tr>
<tr>
<td>Measures</td>
<td>22</td>
</tr>
<tr>
<td>Translation procedures</td>
<td>22</td>
</tr>
<tr>
<td>Externalizing behaviors</td>
<td>23</td>
</tr>
<tr>
<td>Developmental competence</td>
<td>24</td>
</tr>
<tr>
<td>School climate moderators</td>
<td>26</td>
</tr>
<tr>
<td>Exposure to violence predictors</td>
<td>27</td>
</tr>
<tr>
<td>Page</td>
<td></td>
</tr>
<tr>
<td>-----------------------------</td>
<td></td>
</tr>
<tr>
<td>Covariates .................................................................</td>
<td>28</td>
</tr>
<tr>
<td>Analytic Plan ........................................................................</td>
<td>29</td>
</tr>
<tr>
<td>Preliminary Analyses ..........................................................</td>
<td>29</td>
</tr>
<tr>
<td>Structural Equation Model ...................................................................</td>
<td>29</td>
</tr>
<tr>
<td>Measurement model. ......................................................................</td>
<td>31</td>
</tr>
<tr>
<td>Hypothesis testing. ......................................................................</td>
<td>31</td>
</tr>
<tr>
<td>Results .......................................................................................</td>
<td>33</td>
</tr>
<tr>
<td>Descriptive Statistics ..................................................................</td>
<td>33</td>
</tr>
<tr>
<td>Measurement Model .......................................................................</td>
<td>33</td>
</tr>
<tr>
<td>Main Effects Model ......................................................................</td>
<td>34</td>
</tr>
<tr>
<td>Omnibus Moderation Model .............................................................</td>
<td>35</td>
</tr>
<tr>
<td>Interaction Probes by School Climate Dimensions .................................</td>
<td>35</td>
</tr>
<tr>
<td>Discussion ....................................................................................</td>
<td>37</td>
</tr>
<tr>
<td>Influence of Violence Exposure on Adolescent Outcomes .......................</td>
<td>38</td>
</tr>
<tr>
<td>Role of School Climate .................................................................</td>
<td>41</td>
</tr>
<tr>
<td>Implications .................................................................................</td>
<td>45</td>
</tr>
<tr>
<td>Limitations and Future Directions .....................................................</td>
<td>48</td>
</tr>
<tr>
<td>Conclusion ....................................................................................</td>
<td>50</td>
</tr>
</tbody>
</table>

STUDY 2: A PERSON-CENTERED APPROACH TO UNDERSTANDING

TEACHER’S CULTURALLY RESPONSIVE TEACHING PRACTICES ................................. 51

Cultural Responsive Teaching Practices ............................................................... 53

Definitions and current research ........................................................................ 53
Measurement challenges .................................................................................................................. 56
Profiles of Teaching Practices ......................................................................................................... 57
Relations with Teacher and Classroom Characteristics ................................................................. 59
Relations of Teaching Profiles with Student Behaviors ................................................................. 61
Present Study .................................................................................................................................. 63
Method .............................................................................................................................................. 65
Participants ....................................................................................................................................... 65
Procedure ......................................................................................................................................... 65
Measures ........................................................................................................................................... 66
Teacher practices ............................................................................................................................... 66
Student behaviors .............................................................................................................................. 68
Teacher characteristics ..................................................................................................................... 69
Analytic Plan ...................................................................................................................................... 69
Results .............................................................................................................................................. 72
Descriptive Statistics and Bivariate Correlations .............................................................................. 72
Latent Profiles of Classroom Management Techniques .................................................................... 73
Association of Teacher and Classroom Characteristics and Profiles ............................................... 74
Association between Profiles and Student Behaviors ....................................................................... 75
Discussion ......................................................................................................................................... 75
Profiles of Teacher Practices ............................................................................................................ 76
Relationship of Teacher and Classroom Characteristics with Profiles ........................................... 78
Mean Differences in Classroom Behaviors across Profiles .............................................................. 80
Implications and Significance ................................................................. 80

Limitations and Future Directions ....................................................... 83

Conclusion .......................................................................................... 87

GENERAL DISCUSSION ........................................................................ 88

REFERENCES ....................................................................................... 94
# LIST OF TABLES

<table>
<thead>
<tr>
<th>Table</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Student Demographics</td>
<td>117</td>
</tr>
<tr>
<td>2. Descriptive Statistics and Zero-Order Correlations Amongst Study Variables</td>
<td>118</td>
</tr>
<tr>
<td>3. Results of Structural Equation Model Including Omnibus Interaction Test for Moderation of Exposure To Violence Variables by School Climate</td>
<td>120</td>
</tr>
<tr>
<td>4. Simple Slopes for Significant Exposure To Violence x School Climate Interactions</td>
<td>121</td>
</tr>
<tr>
<td>5. Teacher Demographics</td>
<td>122</td>
</tr>
<tr>
<td>6. Descriptive Statistics and Zero-Order Correlations amongst Study Variables</td>
<td>123</td>
</tr>
<tr>
<td>7. Fit Statistics for Latent Profile Analysis of Teacher Classroom Management Techniques</td>
<td>125</td>
</tr>
<tr>
<td>9. Mean Differences in Student Behaviors Across the Latent Profiles</td>
<td>127</td>
</tr>
</tbody>
</table>
## LIST OF FIGURES

<table>
<thead>
<tr>
<th>Figure</th>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Measurement Model Outlining Externalizing Behaviors and Developmental Competence</td>
<td>128</td>
</tr>
<tr>
<td>2.</td>
<td>Structural Equation Model Examining Exposure to Violence Predicting Externalizing Behaviors and Developmental Competence</td>
<td>129</td>
</tr>
<tr>
<td>3.</td>
<td>Structural Equation Model Examining Interaction Between School Safety and Exposure to Violence According to Significant Omnibus Tests</td>
<td>130</td>
</tr>
<tr>
<td>4.</td>
<td>Structural Equation Model Examining Interaction Between School Connectedness and Exposure to Violence According to Significant Omnibus Tests</td>
<td>131</td>
</tr>
<tr>
<td>5.</td>
<td>Structural Equation Model Examining Interaction Between School Services and Exposure to Violence According to Significant Omnibus Tests</td>
<td>132</td>
</tr>
</tbody>
</table>
**General Introduction**

Across the globe, schools are seen as an essential context for building academic and socio-emotional capacities in adolescents, providing students with the opportunities and competencies to achieve their full potential and become productive members of society. According to the bioecological model (Bronfenbrenner, 1979; Bronfenbrenner & Morris, 2006), schools are a proximal context for development, in which students have repeated and continuously evolving interactions, or proximal processes, with peers, teachers, and other adults. The bioecological model emphasizes the importance of an individual’s phenomenological experiences (i.e., unique lived experiences) and interactions within a context in driving development (Bronfenbrenner, 1979; Bronfenbrenner & Morris, 2006); these proximal processes are often shaped – either promoted or constrained – by the structural characteristics of the context itself (Tseng & Seidman, 2007). For example, school quality is often measured by the levels of experience and education of its teachers; although these characteristics do not drive student outcomes, they can facilitate the quality of relationships and interactions that students and teachers have within the classroom. These relationships and interactions are the proximal processes that impact adolescent development (Heck, 2007). In this way, there is value in exploring both the proximal processes that are occurring within a students’ educational context, as well as the features of the school and classroom that are shaping these processes.

Proximal processes that individuals have within their school environments can be enhanced by intentional school practices, including individual activities, policies, and programmatic approaches implemented by teachers, administrators, or other school
personnel. When school practices are intentionally designed to achieve positive changes in student attitudes and behaviors, students are more likely to experience more positive interactions and perceive a higher quality learning environment within their schools. Extant research has established the importance of school practices for promoting development, ranging from individual teacher instruction to overarching school climate (D. K. Cohen, Raudenbush, & Ball, 2003; Teddlie & Reynolds, 2000; Thapa, Cohen, Guffey, & Higgins-D’Alessandro, 2013).

Schools may play a particularly significant role during adolescence, as individuals are experiencing critical transitions in their cognitive and emotional capacities, sense of autonomy, and relationships with peers and non-familial adults (Steinberg & Morris, 2001). Adolescents, as compared to younger children, tend to demonstrate decreased educational motivation, lower confidence and achievement, and increased negative social and behavioral competencies (Blackwell, Trzesniewski, & Dweck, 2007; Eccles, Lord, & Midgley, 1991), indicating that adolescence may be a critical period to understand school-based processes that impact success (Earl, Hargreaves, & Ryan, 2013).

Schools have been identified as particularly important contexts for marginalized youth, those who have been systematically excluded from mainstream society impacting their ability to access opportunities and resources normally available to members of a different social group (Gil-Kashiwabara, Hogansen, Geenen, Powers, & Powers, 2007). Education has been referred to as the “great equalizer” in research (Growe & Montgomery, 2003), politics (Duncan, 2011), and the media (Rhode, Cooke, & Ojha, 2012), reflecting the idea that promotive school contexts can reduce pervasive social and economic disparities that exist between marginalized adolescents and members of the
socio-cultural majority. However, despite this ideal, education has not yet reached its potential in promoting equal outcomes for all children and adolescents (American Psychological Association Presidential Task Force on Educational Disparities, 2012; Burkham & Lee, 2002; Gurria, 2016; Hampden-Thompson & Johnston, 2006). There exists a need to identify school practices that may have implications for reducing gaps in academic achievement, educational attainment, and other indicators of well-being.

The aim of this dissertation, therefore, is to explore school and classroom practices that may be particularly effective in supporting the socio-emotional development of marginalized adolescents. Socio-emotional functioning has longitudinal implications for adolescents’ academic achievement and educational success, as well as future indicators of emotional and psychological well-being (Masten et al., 2005; Roeser, Eccles, & Sameroff, 2000). I focus on two distinct groups of marginalized adolescents: youth affected by violence in Colombia, and students of color within the United States. These groups remain at-risk for diminished academic and socio-economic outcomes despite national and international efforts to improve access to high-quality education and distribute resources more equitably across various social contexts (National Assessment of Educational Progress, 2012; UNICEF, 2017).

Youth affected by violence, especially political violence and armed conflict in international contexts, face significant barriers to achieving educational success (Tomlinson & Benefield, 2005). Although educational enrollment and attainment in conflict-affected regions have drastically increased in the past decades, there are still millions of adolescents out of school in these contexts; in fact, only 48% of youth
affected by conflict are enrolled in secondary education, which is 20% lower than for youth in non-conflict affected areas (United Nations Development Programme, 2015).

Additionally, within the United States, students of color underperform academically and are disproportionately represented in disciplinary actions as compared to White students (Aud et al., 2010; KewalRamani, 2007; Losen & Skiba, 2010; Skiba et al., 2011). The White-Black and White-Hispanic achievement gaps in math and reading within the United States are 30-40% smaller than they were in the 1970s, but non-White students still perform between .5 and .9 standard deviations lower than their White counterparts (Stanford Center for Education Policy Analysis, 2013).

There are many social, economic, and political factors that contribute to these pervasive and persistent gaps, but considering the importance of school processes for adolescent development, there is value in examining the role of school and classroom practices that have the potential to reduce these gaps and improve outcomes for marginalized adolescents. In order to identify school and classroom practices that may be particularly effective in supporting marginalized students, it is important to understand the unique developmental barriers or competencies that might impede or facilitate academic and socio-emotional success for these students. For example, when examining how schools can better support youth in conflict-affected regions, it is essential to consider the intersection between an individual’s school and community contexts, where adolescents may actually be experiencing high levels of violence (Gaias, Lindstrom Johnson, White, Pettigrew, & Dumka, 2017). It may be the case that there are particular aspects of the school climate that are especially important in counteracting the negative implications of violence for youth (e.g., O’Donnell, Roberts, & Schwab-Stone, 2011).
Additionally, when examining practices that might better support development for students of color within the United States, it is essential to consider systemic racism, prejudice, discrimination and oppression that a) these adolescents likely face as individuals on a regular basis, and b) that infiltrate societal structures including schools and other education systems (Garcia Coll et al., 1996). It may be the case that school practices that directly counteract these systemic biases, such as culturally responsive teaching, are especially important for enhancing development for students of color, even though these practices are not often included in considerations of high-quality teaching practices (Gay, 2010; Ladson-Billings, 1995; Sleeter, 2001). It is essential to consider how school practices may intersect with and be responsive to adolescents’ experiences in their communities and larger societies; the degree to which school-based practices are grounded in the contexts in which adolescents are developing likely enhance their proximal processes both within and across settings.

This dissertation focuses on the practices of teachers, administrators, and other school personnel, that can improve outcomes for marginalized youth, specifically violence-affected youth in Colombia and students of color in the United States. I consider the unique contexts in which these students are developing and intentionally examine school-based processes that might be particularly effective with these groups of students. In Study 1, I examine how three aspects of school climate can buffer the negative implications of exposure to violence in Colombian adolescents, with the aim of identifying culturally-relevant and evidence-informed mechanisms through which schools can better support students affected by both community violence and armed conflict. In this study, adolescents’ phenomenological experiences of their school climate
are captured, reflecting their individual perceptions of the characteristics of their school context. In Study 2, I determine how culturally responsive teaching practices in schools with high concentrations of students of color in the United States can be integrated into our current conceptualization of what constitutes high quality teaching, by examining profiles of teaching practices and associations between these profiles and teacher and classroom characteristics and student behaviors. This study uses an observational measure of classroom practices, capturing the quality of teachers’ interactions with their students.

The purpose of this work is to contribute to our evolving understanding of how educational systems can actualize the goals of fostering an equitable society. To this aim, this work is grounded in communities where students may be particularly likely to experience barriers to achievement. Specifically, I am interested in school and classroom practices that have the potential to promote positive developmental functioning for marginalized students (i.e., students of color, youth affected by violence). I examine these practices through the lens of individual perceptions of the school context and interactions. Due to my focus on individuals’ phenomenological experiences of the school context and interactions occurring among individuals within a classroom, these studies capture proximal processes that students are experiencing while speaking to the broader school and classroom context. The results of these studies have implications for how classroom- and school-based practices can promote positive development for marginalized adolescents. This dissertation can contribute to the development of school-based interventions that are particularly responsive to the backgrounds and experiences of
marginalized students, with the potential to reduce pervasive disparities in educational outcomes and other important indicators of well-being.

**Study 1: Improving Developmental Outcomes for Adolescents Affected by Violence: The Role of School Climate**

Colombian adolescents have experienced violence related to the decades-long armed conflict between guerilla groups, paramilitaries, and government armed forces in the country, which has resulted in death, severe physical and emotional trauma, and rampant displacement (Sanchez, 2007). Over 1.5 million school-aged youth have been declared as victims of this armed conflict, and half of the displaced population are minors (Chaux, 2009). In addition, given the interconnectedness between the Colombian armed conflict, urban drug trade, and high rates of poverty, instability, and violent crime (Beall, Goodfellow, & Rodgers, 2011; Campo-Arias, Oviedo, & Herazo, 2014; Di Tella, Edwards, & Schargrodsky, 2010), even more Colombian adolescents have been impacted by the war through exposure to community violence (Chaux, 2002). In communities where educational and employment outcomes are minimal, many adolescents join neighborhood gangs and participated in micro-trafficking of drugs around cities (Angrist & Kugler, 2008). Therefore, many Colombian adolescents, even those who are have not experienced direct consequences of the armed conflict, have either witnessed, or been directly victimized by, conflict in their communities.

The relation between exposure to violence, both community violence and armed conflict, and short- and long-term negative developmental outcomes for adolescents has been well-documented (Chen, Corvo, Lee, & Hahm, 2017; Covey, Menard, & Franzese, 2013). The majority of work examining the implications of violence exposure on
adolescent development has documented the consequences of violence for negative indicators of behavioral, emotional, and academic outcomes, including delinquency, post-traumatic stress disorder, and limited educational attainment (see Overstreet, 2000 for a review), but much less work has understood how violence also impacts positive indicators of development, such as social competence and goal orientation (Barber & Schluterman, 2009). Additionally, most research has examined the independent effects of exposure to community violence and armed conflict. Considering that many adolescents are likely to experience multiple forms of violence in conjunction with one another (Chaux, 2002), it is important to model these types of violence simultaneously and identify the unique influence of various types of violence exposure.

Considering the implications of violence exposure, it is important to investigate characteristics of adolescents’ lives and environments that may promote resiliency. Resiliency, the ability for an individual to demonstrate adaptive outcomes within the context of significant adversity and serious threats to development (Luthar, Cicchetti, & Becker, 2000; Masten, 2001), can be enhanced through individual’s experiences within their diverse ecological contexts (Wietse A. Tol, Song, & Jordans, 2013). Ecological resilience has been defined as “assets and processes on all socio-ecological levels that have been shown to be associated with good developmental outcomes after exposure to situations of armed conflict” (Wieste A. Tol, Jordans, Reis, & de Jong, 2009, p.167). Ecological resilience theory states that the processes occurring within various ecological contexts can have important implications for enhancing an individual’s ability to demonstrate adaptive development in spite of exposure to armed conflict (Wieste A. Tol, Jordans, Kohrt, Betancourt, & Komproe, 2013; Wieste A. Tol et al., 2009). In addition,
ecological resilience theory can be expanded beyond a focus on building resilience in situations of armed conflict to understanding how contextual factors can mitigate the negative implications of exposure to community violence, as well. Resilience is fostered through interactions between the promotive processes occurring within the developmental context and the adverse processes occurring as a result of the violence exposure, whereby the advantages of the promotive context buffer the negative implications of violence (Gaias, Lindstrom Johnson, et al., 2017). The concept of ecological resilience was developed to expand the study of resilience beyond individual factors to the identification of protective processes occurring within social contexts (Wieste A. Tol et al., 2009). This can aid in the development of universal and selective prevention programs that could promote adaptive functioning in adolescents exposed to violence, which may be particularly important in settings, such as Colombia, where infrastructure for targeted intervention, such as the presence of high-quality mental health practitioners, is limited (Wietse A. Tol et al., 2013).

Schools have been identified as one such context that can foster resilience in adolescents affected by violence (Kennedy & Ceballo, 2013; Kliweer, Murrelle, Mejia, Torres de G., & Angold, 2001; Taylor & Kliweer, 2006), buffering negative community processes that adversely impact development (Gaias, Lindstrom Johnson, et al., 2017). In particular, a positive school climate, the overarching emotional, physical, organizational, and academic quality of a school (Bradshaw, Waasdorp, Debnam, & Johnson, 2014), can provide students with an environment where they feel safe, have necessary resources, and are engaged. Prior research has found that school climate has important protective implications for youth affected by community violence and armed conflict (O’Donnell et
al., 2011; Yablon, 2015); however, more research is needed in additional contexts and with more nuanced measures of school climate to identify specific mechanisms through which schools can improve outcomes for adolescents exposed to violence.

The goal of the current study is to understand which aspects of school climate may be most effective in mitigating the detrimental effects of violence exposure for adolescents. Taking into consideration research that differentiates between various types of violence exposure (Barber & Schluterman, 2009; Overstreet, 2000), I examine the independent effects of community violence exposure (witnessing and direct victimization) and exposure to armed conflict. I also build off of previous literature that traditionally focuses on the relations between violence exposure and negative developmental outcomes, by also exploring positive indicators of development, including behavioral competence and psychological well-being. The present study uses data collected in Colombia, a country that has been exposed to 50 years of internal conflict. This research can inform educators in high-violence settings as to the components of school climate that may be most effective in support adolescents who have been affected by violence.

Effects of Violence Exposure on Adolescent Development

Political violence. Political violence, inclusive of armed conflict, genocide, civil war, terrorism, and ethnic conflict, refers to hostile or aggressive acts meant to enact political or governmental change, and often involves both state and non-state (e.g., paramilitary, guerrillas) actors. The armed conflict that Colombia has experienced over the last five decades is only one example of political violence pervasive throughout the world, and researchers have documented the detrimental impacts of such violence on
child and adolescent development (Barber & Schluterman, 2009). In a review of 95 studies from across the world, Barber and Schluterman (2009) demonstrated that exposure to political violence has an overwhelming impact on a variety of negative behavioral and psychological outcomes for adolescents, including aggression, antisocial behavior, externalizing behaviors, risk taking, depression, anxiety, post-traumatic stress disorder, neuroticism, and sleeping difficulties. This may occur via effects on cognitive (e.g., intense perceptions of threat, distrust of others, biased problem-solving), emotional (e.g., numbness of feelings, limited emotional recognition, behavioral emotional expression), and psychophysiological processes (e.g., tolerance for violence, lack of inhibition, definitions in regulation of aggression behavior), as well as through familial processes (e.g., parent-child conflict, punitive parenting practices, insecure attachment related to fear; Punamäki, 2009). Research conducted regarding the armed conflict of Colombia specifically has found evidence consistent with studies from other international contexts. Colombian adolescents who have experienced violence related to armed conflict are more likely to display diminished mental health and socio-emotional competencies, condone retaliation and aggression, and exhibit lower educational attainment (Ardila-Rey, Killen, & Brenick, 2009; Kliewer et al., 2001). Incidences of bullying are also more prevalent in schools located in municipalities with higher rates of combats and violent attacks (Chaux, 2002).

Across the body of literature regarding the effects of political violence on adolescent development, there is a stronger focus on negative, as opposed to positive, indicators of development. Of the studies reviewed by Barber and Schluterman (2009), only 26 investigated indicators of positive developmental competence. Of these, only
four studies found that armed conflict had detrimental implications for developmental competencies, as expected. For example, in Angola, McIntyre and Ventura (2003) find that adolescents who have higher war trauma exposure have lower self-concept and verbal and nonverbal cognitive skills. Contrary to expectations, 12 of the 26 studies reviewed by Barber and Schluterman (2009) find that political violence exposure is positively associated with competent functioning, particularly effective coping strategies. For example, in Palestine, Punamäki & Suleiman (1990) found that the more adolescents were exposed to political violence, the more they demonstrated active coping strategies. Relatedly, in Israel, conflict-affected adolescents demonstrated more coping responses (i.e., hope, strength) than crisis response (e.g., crying, anger) (Klingman, 2001). Some researchers argue that adolescents may demonstrate competent coping strategies despite high violence exposure due to habituation or denial of the threatening environment (Klingman, 2001; Paardekooper, de Jong, & Hermanns, 1999; Punamäki, Hedayiet Muhammed, & Ahmed Abdulrahman, 2004). To my knowledge, no studies conducted in Colombia have examined the impact of armed conflict on positive indicators of developmental competence. This suggests that future work needs to further explore the relations between political violence and positive, in addition to negative, indicators of developmental functioning in adolescence. In the current study, both behavioral (i.e., social competence, educational engagement) and psychological (i.e., goal orientation, hope, educational aspirations) indicators are considered in a comprehensive examination of positive developmental competence, alongside traditional indicators of negative developmental outcomes (i.e., delinquency, violence, drug and alcohol use).
**Community violence.** Community violence, defined as “intentional acts of interpersonal violence committed in public areas by individuals who are not intimately related to the victim” (National Child Traumatic Stress Network, n.d.), also has negative implications for adolescent development (see Overstreet, 2000 for a review). In addition to research that has established concurrent or short-term emotional and behavioral problems associated with community violence exposure, longitudinal studies have demonstrated that the detrimental impacts of violence exposure may last into adulthood, affecting mental health and financial stability (Chen, Corvo, Lee, & Hahm, 2017; Covey, Menard, & Franzese, 2013).

Research on community violence often distinguishes between the effects of witnessing violence and violence victimization. Typically, victimization has been conceptualized as the more proximal experience of violence exposure, and thus, it is often hypothesized that violence victimization will have stronger implications for development than witnessing violence. Although minimal international research, and no research in Colombia, has examined the relative influence of community violence victimization and witnessing on developmental outcomes, US-based research demonstrates evidence of this hypothesis. Within a US sample, Lynch & Cicchetti (1998) found that community violence victimization, but not witnessing, was associated with higher levels of traumatic stress and depressive symptoms and lower levels of self-esteem. However, other studies in the US have found mixed results dependent on the outcome. Duckworth, Hale, Clair, & Adams (2000) found that whereas direct victimization was a significant predictor of behavior problems while controlling for witnessing violence, victimization did not account for a significant proportion of the
variance in post-traumatic stress symptoms. A meta-analysis of 110 studies, conducted both within and outside of the US, examining the effect of community violence exposure and mental health outcomes found that victimization was a stronger predictor of internalizing problems than witnessing, but there were no differences between the effects of victimization and witnessing on externalizing behaviors or post-traumatic stress disorder (Fowler, Tompsett, Braciszewski, Jacques-Tiura, & Baltes, 2009). More research that explicates the distinct contribution of victimization and witnessing of community violence on adolescent development outcomes, in addition to extracting the unique effects of armed conflict exposure, is needed. Additionally, similar to research on the effects of political violence on development, most studies exploring the implications of community violence for adolescents have focused on negative, as opposed to positive, indicators of development.

One study conducted in Colombia found that witnessing community violence, and exposure to gangs had direct negative implications for adolescents’ aggression (Chaux, Arboleda, & Rincón, 2012), as well as indirect effects through cognitive processes, such as justification for violence. Additional research in Colombia has also established indirect pathways between exposure to community violence, measured utilizing government datasets of neighborhood characteristics, and behavioral outcomes through parenting practices and associations with deviant peers (Caicedo & Jones, 2014). Considering the prevalence of community violence in Colombia and the association between armed conflict and urban violence in the country, additional research is needed in this context.

Preventing the Consequences of Violence Exposure: The Role of School Climate
Given the high prevalence of violence around the world, and the harmful consequences of this violence for adolescents, there is great interest from researchers, policy makers, and other community stakeholders to understand how to best prevent the negative consequences of violence exposure on adolescent development. According to ecological resiliency theory (Wieste A. Tol et al., 2009), promotive processes that occur within adolescents’ developmental contexts can have important implications for mitigating negative developmental outcomes and fostering developmental competence in spite of violence exposure. Schools have been identified as potentially important ecological contexts for building resilience, especially as social contexts outside the home gain increasing influence during adolescence. In particular, the quality of a school’s climate, the “shared beliefs, values, and attitudes that shape interactions between students, teachers, and administrators and set the parameters of acceptable behavior and norms for the school” (Bradshaw et al., 2014, p. 594), likely has implications for an adolescent’s resilience. Schools in which students perceive a positive climate provide important support for adolescent development (Bradshaw et al., 2014). This may be particularly important for adolescents who do not experience such advantages in their community context, due to high levels of violence (Gaias, Lindstrom Johnson, et al., 2017).

Limited research has examined the importance of school climate in populations affected by both political and community violence. In Israel, research has demonstrated that positive school climate is associated with lower PTSD (Yablon, 2015) and peer victimization and higher math and reading scores (Benbenishty & Astor, 2005). In Colombia, positive school climate, measured by students’ perceptions of engagement
within their school and classroom was related to both prosocial behavior and positivity (Luengo Kanacri et al., 2017). Consistent with the ecological resilience model, school climate has also been indicated as a moderator of violence exposure. Within the US, Ozer and Weinstein (2004) found that as community violence increased, adolescents who felt unsafe at school demonstrated reduced adaptive functioning, whereas those who felt safe at school demonstrated higher adaptive functioning. Additionally, in Gambia, in the presence of positive school climate, the association between exposure to community violence and PTSD was reduced (O’Donnell et al., 2011). However, additional work is needed to explicate more specific components of school climate that can promote developmental competence for violence-affected youth, to identify potential actionable levers of intervention for schools to enhance resiliency. The current study focuses on three theoretically significant components of school climate that may be able to buffer the negative implications of violence exposure on adolescent development.

**Safety.** Feeling socially, emotionally, intellectually, and physically safe is a basic, fundamental human need that motivates behavior (Maslow, 1943). The need for safety is an active and dominant mobilizer, especially when faced with extreme threats, such as violence (Maslow, 1943). Infants, children and adolescents feel safe in predictable and organized environments, where unexpected and dangerous events do not occur, and if they do, they can be sheltered from harm in those situations (Maslow, 1943). School safety provides students an environment where they do not feel threatened or isolated, and therefore, can engage better with their academic and extracurricular activities in school (Lindstrom Johnson, 2009; G. Morrison, Furlong, & L. Morrison, 1994). Without a sense of safety, students will be limited in their ability to achieve their full potential, as
they have to focus on minimizing the threat of violence and victimization before engaging in learning processes. Extant research has demonstrated the positive implications of school safety on adolescent development (Devine & Cohen, 2007; Jimmerson, Nickerson, Mayer, & Furlong, 2012).

**Connectedness.** In addition to feeling safe, adolescents need to feel connected to others and perceive a sense of belonging in their environments (Maslow, 1943). According to the social development model (Hawkins & Weis, 1985), when adolescents develop connections to peers and adults in their school environment, believe in the value of those connections, and are committed to maintaining those connections, they are less likely to engage in delinquent behaviors. The connection, or social bond, that adolescents form with their school exerts an informal control on behavior, inhibiting deviant behaviors and enhancing social competence and motivation to achieve educational goals (Catalano, Oesterle, Fleming, & Hawkins, 2004; Hirschi, 1969). Therefore, finding ways for students affected by violence to feel connected to the school community may be an important direction for enhancing development. Prior research has demonstrated that students who perceive greater school connectedness, consisting of student-teacher and student-student relationships as well as a sense of belonging, are less likely to use substances, initiate sexual activity, engage in violence, demonstrate physical and relational aggression, and are more likely to have higher levels of emotional well-being (Bond et al., 2007; McNeely, Nonnemaker, & Blum, 2002; Wilson, 2004). In fact, in a study of the associations between various individual, family, and school-level risk and protective factors and eight negative indicators of adolescent well-being, including emotional distress, violence, substance use, and sexual behaviors, school connectedness
was one of only two variables that were protective for every health risk behavior (Resnick et al., 1997).

**Services.** Finally, adolescents benefit from school services that address their mental, emotional, and behavioral (MEB) needs (Stein, Jaycox, Kataoka, Wong, et al., 2003). Schools have been identified not only as centers for academic learning, but also as ideal locations to provide support for students’ mental, emotional, and psychological health (Bruns et al., 2016; Durlak, Weissberg, Dymnicki, Taylor, & Schellinger, 2011). In schools, as compared to other community or health locations, students are already spending a large proportion of their day, do not face barriers to access, and have often built relationships with supportive adults. Scholars have called for MEB services to not only exist as targeted interventions for students demonstrating psychological and behavioral challenges, but to also be integrated into the general school climate (Bruns et al., 2004). Instead of solely relying on counselors, psychologists, and social workers to address the MEB needs of students, building capacity for teachers, administrators, and other school personnel to support personal, non-academic problems that students may be facing, is likely to enhance socio-emotional and academic development (Walrath, Bruns, Anderson, Glass-Siegel, & Weist, 2004; Way, Reddy, & Rhodes, 2007). For example, in the School Development Program (SDP; Haynes & Comer, 1990), mental health experts (e.g., social workers, psychologists) are tasked not only with addressing individual student needs, but also improving the overarching school climate. In SDP schools, teachers, administrators, and other personnel are trained not to only enhance students’ academic capacities, but also to promote their psychological and social development. Schools that have implemented SDP have demonstrated gains in achievement,
attendance, behavior, and overall adjustment (Lunenburg, 2011). Such an approach may be particularly important in under-resourced areas with limited access to designated clinical staff. Additionally, a school climate that comprehensively focuses on supporting MEB well-being, in addition to teaching academic content, may be particularly important for adolescents affected by violence, as they are at particular risk for developing mental health problems (Albus, Weist, & Perez-Smith, 2004; Kataoka et al., 2003). Although no research to my knowledge has examined adolescents’ perceptions of school services, it is likely students’ experiences of these services may be most relevant for understanding their implications for wellbeing.

Present Study

The aims of the current study were to explore the implications of violence exposure on adolescent development, and determine whether these relations are moderated by school climate. I built off previous research by examining the unique effects of three different aspects of violence exposure: 1) exposure to armed conflict, 2) witnessing community violence, and 3) direct community violence victimization on both developmental competence and externalizing behaviors. I hypothesized that all three aspects of violence exposure would positively predict externalizing behaviors (i.e., delinquency, violence, drugs and alcohol) and negatively predict developmental competence (i.e., educational engagement, social competence, goal orientation, hope, educational aspirations). Previous research has found mixed results regarding the implications of violence exposure on developmental competence; however, most research that has found positive associations examines coping as an indicator of developmental competence, which is not measured in the current study. Due to the severity of armed
conflict exposure, I expected that this exposure would be the strongest predictor of developmental outcomes. Following armed conflict exposure, I expected that community violence victimization would be a stronger predictor of development than witnessing community violence, consistent with research that has demonstrated that direct victimization is a more proximal experience of community violence (Lynch & Cicchetti, 1998).

In addition, I also explored environmental conditions that might facilitate positive functioning within highly violent environments (Barber, 2013; Barber & Schluterman, 2009). In particular, I examined three unique aspects of school climate as moderators: 1) safety, 2) connectedness, and 3) services. I captured adolescents’ perceptions of their community and school contexts, considering the importance of an individual’s phenomenological experiences of their environments for driving developmental outcomes, as emphasized in the bioecological (Bronfenbrenner & Morris, 2006), ecological resilience (Wieste A. Tol et al., 2009), and social development (Hawkins & Weis, 1985) models. According to ecological resilience theory, I expected that students’ perceptions of school safety, connectedness, and services, would moderate the relation between violence exposure and externalizing behaviors and developmental competence. In other words, the impact of violence exposure on development would be mitigated for students who perceive high levels of connectedness, safety, and services in their schools.

**Method**

**Participants and Procedure**

The current study utilized data collected from 1,857 sixth to eleventh grade students in six public high schools in Cartagena, Colombia (see Table 1 for demographic
information). Schools were recruited through word-of-mouth, using convenience sampling, with careful consideration given to enrolling a variety of schools in distinct areas of the city who served students from diverse neighborhoods. In Colombia, it is typical for students to be assigned a group at the beginning of the school year; students then take all of their classes with their group in the same classroom and teachers rotate to each group’s classroom. In most cases, data were collected from two groups per grade from each school, although some adjustments were made for logistical or administrative purposes. In total, data was collected from students in 64 groups (potential N = 2,331), with an average of 36.42 students enrolled in each group and an average of 29.02 students participating from each group.

Surveys were completed anonymously and did not contain any identifying information. The study employed passive consent, meaning that parents of children in the participating groups could choose to opt their child out of participation in the study. Before the scheduled data collection, all parents of students in the selected groups were sent a letter explaining the purpose and procedures of the study. All children in the participating groups whose parents did not opt them out of the study were given a chance to participate, but were able to decline participation through the assent process. Survey instructions were read to each group of students by a study team member, describing that the study was completely voluntary and they could skip any questions they did not wish to answer, and reminding students not to put their names on the survey. Parental opt-out forms were only received from 28 parents and 25 students did not assent to participate in the study. Any other non-participating students were not in attendance during data collection. Participation rates within each group, calculated by dividing the number of
students who completed the survey by the official number of students enrolled in the class according to school records, including those who may not attend school regularly, ranged from 28.13% to 100% with an average rate of 79.65%. Non-participating students worked independently on other school work during data collection. If students completed the survey earlier than the rest of their classmates, they also worked independently.

Recruitment procedures were approved by the participating school and the Arizona State University Institutional Review Board.

Data was collected in each school in either one or two days, depending on the size of the school. Each student completed a paper-and-pencil questionnaire. Individualized assistance from a study team member was provided to students who had questions. The questionnaire took between 20 minutes and an hour to complete, with younger students often needing more time. Each participating school received a contribution to a school improvement project that fulfilled a need identified by the director and other staff (e.g., recycling bins, printers, door knobs, whiteboard markers, fans).

**Measures**

**Translation procedures.** All measures had originally been developed for use in the United States, and therefore, it was necessary to translate them into Spanish, particularly for the Colombian context. For the present study, which examines processes within one cultural group, but not for the purposes of cross-cultural comparison, it was essential to establish semantic equivalence (Knight, Roosa, & Umaña-Taylor, 2009), whereby the ideas expressed in each item were accurately conveyed in Spanish. I utilized a blind back-translational approach to translation, where the measures were translated into Spanish by a bilingual native Spanish speaker and then the Spanish versions were re-
translated into English by a bilingual native English speaker (Wang, Lee, & Fetzer, 2006). Per recommended practice, the individual translating from Spanish back to English was not familiar with the original English version of the survey (Wang et al., 2006). In addition, to further establish semantic equivalence after translation, a review team of individuals from the local context reviewed the survey to check for any culturally inconsistent phrasing or wording (Geisinger, 1994; Kristjansson, Desrochers, & Zumbo, 2003). Finally, the questionnaires were piloted in one school that was not a participating school but reflected the demographic characteristics, particularly language ability, of the target sample (Knight et al., 2009). Adjustments were made for questions, items, or anchors that pilot students found confusing.

**Externalizing behaviors.**

**Delinquency.** Delinquency was measured using 17 items, adapted from the Risky Behavior Measure (Eccles & Barber, 1990). Each was measured on a four-point scale (0 = Never, 3 = More than 10 times), and scores were summed to create an index of delinquent behavior. Example items included: “How many times in the past year have you gotten in trouble in school?” and “How many times in the past year, have you lied to your parents about something important?”. This measure has demonstrated validity in previous studies that have examined the effects of effective and ineffective familial, peer, and school processes on adolescent delinquency (Bravo, Umaña-Taylor, Toomey, Updegraff, & Jahromi, 2016; Davidson, Updegraff, & McHale, 2011; Jensen & Whiteman, 2014; Toomey, Umaña-Taylor, Updegraff, & Jahromi, 2015).

**Violent behaviors.** Students’ own violent behaviors were measured using four items from the Youth Risk Behavior Surveillance Survey (Center for Disease Control,
Students were asked how many times they had been involved in a fight, had carried a knife or gun, and had injured someone in a fight in the past month. Each item was rated on a four-point scale (0 = *Never*, 3 = *5 times or more*). Scores were summed to create an index of violent behaviors. These items have been used extensively as valid assessments of adolescents’ violent behaviors (Brener et al., 2013).

**Drugs and alcohol.** Students’ drug and alcohol behaviors were measured using three items from the Youth Risk Behavior Surveillance Survey (Center for Disease Control, 2017). Students were asked how many times they had consumed alcohol, had been drunk, and had consumed drugs. Each item was rated on a four-point scale (0 = *Never*, 3 = *5 times or more*). Scores were summed to create an index of behaviors related to drug and alcohol use. Previous research has demonstrated that adolescent self-reports of drug and alcohol use have high test-rest reliability and validity with other measures and records of such behaviors (Brener, Billy, & Grady, 2003; Needle, 1983).

**Developmental competence.** The majority of scales measuring positive indicators of developmental competence were developed as part of the Positive Indicators Project through the Flourishing Children Project from Child Trends (Lippman et al., 2014). Concurrent validity for each scale was established by assessing bivariate and multivariate relations with measures of social behavior (i.e., fighting), health behavior (i.e., smoking), emotional well-being (i.e., depressive symptoms), and cognitive outcomes (i.e. parent-reported grades) (Lippman et al., 2014).

**Educational engagement.** Educational engagement captures the degree to which students participate in, care about, and are invested in academic and school-based activities (Lippman et al., 2014). Educational engagement was measured using three
items (e.g., “If something interests me, I try to learn more about it.”) on a four-point scale (1 = *Totally disagree*, 4 = *Totally agree*). Scores were averaged across items with higher scores representing higher educational engagement ($\alpha = .74$).

**Social competence.** Social competence includes a set of positive skills necessary to get along well with others and work collaboratively in groups (Lippman et al., 2014). Social competence was measured using six items (e.g., “How often do you listen to other students’ ideas?”) on a five-point scale (1 = *None of the time*, 5 = *All of the time*). Scores were averaged across items with higher scores representing higher social competence ($\alpha = .76$).

**Goal orientation.** Goal orientation refers to one’s motivation and ability to take action toward desired future plans (Lippman et al., 2014). Goal orientation was measured using five items (e.g., “I develop step-by-step plans to reach my goals.”) on a four-point scale (1 = *Totally disagree*, 4 = *Totally agree*). Scores on each item were averaged with higher scores representing higher goal orientation ($\alpha = .77$). Concurrent validity was established by examining relations between goal orientation and

**Hope.** Hope refers to a “general and broad trust that the future will turn out well” (Lippman et al., 2014). Hope was measured using three items (e.g., “I expect good things to happen to me”) on a four-point scale (1 = *Totally disagree*, 4 = *Totally agree*). Scores were averaged across items with higher scores representing higher hopefulness ($\alpha = .86$).

**Educational aspirations.** Educational aspirations refer to adolescents’ expectations for their future educational attainment. Educational aspirations were measured using two items. The first asked students whether graduating high school was
important to them, whereas the second asked whether they planned to attend college. Both items were measured on a four-point scale (1 = *Totally disagree*, 4 = *Totally agree*).

**School climate moderators.** All components of school climate were measured using the Spanish version of the US-based Maryland Safe and Supportive Schools School Climate Survey (MDS3; Bradshaw et al., 2014). Prior work utilizing the MDS3 survey in Mexico established measurement invariance and convergent validity of school climate model, demonstrating the appropriateness of using the measure outside of the United States, particularly in Latin American contexts (Shukla et al., 2007).

**Safety.** The safety scale contains two items that capture students’ feelings of security at school (i.e., “I feel safe at this school.”, “I feel safe going to and from school.”). Students rated both items on a four-point scale (1 = *Strongly disagree*, 4 = *Strongly agree*). Scores were averaged across items with higher scores representing higher perceptions of safety (α = .74).

**Connectedness.** The connectedness scale contains nine items that capture students’ sense of belonging at their school. Connectedness included students’ perceptions of their relations with their teachers (e.g., “Students trust teachers.”), relations amongst students (e.g., “The students respect one another”), and general belonging (e.g., “At this school, I feel like I fit in.”). Students rated each item on a four-point scale (1 = *Strongly disagree*, 4 = *Strongly agree*). Scores were averaged across items with higher scores representing higher feelings of connectedness (α = .84).

**Services.** The services scale contains four items that address how well students perceive that their psychological and emotional needs are met at the school (e.g., “The students that need support with their problems can receive help through the school”,
“There is someone at school with whom I can talk to regarding my personal problems”). Students rated each item on a four-point scale (1 = *Strongly disagree*, 4 = *Strongly agree*). Scores were averaged across items with higher scores representing higher perception of services and resources ($\alpha = .75$).

**Exposure to violence predictors.**

*Violence victimization.* Victimization was measured using an adapted version of the neighborhood subscale of the Victimization Scale (Nadel, Spellmann, Alvarez-Canino, Lausell-Bryant, & Landsberg, 1996). Adolescents reported on 7 items measured on a 4-point scale (0 = *Never* to 3 = *Many times*), including their experiences of victimization related to physical aggression, attacks with weapons (guns or knives), verbal abuse, sexual harassment, robbery, and drug micro-trafficking within their community. Scores were summed across items to create a victimization index, with higher scores representing higher victimization. Previous studies using this scale have found that community violence exposure is significantly related to increased internalizing and externalizing problems, and decreased academic competence and social skills over time (J. Reyes, 2010).

*Witnessing violence.* The degree to which adolescents witnessed violence in their communities was measured using an adapted version of the Children’s Exposure to Community Violence scale (Richters & Martinez, 1990). Adolescents reported on 17 items (e.g., “In your neighborhood, how often have you seen someone shot?”; “In your neighborhood, how often have you seen gangs?”) measured on a 4-point scale (0 = *Never* to 3 = *Many times*). Scores were summed across items, and higher scores represented higher exposure to witnessing community violence. Self-reports of exposure to violence
have been established as valid representations of the degree to which youth have been
exposed to violence (White, Bruce, Farrell, & Kliewer, 1998). This scale has been used to
demonstrate associations between witnessing community violence and aggression,
internalizing and externalizing symptoms, and emotional regulation (Criss, Morris,
Ponce-Garcia, Cui, & Silk, 2016; Stokes & Jackson, 2014; White et al., 1998; Yakin &
McMahon, 2003).

**Exposure to armed conflict.** The degree to which adolescents were exposed to
armed conflict was assessed using an adaptation of the Childhood War Trauma
Questionnaire (Macksoud, 1992). Adolescents reported on 16 items to indicate whether
they had or had not experienced various situations because of the armed conflict (e.g.,
forced residence change, encountering a guerrilla group, kidnapping in the family).
Consistent with Macksoud and colleagues (Macksoud, 1992; Macksoud & Aber, 1996)
calculation of a trauma score, the number of situations a youth had experienced were
summed to create an index of armed conflict exposure. A total of 98% of children had
experienced 5 or less situations; therefore, any scores above 5 (n = 46) were truncated to
this cut-off. Scores could range from 0 to 5, with higher scores reflecting more exposure
to armed conflict. Content validity of the measure was established through interviews
conducted with diverse families in a war-affected context (Macksoud, 1992), and this
measure has shown expected associations with socio-emotional and behavioral outcomes
in multiple countries affected by political violence (Dybdahl, 2001; Ehntholt & Yule,
2006; Garbarino & Kostelny, 1996; Macksoud & Aber, 1996).

**Covariates.** In order to better isolate the effects of exposure to violence and
school climate on developmental outcomes, I controlled for child’s grade (i.e., 6th-11th),

28
sex, and parental education, which students reported on at the beginning of the survey. Previous research has demonstrated that these factors are related to students’ perceptions of their school climate (Bradshaw et al., 2014; Crosnoe, Johnson, & Elder Jr, 2004; Fan, Williams, & Corkin, 2011; Kuperminc, Leadbeater, Emmons, & Blatt, 1997; Shukla, Konold, & Cornell, 2016), as well as both positive and negative indicators of adolescent development (Demuth & Brown, 2004; Flewelling & Bauman, 1990; Li & Lerner, 2011; Moore & Lippman, 2005; Nagin & Tremblay, 2001; Peets & Kikas, 2006).

**Analytic Plan**

**Preliminary Analyses**

I conducted preliminary analyses including descriptive statistics, frequencies, and correlations using SPSS 24 (IBM Corp., 2016). First, means and standard deviations of observed study variables were examined. Next, I assessed the univariate normality and outliers by examining descriptive statistics. Histograms and frequency charts were reviewed to identify outliers. Outliers were adjusted by altering the score to fall just lower or higher than the most extreme score. Finally, I examined the relations amongst all study variables, analyzing their zero-order correlations.

**Structural Equation Model**

The aims of this study were to understand how exposure to violence impacts adolescents’ behavioral and psychological outcomes and whether various aspects of school climate moderate this relation. To address these aims, I utilized structural equation modeling, with a series of analyses conducted in Mplus 8.1.5 (Muthén & Muthén, 2017). The maximum likelihood-robust estimator was employed which adjusts the chi-square and standard errors to account for non-normality in the data (Asparouhov & Muthén,
Missing data was handled using a Full Information Maximum Likelihood (Acock, 2005), which minimizes bias in parameter estimates while retaining the original sample size (Enders, 2010). Additionally, I controlled for the nested structure of the data within schools, by including school membership as fixed effects (i.e., dummy codes) in the model. Modeling cluster affiliation as fixed effects has been shown to be the most optimal way to control for Level 2 variance with a small number of clusters, by outperforming other methods (e.g., Bayesian, generalized estimating equations, multi-level models) in terms of power, estimating un-biased parameters, minimizing assumptions, and accounting for all heterogeneity at level 2, alleviating concerns regarding omitted variable bias (McNeish & Stapleton, 2016). These dummy-coded variables were allowed to covary with all predictors in the model.

To better isolate the effects of violence exposure and school climate on developmental outcomes, all path models included grade, age, gender, and parental level of education (an average of mother’s and father’s education), in addition to the dummy coded variables representing school membership, as covariates. Considering that exposure to violence varies by sex, age, and socio-economic status (Stein, Jaycox, Kataoka, Rhodes, & Vestal, 2003), these demographic characteristics were allowed to covary with the three exposure to violence variables in all models. In addition, the three exposure to violence variables were allowed to covary with one another. All predictors and moderators were centered prior to running analyses.

Model fit was assessed based on global fit indices (chi-square, comparative fit index [CFI], root-mean-square-error of approximation [RMSEA], and standardized root-mean-square residual [SRMR]). Models were considered to fit adequately if the CFI was
greater than or equal to .90 and the RMSEA and SRMR are each less than or equal to .06 (Hu & Bentler, 1999). For poorly-fitting models, modification indices were reviewed and those that were theoretically relevant were adjusted one at a time. Once adequate model fit was established, for both the measurement and full structural models, specific model parameters were examined.

**Measurement model.** Before testing relations between my variables of interest, I established a measurement model including the two latent outcomes utilizing a confirmatory factor analysis. The externalizing behaviors latent factor included three indicators: delinquency, violence, and risky behavior. The developmental competence latent factor included five indicators: engagement, social competence, goal orientation, hope, and educational expectations as indicators. These two latent factors were free to covary.

**Hypothesis testing.** After the measurement model was established, I developed full structural path models to address the aims and research questions of the study. Although I recognize the cross-sectional nature of the data, I conceptualized adolescents’ perceptions of their community (i.e., violence exposure) and school (i.e., school climate) as predictors and indicators of their externalizing behaviors (i.e., delinquency, aggression, drugs and alcohol) and developmental competence (i.e., engagement, social competence, goal orientation, hope, educational expectations) as outcomes. First, to understand the influence of violence exposure on adolescent functioning, I regressed the two latent outcomes on three predictors (i.e., exposure to armed conflict, violence victimization, and witnessing violence).
Second, I tested moderation of the effects violence exposure on externalizing behaviors and developmental competence by school climate. Specifically, I was interested in exploring how school safety, connectedness, and services impact the influence of exposure to armed conflict, violence victimization, and witnessing violence on externalizing behaviors and developmental competence. However, conducting 18 different moderation tests would increase the risk of obtaining Type-1 (false-positive) errors by chance. In order to reduce this possibility, I ran omnibus moderation tests using a single latent variable comprised of the three school climate constructs interacted with the three predictors predicting our the latent outcomes (e.g., Pettigrew et al., 2015). These tests helped rule out the possibility that none of the 18 effects were significant. For any significant omnibus tests, I tested individual interactions between the significant predictor and the three school climate moderators, with a separate model for each moderating variable. For example, if the omnibus tests indicated a significant interaction between victimization and school climate for externalizing behaviors, I conducted one model that tested the interaction between victimization and safety, another model that tested the interaction between victimization and connectedness, and another model that tested the interaction between victimization and services. All predictors with significant omnibus interactions were tested in the same model. In other words, the interaction between witnessing and safety and victimization and safety would be tested simultaneously, but separately from a model that tested both the interaction between witnessing and services and victimization and services. Significant interaction parameters were probed using the model constraint function, testing the effect of violence exposure at one standard deviation above and below the mean of the school climate moderator.
Results

Descriptive Statistics

Descriptive statistics and zero-order correlations are presented in Table 2. Descriptive statistics reveal that on average students did not report high levels of violence exposure or externalizing behaviors, with means far below the highest observed value and highest possible value. However, on average students perceived high levels of safety ($M = 3.25$), connectedness ($M = 3.07$), and services ($M = 3.12$) in their schools. Indicators of developmental competence were also high, with all averages within one point of the scale maximum. Correlations between study variables were weak to moderate, but were in the expected direction. Armed conflict exposure, community violence victimization, and witnessing community violence were all weakly or moderately, positively associated with externalizing behaviors, with correlations ranging from $.23$ to $.55$. Correlations between exposure to violence variables were weakly, negatively associated with indicators of developmental competence, ranging from $-.01$ to $-.18$. Associations between developmental outcomes and school climate were also in the expected direction. Safety, connectedness, and services were all significantly negatively associated with delinquency, violence, and drug and alcohol use ($rs$ between $-.10$ and $-.25$), and significantly positively associated with educational engagement, social competence, goals, hope, and educational expectations ($rs$ between $.13$ and $.33$). Significant correlations amongst study variables (e.g., between and amongst exposure to violence, school climate, and indicators of externalizing behaviors and developmental competence) warranted examination of the research questions.

Measurement Model
The hypothesized measurement model (see Figure 1), with delinquency, violent behaviors, and drug and alcohol use as indicators of externalizing behaviors and educational engagement, social competence, goal orientation, hope, and educational expectations as indicators of developmental competence, demonstrated good fit to the data \( \chi^2(19) = 91.06, p < .001, \text{RMSEA} = .05 [.04, .06], \text{SRMR} = .04, \text{CFI} = .97, \text{TLI} = .95 \). Local fit was also adequate with all indicators positively loading onto their expected factors (all \( ps < .001 \)). Most indicators had standardized loadings over .56; social competence was the only exception with a loading of .33. The two latent variables were also significantly inversely correlated with one another.

**Main Effects Model**

My first research question was to determine whether three types of violence exposure (armed conflict, community violence victimization, witnessing community violence) significantly predicted externalizing behaviors and developmental competence. This model (see Figure 2) demonstrated adequate fit to the data \( \chi^2(88) = 360.39, p < .001, \text{RMSEA} = .04 [.04, .05], \text{SRMR} = .03, \text{CFI} = .93, \text{TLI} = .90 \). All three dimensions of exposure to violence significantly and positively predicted externalizing behaviors, such that a 1-SD increase in witnessing community violence was associated with a .47-SD increase in externalizing behaviors, a 1-SD increase in community violence victimization was associated with a .23-SD increase in externalizing behaviors, and a 1-SD increase in exposure to armed conflict was associated with a .16-SD increase in externalizing behaviors. However, for developmental competence, only exposure to armed conflict was a significant predictor, whereby a 1-SD increase in exposure to armed conflict was associated with a .08-SD decrease in developmental competence. Grade and
sex were significant predictors of both outcomes. Grade were associated with higher levels of both developmental competence and externalizing behaviors, whereas males demonstrated higher levels of externalizing behaviors, but lower levels of developmental competence than females. The three exposure to violence variables were all significantly correlated with one another.

**Omnibus Moderation Model**

The second research question addressed whether three dimensions of school climate (i.e., safety, connectedness, services) moderated the relation between exposure to violence and developmental outcomes. In order to reduce the risk of obtaining Type 1 errors (false positives), I first conducted an omnibus moderation model, where each exposure to violence variable was interacted with a school climate latent variable including safety, connectedness, and services as indicators, to predict externalizing behaviors and developmental competence (see Table 3). Witnessing was significantly moderated by school climate for externalizing behaviors ($B = -.03$, $SE = .01$, $\beta = -.12$, $p = .03$), and victimization was marginally moderated by school climate for developmental competence ($B = -.03$, $SE = .02$, $\beta = -.07$, $p = .08$). Exposure to armed conflict was not moderated by school climate for either outcome. These significant interactions were further probed to determined which particular aspect(s) of school climate moderated the relation between witnessing and externalizing behaviors and victimization and developmental competence.

**Interaction Probes by School Climate Dimensions**

To explore which dimensions of school climate moderated the relations between witnessing and victimization and developmental outcomes, an individual model was run
for each aspect of climate (see Figures 3-5). Each model included the main effects for the three exposure to violence variables and the focal dimension of school climate (i.e., safety OR connectedness OR services) predicting both outcomes. In addition, interactions between the focal dimension of school climate and witnessing were added in predicting externalizing behaviors and between the focal dimension of school climate and victimization in predicting both externalizing behaviors and developmental competence. In order to improve model fit, the covariances between a) grade and the focal dimension of school climate and b) social competence and educational engagement was released for all models, based on examination of modification indices. This was judged theoretically allowable a) because reports of school climate are likely to change as a function of students spending more years within their school environments and with their teachers and peers, and b) because social competence and educational engagement were derived from the same measurement source and may display some shared measurement error. In addition, for the connectedness model, modification indices suggested allowing a covariance between sex and connectedness. Some previous research has demonstrated that girls and boys have differing perceptions of school connectedness and belongingness (Thomas & Smith, 2004). After these modifications were taken into account, all three moderation models demonstrated adequate fit with RMSEAs below .05, SRMRs below .04, and CFI and TLI above .90.

All three dimensions of school climate significantly predicted both developmental outcomes, whereby higher levels of safety, connectedness, and services were associated with higher levels of developmental competence and lower levels of externalizing behaviors. Results demonstrated that services (B = -.02, SE = .01, β = -.08, p = .045) and
connectedness (B = -.02, SE = .01, \( \beta = -.06, p = .041 \)) were both significant moderators and safety was a marginally significant moderator (B = -.01, SE = .01, \( \beta = -.06, p = .058 \)) of the relation between witnessing and externalizing behaviors. Services emerged as a marginally significant moderator of the relation between victimization and developmental competence (B = -.03, SE = .02, \( \beta = -.06, p = .075 \)).

Examinations of the simple slopes (Table 4) revealed that witnessing significantly predicted externalizing behaviors at high (1SD above the mean), average, and low (1SD below the mean) levels of safety, connectedness, and services, but the strength of these associations decreased as perceptions of school climate increased. Additionally, at high and average levels of services, victimization did not predict developmental competence; however, at low levels of school services, victimization marginally and negatively predicted developmental competence.

**Discussion**

The aims of the present study were to test the relations between violence exposure and adolescent outcomes, and to understand the role of school climate – specifically, students’ perceptions of safety, connectedness, and services – in mitigating the detrimental implications of violence on development. I find that witnessing community violence, community violence victimization, and experiences of armed conflict are all significantly associated with adolescent externalizing behaviors, whereas only the latter is significantly related to developmental competence. In terms of the effects of school climate, I find significant moderation of the relation between witnessing community violence and externalizing behaviors by safety, connectedness, and services, whereby the relation between witnessing and externalizing is weaker for adolescents who perceive
higher levels of positive school climate. I also find that services moderates the relation between victimization and competence, whereby victimization is only significantly negatively related to competence at low, but not high or average levels, of perceived school services.

**Influence of Violence Exposure on Adolescent Outcomes**

One objective of the current study was to isolate the independent effects of community violence exposure, including witnessing and victimization, and experiences of political violence, specifically in this case, armed conflict. This builds off prior research that typically examines community violence and political violence independently from one another (e.g., Barber & Schluterman, 2009; Overstreet, 2000). Instead, this study considers that these forms of violence may be experienced in conjunction with one another, particularly in contexts where the underlying causes of each type of violence may be interrelated. These results demonstrate that all three forms of violence exposure are significantly and positively associated with adolescents’ externalizing behaviors. Exposure to violence may provide behavioral models for deviant behavior, increase adolescent’s justification and acceptability of these behaviors, and desensitize adolescents to the effects of violence (Mrug & Windle, 2009). However, contrary to prior research and hypotheses, both community violence variables were stronger predictors of externalizing behaviors than armed conflict. This may be related to the cross-sectional nature of the data; children who demonstrate more externalizing behaviors, such as aggression, delinquency, and drug and alcohol use, are more likely to be in situations within their communities where they are more likely to be exposed to violent situations (O’Keefe, 1997). In an examination of bidirectional influences of
violence exposure and adjustment, Mrug and Windle (2009) found that delinquency was a significant predictor of both witnessing violence and victimization. The issue of directionality and causality may not be as concerning for armed conflict experiences, as it is less likely that larger socio-political events, perhaps with the exception of direct involvement with warfare, differentially affect individuals according to their personal characteristics and behavioral dispositions.

It is also likely that the strength of these relations is affected by both the temporal and environmental proximity of the different types of violence to adolescents’ lived experiences. Experiences of armed conflict, although they are often very severe in nature (e.g., kidnapping, bombing) may constitute more acute one-time events, whereas experiences of community violence are often more consistent chronic stressors present in an adolescents’ daily life (Lambert, Nylund-Gibson, Copeland-Linder, & Ialongo, 2010). Previous research has found that ongoing chronic community violence exposure is more strongly associated with externalizing behaviors than acute, isolated instances of violence (Cooley-Quille, Turner, & Beidel, 1995; Vanderschmidt, Lang, Knight-Williams, & Vanderschmidt, 1993). This may be particularly likely in the context of the current study. Data was collected as the apex of political violence in Colombia was waning and the country was entering a post-conflict period, perhaps attenuating the implications of this type of violence on adolescent development (Keresteš, 2006). Additionally, this study only includes youth attending high school in an urban area of Colombia that was itself not directly impacted by the armed conflict. The youth in this study who experienced armed conflict events likely did so before moving to the city, and therefore, were no longer situated within the conflictual environment at the time of data collection, or were
affected by the conflict indirectly through a family member from another area. It will be important to replicate these findings with adolescents living within areas of the country with more prolonged direct exposure to armed conflict. However, it is important to remember that despite the fact that these armed conflict events were likely more distal to the current lived experiences of the adolescents participating in this study, the effects of armed conflict were significant above and beyond experiences of community violence, highlighting the severity of the developmental implications of these experiences.

Additionally, armed conflict exposure was the only significant predictor of developmental competence, whereby adolescents who experienced more armed conflict events reported diminished levels of developmental competence. Although community violence witnessing and victimization were strongly associated with externalizing behaviors that capture more immediate, concurrent behaviors, these experiences do not seem to alter adolescents’ perceptions of their own competencies and future orientation. Armed conflict events, however acute, may be severe enough in nature to significantly affect an adolescents’ outlook regarding their engagement in personal, relational, and educational skill building and identity formation (Macksoud & Aber, 1996; Wieste A. Tol et al., 2009).

This finding, although consistent with the aforementioned results regarding the detrimental implications of armed conflict on externalizing behavior, contributes to a very mixed and limited body of literature examining the effects of political violence on positive developmental outcomes. Many previous studies have found no association or an unexpected positive relation between exposure to political violence and indicators of developmental competence, speculating that experiencing armed conflict engenders high
levels of coping, strength, self-determination, and planfulness (Barber & Olsen, 2009; Macksoud, 1992). It is unclear why such divergent results have emerged across studies, but it could be related to the variety of outcomes that are conceptualized as indicators of developmental competence, ranging from coping skills (e.g., Klingman, 2001) to prosocial behavior (e.g., Keresteš, 2006), to academic self-efficacy and attainment (e.g., Slodnjak, Kos, & Yule, 2002). A strength of the present study is the use of a latent variable that represents multiple indicators of developmental competence, more broadly conceptualizing what constitutes adolescent functioning than prior studies. More research is needed to contribute to our understanding of the impacts of political violence on developmental competence, and more systematically explicate how these impacts vary according to temporal and contextual characteristics. For example, in previous research, the influence of political violence has varied depending on the degree to which participants have experienced or been directly involved with the conflict, and the timing of the study relative to the experience of the violence.

**Role of School Climate**

The primary objective of the current study was to understand whether school climate mitigates the negative implications of violence exposure for adolescents. However, it is also important to note that the main effects of safety, connectedness, and services were significantly associated with both adolescent outcomes, indicating that regardless of exposure to violence, students who perceive higher levels of positive school climate also report lower levels of externalizing behaviors and higher levels of developmental competence. This is consistent with extant research that has outlined the
benefits of school safety, connectedness, and services for enhancing students’ abilities to develop strong socio-emotional competencies (Bradshaw et al., 2014).

Beyond the implications of school climate for the general student population, the current study demonstrates support for ecological resilience theory (Wieste A. Tol et al., 2013, 2009), suggesting that promotive processes within school contexts can mitigate the detrimental effects of violence exposure for adolescents. Whereas ecological resilience theory was initially developed in relation to experiences of political violence (Wieste A. Tol et al., 2013, 2009), the current study expanded the theory to explore resilience processes for adolescents exposed to community violence. In fact, contrary to the initial theory, I did not find that any aspects of school climate were significant moderators of the relations between armed conflict and either externalizing behaviors or developmental competence, although significant results were found in relation to community violence exposure. Students affected by community violence may perceive that their schools are better able to support their needs than those affected by armed conflict, because the events of the armed conflict are likely more distal to the school environment than community violence. Because schools are situated within high-violence communities and teachers, administrators, and other personnel likely have personal experiences facing and coping with community violence on a regular basis, they may be more familiar with the consequences of community violence exposure and may be able to utilize these experiences to respond to students’ own challenges. This embeddedness may facilitate students’ perceptions of the ability for their schools to respond to the challenges they face in their community.
Due to the severity of the armed conflict, mitigating the effects of this type of violence exposure may require more tailored interventions that explicitly address the circumstances of the conflict or target the individual needs and backgrounds of conflict-affected students, beyond improving the general school climate. For example, Jordans and colleagues (2010) found positive effects of a classroom based intervention that addressed positive coping, trauma, and safety for improving socio-behavioral outcomes and positive wellbeing in early adolescents affected by violence in Nepal. In Colombia, educators, policy makers, and researchers have been developing a multi-tiered elementary school prevention initiative called *Aulas en Paz* (Classrooms in Peace) that provides both universal and targeted programming to enhance citizenship competencies, promote peace, and prevent violence (Chaux, 2009); a recent evaluation found that the program led to reductions in aggressive behavior and improvements in prosocial behavior (Chaux et al., 2017).

The current study did find that school climate significantly moderated the relation between witnessing community violence and externalizing behaviors and the relation between community violence victimization and developmental competence. All three dimensions of school climate – safety, connectedness, and services – emerged as moderators of the relation between witnessing and externalizing. This moderation represented an amplified disadvantages mechanism (Gaias, Lindstrom Johnson, et al., 2017) whereby the detrimental effects of community violence were particularly profound at low levels of positive school climate. This is consistent with theory and prior research with younger children (Whipple, Evans, Barry, & Maxwell, 2010) that suggests that adolescents who experience higher levels of disadvantage in multiple contexts would be
at particular risk for decreased socio-emotional well-being. This may be related to the fact that school and community resources are often linked, with school characteristics often reflecting the characteristics of the community in which they are embedded, with regard to demographic and socio-economic indicators and indicators of safety, community organization, and well-being (Chaux, Molano, & Podlesky, 2009).

As students perceived higher levels of safety, connectedness, and services, the relation between witnessing and externalizing behaviors was weakened, although not fully alleviated. These findings indicate that it is not one particular aspect of school climate that can reduce externalizing for youth who witness violence, but improving a student’s sense of safety, belonging, and support is associated with a fewer externalizing behaviors. Although many studies have identified these elements of the school climate to be important for enhancing development within high-violence contexts (e.g., Payne, Gottfredson, & Gottfredson, 2003), ours is one of the first to identify these specific aspects of school climate as particularly important for youth who report direct experiences witnessing violence (see Ozer & Weinstein, 2004 for an exception with regard to school safety).

I also found support for an amplified disadvantages mechanism (Gaias, Lindstrom Johnson, et al., 2017) with regard to the relation between victimization and developmental competence, but only for one specific dimension of school climate – services. Community violence victimization hindered developmental competence at low, but not average or high levels of school services. This finding emphasizes the importance of integrating services to address mental, and emotional, and behavioral needs into the overarching climate of the school (Bruns, Walrath, Glass-Siegel, & Weist, 2004). Not
providing students who have experienced victimization in their communities with support for personal, non-academic problems can have detrimental implications for their perceptions of their own competencies and outlook toward the future. Students in high-conflict environments may already perceive their schools to be especially supportive contexts, as compared to other community locations (Frey, Ruchkin, Martin, & Schwab-Stone, 2009; Saltzman, Pynoos, Layne, Steinberg, & Aisenberg, 2001), so having school personnel who are equipped to respond to the needs of victimized students is likely an effective way to prevent the detrimental implications of victimization that would otherwise emerge with low levels of school services. It is important to emphasize that the measure of services utilized in this study was not meant to capture the presence of mental health professionals within the schools, furthering underscoring the importance of enhancing the capabilities for all school members to provide support for MEB needs and to integrate services into the norms, expectations, and values of the school as opposed to compartmentalizing support and services to a few specialists within the school. An effective classroom-based mental health intervention conducted with violence-affected youth in Indonesia utilized implementers with no formal mental health training, but who were selected from target communities, demonstrated high-levels of social skills, and had previously volunteered in humanitarian programs (Wietse A. Tol et al., 2008). This study is encouraging as it demonstrates that services can be provided by people from a range of backgrounds who are capable to responding to and supporting students’ non-academic and personal needs, which may be important in under-resourced and high-violence contexts.

Implications
The current study presents several recommendations for school practices. The results demonstrate that improving school safety, connectedness, and services will likely have implications for enhancing development for all adolescents, and may be particularly important for students affected by violence. In addition to investing resources and training teachers to improve school climate for all students, it may also be important to provide support in understanding and recognizing the consequences of violence, so school personnel may be especially equipped to enhance the school experience for violence-affected youth.

Improving school climate involves implementing strategies at multiple levels, including establishing school-wide guidelines, improving assessment, and training teachers to emphasize relationship and community building (J. Cohen, McCabe, Michelli, & Pickeral, 2009). Interventions designed to enhance school climate have proven fruitful in the past (e.g., Positive Behavioral Interventions and Supports, Bradshaw, Koth, Thornton, & Leaf, 2009; Catalano et al., 2004; Monahan, Oesterle, & Hawkins, 2010). Researchers have also pointed to a number of best practices to improve school climate for adolescents. Although previous research has typically conceptualized climate holistically, recent work, such as this study, focuses on defining and indicating best practices for improving specific aspects of climate (see Voight & Nation, 2016 for a review). Establishing clear and well-enforced school rules and improving the physical environment of the school likely have implications for improving students’ perceptions of school safety (Lindstrom Johnson, 2009). Connectedness may be enhanced by improving relationships amongst and between students and teachers and increasing opportunities for students to have ownership over school decisions and processes (Center for Disease
Control and Prevention, 2009). There may be a particular opportunity for Colombian schools to increase students’ perceptions of school connectedness, as students spend their whole academic day with the same group of classmates. Within these groups, teachers can facilitate a strong sense of community and belongingness amongst students.

Because services emerged as a moderator of both witnessing and victimization, this study suggests that prioritizing practices related to enhancing school services may maximize benefits for violence-affected youth. These practices may include training administrators, teachers, and staff regarding adolescent socio-emotional development, increasing the number of mental health professionals in the school, and conducting universal screening for mental health problems (Bruns et al., 2016). It is important to identify and support educators who endorse the importance of student emotional and behavioral competencies, as they will be more likely to be receptive to training and to integrate strategies into their everyday practices with fidelity (Brackett, Reyes, Rivers, Elbertson, & Salovey, 2011; Bruns et al., 2016; Kincaid, Childs, Blase, & Wallace, 2007).

It is also important to recognize that many initiatives to improve school climate and adolescent functioning in contexts of violence have been grounded in the United States. In violence-affected regions outside of the United States, most school-based interventions employ clinical therapy techniques (e.g., cognitive behavior therapy, art therapy, trauma healing) to target specific mental health symptoms, as opposed to examining the overarching school climate (Peltonen & Punamäki, 2010; Rolfsnes & Idsoe, 2011). Some programs, such as the REPLICA program in Northern Uganda (Bragin & Opiro, 2012), are comprehensive and include initiatives to improve access to
school, enhance safety and the socio-emotional climate, and develop targeted psycho-social programs. In Colombia, two programs intended to reduce violence and socialize peace in elementary schools, *Escuela Nueva* (New School; Forero-Pineda, Escobar-Rodríguez, & Molina, 2006) and the Early Prevention of Aggression Project (Duque, Klevens, Ungar, & Lee, 2005), included school and classroom climate components, such as building positive relationships and promoting effective classroom management skills. The Colombian Institute for the Evaluation of Education (ICFES) also evaluates schools according to student perceptions of both the school climate, including the classroom environment (e.g., “The teacher must wait for a long time in order for the students to be silent.”) and teacher monitoring of learning (e.g., “If we receive bad grades, the teacher explains to us what we did wrong.”), in addition to assessing students on academic standards. Each school’s scores are shared with school administrators, and consequently each school participates in a “Day of Excellence,” where administrators review the results with the school community, including teachers and families, and establish data-driven plans to improve the academic and socio-emotional climate of the school.

**Limitations and Future Directions**

Although this study offers important and novel evidence regarding the relation between exposure to violence, school climate, and adolescent outcomes, it is not without limitations. The most notable limitations concern issues of measurement and study design. As mentioned earlier, this data is cross-sectional and prevents us from drawing any causal interpretations of the results. Students who display high levels externalizing behaviors or developmental competence likely engage with their school and community contexts in different ways than their peers, and these indicators of adolescent functioning
could impact their exposure to violence and perceptions of the school climate. The issue of cross-sectionality may be compounded when considering the interactions examined in the present study. It could be the case that high levels of externalizing combined with high levels of witnessing violence contribute to lower perceptions of school safety, as opposed to low perceptions of safety combined with high levels of violence contributing to higher levels of externalizing. Longitudinal research is needed in order to better tease apart the directionality of these relations. Longitudinal research would also allow for follow-up analyses of adolescents’ academic and career attainment.

In addition, the data used in this study is entirely self-report. Although this allows us to understand adolescents’ phenomenological experiences within their developmental contexts and previous research has demonstrated that anonymous self-report data collected from youth regarding their own behaviors are reliable (Brener, Collins, Kann, Warren, & Williams, 1995), this study would be enhanced by including other sources of data. For example, adolescent report of externalizing behaviors could be corroborated with peer nominations, and perceptions of climate could be utilized in conjunction with environmental observations of the school environment. With a larger number of schools, I would be able to test school-level effects, both in terms of the aggregation of student’s perceptions as well as structural characteristics of the schools and the communities in which they are located. Additionally, the measurement of violence experiences was broad with regard to timing – although we asked students how frequently they witnessed or were victimized by community violence, we did not specify a certain timeline for these experiences and are not able to conceptualize the proximity of these events to one another. We also did not capture the intensity of these experiences, or who perpetrated
the violence (e.g., a peer, a family, an adult in the community). More detailed assessments of violence exposure would provide more insight into these experiences, and might be better able to inform more targeted interventions.

An additional limitation concerns the generalizability of the current findings. This study was situated within a specific context, both geographically and historically with regard to the timing of the armed conflict relative to the data collection period. It is unclear the extent to which these results are conditional to the Colombian context and the particular urban environment where data was collected. The relatively large sample size and the consistency of these results with theory and previous research findings offers some confidence that these results are not entirely unique to this population. However, it is particularly important for future research to simultaneously examine the effects of political violence and community violence on adolescent development and to replicate these findings regarding the relative importance of particular school climate dimensions, perhaps through a cross-national data collection project.

Conclusion

Despite the above limitations, this study contributes new understandings regarding the impact of violence exposure on adolescent developmental outcomes, and the role of school climate in mitigating these impacts. Given the detrimental ramifications of both community violence and armed conflict exposure, identifying practical mechanisms to reduce externalizing behaviors and enhance competence is essential. This study enhances the literature in a number of notable ways including examining multiple forms of violence exposure simultaneously, investigating both positive and negative developmental outcomes, and specifying particular dimensions of school climate that
may be especially effective at facilitating resilience in violence-affected youth. This study was also conducted in an understudied context, and has direct implications for Colombia as the country enters a post-conflict period and seeks solutions for socializing peace particularly amongst youth. However, despite the focus within the Colombian context, I believe that the results of the current study can inform school-climate based interventions in a variety of contexts, particularly those where youth and adolescents are simultaneously exposed to both political and community violence.

**Study 2: A Person-Centered Approach to Understanding Teacher’s Culturally Responsive Teaching Practices**

Pervasive and persistent ethnic and racial disparities exist in education in the United States, whereby African American, American Indian, Latino, and Southeast Asian students underperform academically relative to Whites and other Asian American groups (Aud et al., 2010; KewalRamani, 2007). These gaps are not only apparent in measures of academic performance and achievement (e.g., test scores, graduation and college matriculation rates), but also in the disproportionate representation of students of color in disciplinary actions. Hispanic and African American students are almost twice and four times as likely, respectively, as White students to be referred to the office in middle school (Skiba et al., 2011). Additionally, 50% of Black students, versus 20% of White students, have been suspended or expelled (Skiba, Michael, Nardo, & Peterson, 2002; Wallace, Goodkind, Wallace, & Bachman, 2008). Finding ways to improve the academic performance of students of color and reduce their over-representation in disciplinary actions has been an important, but elusive, goal for researchers, educators, administrators, and policy makers.
Culturally responsive education, a pedagogical approach that uses cultural referents and frames of reference to empower diverse students and make learning more relevant and effective for them (Gay, 2010; Ladson-Billings, 2000), has been discussed as a promising direction for improving the quality of education, and consequently, educational outcomes, for students of color. Culturally responsive teaching practices are meant to move beyond a deficit perspective, whereby the blame for lower performance amongst students of color is placed on the students or their families, and instead examine teacher practices or school structures and systems that may be biased towards the needs and expectations of the cultural majority (García & Guerra, 2004; Paris, 2012). Additionally, these practices directly contrast colorblind approaches, whereby teachers do not see race as an issue in education and assume that all students equally benefit from the same teaching practices (Apfelbaum, Pauker, Sommers, & Ambady, 2010). Culturally responsive teaching practices intentionally reduce misalignment between students’ home and school cultures by utilizing students’ cultural backgrounds as a resource within the classroom (Gay, 2010; Ladson-Billings, 1995). Culturally responsive teaching practices also require a critique of teachers’ racial biases, the attitudes or stereotypes that teachers may hold regarding certain groups of students. These biases may translate into expectations that students of color will perform worse academically and demonstrate more disruptive behaviors, despite actual performance or behavior, respectively (Gilliam, Maupin, Reyes, Accavitti, & Shic, 2016; McKown & Weinstein, 2008).

Despite the recognition of the importance of teachers’ culturally responsive teaching practices, the conceptualization of these practices has not been integrated into broader frameworks regarding what constitutes high quality teaching practices. Instead of
exploring cultural competence as an isolated domain, independent of other indicators of high-quality teaching, the current study uses person-centered approaches to explain variability across teaching practices. I also investigate the associations between profiles of teaching practices and teacher and classroom characteristics and student classroom behaviors. Understanding how cultural responsiveness fits with other teaching practices, and which teachers are likely to fall within each profile, has implications for targeting and tailoring teacher training programs and for integrating cultural competence into the policies and standards that regulate the teaching profession. Currently, interventions intended to improve these practices in in-service teachers is extremely limited (Bottiani, Larson, Debnam, Bischoff, & Bradshaw, 2017; Brown, 2007; Garcia-Barrera, Karr, Trujillo-Orrego, Trujillo-Orrego, & Pineda, 2017; Sleeter, 2001). Additionally, understanding whether certain profiles of teaching practices are related to student classroom behaviors, particularly those profiles that include high levels of cultural competence, can provide evidence of the effectiveness of these practices and insight into how teacher training and professional development interventions might affect classroom behaviors that have implications for improving student learning and reducing disciplinary sanctions.

**Cultural Responsive Teaching Practices**

**Definitions and current research.** Cultural responsive teaching (Au & Kawakami, 1994; Gay, 2010; Ladson-Billings, 1995; Lindsey, Nuri-Robins, & Terrell, 2009; Paris, 2012; Sugai, O’Keeffe, & Fallon, 2012; Weinstein, Tomlinson-Clarke, & Curran, 2004) requires that teachers intentionally facilitate a classroom environment that builds off of the sociocultural and linguistic knowledge and experiences of the students.
within it. Gay (2000) defines culturally responsive teaching as instruction that “uses the cultural knowledge, prior experiences, frames of reference, and performance styles of ethnically diverse students to make learning encounters more relevant to and effective for them [in order to] build bridges of meaningfulness between home and school experiences as well as between academic abstractions and lived sociocultural realities” (pg. 29).

Proponents of culturally responsive practices argue that when academic experiences are grounded in students’ lived experiences, misalignment experienced between norms, values, and customs between a students’ school and home culture is reduced, which is particularly important for students of color. When this misalignment is reduced, academic content becomes more personally meaningful, and therefore, can be learned more easily; this likely facilitates improved academic achievement amongst students of color (Au & Kawakami, 1994; Gay, 2010; Kleinfield, 1975; Ladson-Billings, 1995).

It is widely accepted that culturally responsive teaching practices are important to promote success for students of color, and some scholars have demonstrated how classrooms and schools have been transformed through the intentional facilitation of these practices with important implications for student success (Kraft, 2007; Ladson-Billings, 1994; Lalas, 2007; Moll, Amanti, Neff, & Gonzalez, 1992). Most of this evidence base is built on small-scale action research studies that employ qualitative methodology. For example, Moll and colleagues (1992) facilitated a participatory research project where classroom teachers used qualitative techniques to critically examine the knowledge and skills present in their students’ primarily Mexican and Mexican-American households. Teachers then incorporated the information gained in household observations into their instruction and teaching practices. These lessons integrated a deep
understanding of the students’ home culture into important academic content and even invited parents to participate in the class instruction. As another example, Kraft (2007) observed culturally responsive classrooms, where teachers emphasized assignments that required students to explore their own experiences in their families, neighborhoods, and countries of origins. Studies such as these contribute greatly to our understanding of the pedagogy behind culturally responsive practices; however, this work needs to be complemented by quantitative, outcome-focused research that can help to more systematically establish the effects of these practices on student outcomes.

Similarly, evidence regarding the effectiveness of interventions designed to enhance teachers’ use of culturally responsive teaching practices is limited. Such interventions which intentionally aim to reduce historic disparities have been referred to as equity-explicit programs, which contrast equity-implicit programs that “aim to improve the outcomes of all students including those more vulnerable to negative schooling outcomes” (Gregory et al., 2016, p. 5). Previous research has demonstrated that equity-implicit coaching models, where teachers are trained to respond to individual student needs without drawing attention to culture, race, or bias are effective in reducing racial disparities in classroom disciplinary referrals (Gregory et al., 2016; Gregory, Allen, Mikami, Hafen, & Pianta, 2015); however, research regarding equity-explicit professional development and coaching programs is extremely limited. Many theoretical and pedagogical frameworks have been developed to enhance teachers’ ability to build culturally responsive classroom environments (Brown, 2007), but a review conducted by Bottiani and colleagues (2017) found that only 10 studies, published between 1998 and 2017, have empirically examined the impact of in-service trainings on teachers’ culturally
responsive practices (Bottiani et al., 2017). Eight of the ten were qualitative studies and neither of the two quantitative studies used randomization or otherwise adjusted for systematic bias between the intervention and control groups (Bottiani et al., 2017). Additionally, many of the interventions focused on changing knowledge and beliefs as opposed to intervening on teachers’ skills or practices themselves (Bottiani et al., 2017).

Measurement challenges. A major challenge in establishing an evidence base regarding the importance culturally responsive practices for student outcomes, and delineating the best ways to improve these practices, lies in measurement. Throughout the field, there exists a lack of consensus and clarity regarding the operationalization and measurement of cultural responsive teaching practices. Most studies examining culturally responsive teaching practices rely on self-reports, which are wrought with issues of social desirability. Teachers are likely to report practices that they believe they should be implementing, whether or not they actually implement them, particularly with regard to sensitive topics such as cultural responsiveness and bias (Constatine & Ladany, 2000; Granello & Wheaton, 1998; Katz & Hoyt, 2014; Liu, Sheu, & Williams, 2004; Ohm & Rosen, 2011; Sodowsky, Kuo-Jackson, Richardson, & Corey, 1998).

In comparison to self-reports, observational measures of culturally responsive teaching practices have received relatively limited attention and use in the field (Debnam, Pas, Bottiani, Cash, & Bradshaw, 2015). It is difficult to establish, validate, and widely utilize standardized observational instruments of culturally responsive teaching practices, as, by definition, these practices need to be flexible to the local, socio-cultural context of the school and its students; however, the objective nature of observational measures is a considerable strength.
Observational measures can be leveraged to understand the implications of culturally responsive teaching practices on student outcomes, assess the effectiveness of cultural competence interventions on teacher behaviors, and provide feedback for teachers on their implementation of these practices (Debnam et al., 2015). Therefore, more work is needed to understand culturally responsive teaching practices utilizing observational measures, to better inform implementation and evaluation of these practices in relation to student outcomes, with the goal of designing and tailoring professional development programs for teachers.

Profiles of Teaching Practices

When studying teacher’s implementation of culturally responsive teaching practices, it is important to consider them in the context of other teaching practices. Although teaching practices can encapsulate pedagogical and curricular practices, the current study focuses on classroom management techniques. Classroom management practices capture the variety of strategies teachers use on daily basis not to teach content, but instead to build a positive classroom environment that is structured, engaging, and productive and encourages student learning and growth (Pas, Cash, O’Brennan, Debnam, & Bradshaw, 2015). Promotive classroom management techniques include establishing clear expectations with consistent and fair consequences for behavioral infractions, utilizing effective praise for positive behavior, providing opportunities for student engagement and discussion, and ensuring student understanding (Armendariz & Umbreit, 1999; Colvin, Flannery, Sugai, & Monegan, 2009; Evertson, 1985; Evertson & Emmer, 1982; Ialongo, Poduska, Werthamer, & Kellam, 2001; Moore Partin, Robertson, Maggin, Oliver, & Wehby, 2010). Because teachers do not use these practices in isolation, it is
important that researchers do not study them in isolation, and instead consider the constellation of strategies that are being employed. Person-centered approaches (i.e., latent profile/class analyses) are particularly informative statistical techniques for identifying groupings of teachers that vary on multiple dimensions of instruction, which can then facilitate the “development of interventions that are both targeted at the needs of individual teachers and coordinated across multiple domains of practice” (Halpin & Kieffer, 2015, pg. 269).

Of particular interest to the current study is understanding how cultural competence fits with other dimensions of high-quality classroom management techniques. Researchers have conceptualized various constructs that represent high-quality classroom management practices, including autonomy support, monitoring, responsiveness, and have demonstrated that these practices tend to operate together (Anderman, Andrzejewski, & Allen, 2011). However, minimal research has explored these constructs in relation to cultural responsiveness (Pas et al., 2015; Sugai & Horner, 2002). One study in early childhood found that the emotional climate of a classroom (i.e., positive student-teacher relationships, teacher sensitivity, regard for student perspectives), but not the instructional climate (i.e., concept development, quality of feedback, language modeling) was predictive of teachers’ acceptance of diversity in the classroom (Sanders & Downer, 2012). Diversity acceptance was defined as having classroom materials that reflected racial and cultural diversity in non-stereotypic ways and whether teachers actively counteracted incidences of discrimination that occurred amongst students (Sanders & Downer, 2012). Another study found that whereas established measures of high-quality classroom management practices, including teacher
anticipation, monitoring, control, proactive behavior management, and meaningful participation between students and teachers, were all related to one another, only meaningful participation was associated with culturally responsive behavioral management strategies (Debnam et al., 2015). Culturally responsive teachers may be more likely to actively engage students in classroom processes by encouraging them to share their perspectives (Kraft, 2007), which is reflected in the meaningful participation construct. Despite the differences in population and methodology, both of these studies suggest that teachers who are sensitive to students’ perspectives may also engage in more culturally responsive teaching practices.

Student-teacher meaningful participation and cultural responsiveness may reflect a distinct domain of classroom management techniques that require teachers to take the perspectives, backgrounds, skills, and identities of their students into consideration, in contrast to more traditional teacher-directed control and management strategies. Hickey & Schafer (2011) refer to such strategies as sociocultural participation-centered classroom management techniques, and discuss the importance of incorporating students’ backgrounds and perspectives into classroom management in order enhance collective participation and build an authentic learning environment for students. It is likely that teacher-directed and participation-centered techniques complement one another, but it could be the case that some teachers who demonstrate quality in teacher-directed techniques do not incorporate participation-centered techniques, and visa versa.

Relations with Teacher and Classroom Characteristics

Teacher and classroom characteristics may play a role in the likelihood that a teacher falls within a particular grouping. Although there is no evidence that teachers’
race would determine whether their level of quality on more traditional classroom management techniques (e.g., control, monitoring), race is very likely related to whether a teacher ascribes to the principles of culturally responsive practices. Research has demonstrated that White teachers, who have likely not received the same level of socialization regarding the implications of race and racial biases in society as teachers of color (Saffold & Longwell-Grice, 2008; Sleeter, 2001), may be more likely to adopt a colorblind or deficit framework in their classrooms (García & Guerra, 2004). Although teachers of color are not necessarily more likely to receive pedagogical training regarding culturally responsive teaching practices (Sleeter, 2001), they are more likely to have deeper understandings regarding biases in education and have higher expectations of students of color (Villegas & Irvine, 2010). Teachers of color, who may have also experienced inequality or barriers in their own schooling, are more likely to be able to understand students’ linguistic and cultural codes as well as the challenges and resources that students face (Nieto, 1999). Teachers of color may also be better able to serve as an advocate for students of color and as a cultural broker as they navigate a potentially unfamiliar and novel education system (Villegas & Irvine, 2010).

In addition to teachers’ own race, the racial breakdown of students within the classroom likely plays a role in determining a profile of teaching practices. Schools and classrooms with high proportions of students of color are more likely to have inexperienced and lower quality teachers (Peske & Haycock, 2006). In addition, punitive and authoritarian behavior management techniques, which are widely considered to be ineffective means to establish safe and productive learning environments (American Psychological Association Zero Tolerance Task Force, 2008), are more often employed
in schools and classrooms with more racial and ethnic minority students. Students of color, particularly African American boys, are also more often targeted for needing disciplinary attention, even for behaviors employed by their White counterparts with no consequence (Weinstein et al., 2004). This research suggests that lower quality teachers might be clustered within classrooms with higher numbers of non-White students. On the other hand, researchers have also described many examples of high quality, culturally responsive teaching practices that take place in diverse classrooms with more students of color (Ladson-Billings, 1994; P. Reyes, Scribner, & Paredes Scribner, 1999; Weinstein et al., 2004). In these classrooms, teachers respond directly to the needs of their students by incorporating their socio-cultural backgrounds into instruction. Because of the increased saliency of culture, race, and ethnicity in classrooms with lower numbers of White students, groups of teachers who demonstrate higher cultural competence are likely to be concentrated in these classrooms.

Finally, years of teaching experience has often been linked to teaching quality, and is often considered a proxy for quality, and therefore warrants inclusion in the current analyses. Teachers with more years of experience tend to engage in higher quality teaching practices (Harris & Sass, 2011; Wenglinsky, 2000); however, to my knowledge, no research has systematically examined whether years of teaching experience is related to the use and quality of culturally-responsive practices in classrooms.

**Relations of Teaching Profiles with Student Behaviors**

Considering the disproportional representation of students of color in disciplinary sanctions, it is important to understand whether classroom management strategies, including culturally responsive practices, have implications for negative student
classroom behaviors. Behaviors such as non-compliance and physical aggression are common reasons for office referrals and other disciplinary sanctions, so exploring teaching practices that may reduce these behaviors could have implications for disproportionality.

Researchers have identified various high-quality teaching and classroom management practices that are associated with positive student behaviors, including establishing structure, actively engaging students in instruction, establishing and reinforcing consistent expectations, and utilizing a range of strategies to both increase appropriate behavior and decrease inappropriate behavior that vary based on the complexity and severity of the behavior (Rusby, Crowley, Sprague, & Biglan, 2011; Simonsen, Fairbanks, Briesch, Myers, & Sugai, 2008). However, in this literature, there is a noticeable lack of empirical studies that systematically examine the relations between culturally responsive teaching practices and student behaviors in the classroom (Vincent, Randall, Cartledge, Tobin, & Swain-Bradway, 2011). It is essential to address this gap because research has demonstrated that racial disparities in disciplinary practices and outcomes still remain in schools characterized by high quality teaching practices and classroom management techniques (Bradshaw, Mitchell, O’Brennan, & Leaf, 2010; Vincent et al., 2011). This indicates that there are likely additional teaching practices, specifically those that are responsive to students’ socio-cultural backgrounds, that are associated with lower negative student behaviors in the classroom. Research is needed not only to establish a novel association between culturally responsive teaching practices and students’ behaviors in the classroom, but also to begin disentangling the effects of these practices from those of more established indicators of high quality teaching. For
example, it is important to examine whether student behaviors differ in classrooms where teachers display similar levels of more traditional classroom management techniques, but vary in their delivery of cultural responsiveness.

**Present Study**

The aims of the current study were to 1) identify profiles of teachers, based on their implementation of high quality classroom management practices, including cultural competence, 2) determine whether these profiles are associated with teacher (i.e., race, years of experience) and classroom characteristics (i.e., proportion of White students), and 3) test whether the profiles are associated with student classroom behaviors. Specifically, I used a person-centered approach exploring six observed classroom management techniques. Considering the limited knowledge regarding the relations amongst teaching practices, particularly regarding cultural competence, this analysis was primarily exploratory. However, I expected that teachers who demonstrate higher levels of meaningful participation might also exhibit higher levels of culturally responsive practices (Debnam et al., 2015; Hickey & Schafer, 2011).

Identifying profiles of teachers can assist teacher training and professional development programs to target the types of teachers who are in need of training and address the specific skill(s) they need most. For example, if there are teachers who demonstrate more traditional indicators of quality, but are not culturally competent, it would be important to identify these teachers for professional development opportunities that specifically target skills regarding culturally responsive practice. However, if cultural competence is associated with other indicators of teaching quality, in that teachers who demonstrate competence on more traditional dimensions of quality (e.g., engagement,
control) also are more culturally competent, it would follow that identifying low-quality teachers and providing professional development to address a variety of classroom management skills would enhance not only their general teaching quality, but their cultural competence as well.

Within my second research aim, I expected that teachers’ race and classroom racial composition will be associated with the various teacher profiles. It was expected that White teachers would be more likely to fall in profiles with lower levels of cultural competence, regardless of the quality of other indicators of teaching quality. The opposite is expected for teachers of color; I expected these teachers to demonstrate higher levels of cultural competence, regardless of their levels of teaching quality on other indicators. I expected that teachers in classrooms with more White students would demonstrate higher levels of traditional indicators of teaching quality coupled with lower cultural competence, whereas teachers in classrooms with fewer White students would demonstrate lower levels of traditional indicators of quality but higher cultural competence. Additionally, I expected that teachers with more experience would engage in higher levels of teaching quality across all six domains. Finally, with regard to my third research aim, I expected that students in classrooms with high quality teachers would demonstrate fewer negative behaviors, and this would be especially strong for classrooms where teachers engaged in culturally competent practices in addition to demonstrating high quality on other indicators.

These aims were tested using a sample of ethnically and racially diverse middle school teachers. Together, these aims provide a comprehensive and novel examination
into teachers’ culturally responsive teaching practice in relation to other teaching practices, teacher and classroom characteristics, and student behaviors.

**Method**

**Participants**

Data came from 103 teachers at nine middle schools in one school district in Maryland (see Table 2 for demographic information). Teachers were part of a larger study, examining the impact of a cultural proficiency professional development intervention, Double Check, on student engagement. The goal of the intervention is to reduce disproportionality of students of color in special education and disciplinary actions. The current study uses data from the baseline assessments before teachers were assigned to control or treatment groups.

Representatives from the school district, who had previously worked with the research team, approached the primary investigator about developing the project and participating in the intervention. School district representatives contacted schools to discuss the project, and principals indicated whether they would be interested in participating. Interested schools indicated their willingness to participate in writing, with acknowledgement of the project details, including study design and data collection procedures. Interested teachers within those schools completed a consent form.

**Procedure**

The current study utilized teacher self-report and classroom observation data. Teachers were asked about their teaching experiences (i.e., years of experience) and personal characteristics (i.e., race) through a confidential online questionnaire.
Classroom observations were conducted using both global ratings and event-based tallies from the Assessing School Settings: Interactions of Students and Teachers (ASSIST; Rusby et al., 2011; Rusby, Taylor, & Milchak, 2001) observational measure. Teachers were observed three times. At each observation, trained researchers tallied teacher and student behaviors for 15-minutes, and after completion of the tally period, they completed the global ratings of the classroom environment. Prior to data collection, all data collectors were trained using a coding manual, videos and vignettes, and at least three practice observations in a school with an expert coder. Inter-observer agreement was calculated by dividing the total number of agreements and disagreements by the total number of agreements and multiplying by 100%. Observers were expected to achieve an 80% inter-observer agreement across three practice observations; if this reliability level was not reached, additional observations were completed. Re-calibration was completed two weeks after data collection had begun, by sending observers three 15-minute videos to code as if they were live observations. Observers were expected to match 80% of their codes with the master coder; if not, they were required to complete additional in-person observations with an expert coder. Recent reliability analyses of the ASSIST suggest high reliability among observers, as a very low proportion of the variance (<1%) in the classroom codes was attributable to the independent raters (Abry, Cash, & Bradshaw, 2014).

**Measures**

**Teacher practices.** Teacher practices were captured using global ratings of the ASSIST observational measure (Rusby et al., 2011, 2001). The global rating items were scored on a 5-point Likert-type scale, from 0 (never) to 4 (almost continuously/often
occurred). The global ratings measured the following six dimensions of teaching practices: teacher control of the classroom (five items, \( \alpha = .89 \), e.g., “There is evidence of classroom routines – students know what they’re supposed to be doing”), teacher anticipation and responsiveness (six items, \( \alpha = .89 \), e.g., “Teacher is responsive to students’ behavioral and/or academic needs.”), teacher monitoring (four items, \( \alpha = .94 \), e.g., “Teacher scans the room and is aware of what is occurring.”), teacher proactive behavior management (four items, \( \alpha = .80 \), e.g., “Teacher is consistent, even-handed, and firm when necessary”), teacher and student meaningful participation (nine items, \( \alpha = .88 \), e.g., “Teacher encourages students to share their ideas and opinions.”), and cultural responsiveness (seven items, \( \alpha = .79 \), e.g., “Teacher integrates cultural artifacts reflective of students’ interests into learning activities). The cultural responsiveness dimension was developed specifically for use with the Double Check intervention and was not part of the original ASSIST measure. This scale was developed following a literature review of culturally responsive best practices conducted by the study team (Bottiani et al., 2017). It was then reviewed for content validity by an expert cultural advisory panel comprised of nationally recognized researchers, local teachers, administrators, and school personnel, and other community stakeholders such as parents and activists.

Ratings on each item were averaged over the three observation time points, and then the ratings for each item within a subscale were averaged to create a single score for each dimension of teacher practices. Intraclass correlations on the six dimensions across the three observations ranged from .72 to .81, indicating relatively little variability across the timepoints (Cicchetti, 1994). Higher scores reflected higher levels of each practice.
Research has demonstrated that controlling for social desirability, teachers’ self-reports of their culturally-responsive teaching self-efficacy is related to their scores on this observational measure (Debnam et al., 2015). Additionally, changes in teachers’ scores on this measure were observed after participation in a cultural responsiveness intervention program (Bradshaw, Pas, Debnam, Bottiani, & Rosenberg, 2018). Observations of teacher practices on the ASSIST have also been related to higher levels of positive and lower levels of negative student behaviors (Pas et al., 2015; Rusby et al., 2011).

**Student behaviors.** Student behaviors were captured using event-based tallies of the ASSIST observational measure (Rusby et al., 2011, 2001). The target behaviors included non-compliance, disruptions, verbal aggression, physical aggression, and profanity. In each 15-minute observation, a data collector counted the number of times each behavior occurred. Each incidence could only count for one behavior’s tally (e.g., profanity OR verbal aggression). The tallies for each behavior were averaged over the three observation time points to create a single score for each behavior. Higher scores reflected more incidences of each behavior. Previous work measuring negative student behaviors using the ASSIST have found associations between profiles of classroom behavior (non-compliant, consistently meets expectations, inconsistently meets expectations) and classroom management techniques (Pas et al., 2015).

**Classroom characteristics.** Observers also recorded classroom characteristics, including the number of students and racial composition of the classroom racial (i.e., number of White students). The percentage of White students in the classroom was created by dividing the number of White students in the classroom by the number of total
students in the classroom at each time point and then average the percentages over the three time points. The between school intra-class correlation for percentage White was .33, indicating that a considerable amount of variability in classroom composition occurred at the school level. Additionally, the average percentage of White students for classrooms within a school generally reflected school-level demographic data according to public, administrative records.

**Teacher characteristics.** Teachers reported on their race and years of teaching experience.

**Analytic Plan**

The first aim of this study was to evaluate patterns of teaching practices, with the specific goal of understanding how cultural responsiveness fits amongst other indicators of high quality processes. To explore these patterns, I used latent profile analysis to identify the optimal number of teaching practices profiles using Mplus 8.1.5 (Muthén & Muthén, 2017). For each model, 500 random sets of starting values, 50 final stage optimizations, and 50 iterations in the initial stage were used to avoid convergence on a local maximum. In order to account for the non-independence of the data (i.e., teachers nested within schools), I controlled for school membership, by including eight ($j - 1$) dummy-coded variables representing each school as covariates. This was necessary as the proportion of variance explained at the school-level for the six classroom management techniques ranged from 5.9% (cultural responsiveness) to 27.5% (anticipated responsiveness). Including cluster membership in the model as fixed effects has been demonstrated to outperform Bayesian and other multilevel modeling techniques when
modeling clustered data with very few clusters (i.e., under 20; McNeish & Stapleton, 2016).

I compared several models with varying numbers of latent profiles by evaluating statistical measures of model fit and theoretical interpretability. I began with a one profile solution and continued to increase the number of profiles until a reliable solution was identified (Pastor, Barron, Miller, & Davis, 2007). In order to enumerate the appropriate number of latent profiles, I compared various fit indices in conjunction with one another. I evaluated models according to the Bayesian Information Criterion (BIC; Schwarz, 1978) and sample-size adjusted BIC, Akaike Information Criteria (AIC), the Vuong-Lo-Mendell-Rubin and Lo-Mendell-Rubin Likelihood Ratio Test (VLMR-LRT, LMR-LRT; Lo, Mendell, & Rubin, 2001), and Bootstrap LRT (BLRT; McLachlan & Peel, 2000). The AIC and BIC considers model fit, sample size, and number of model parameters, and the model with the lowest AIC and BIC is considered to have the most optimal fit. The VLMR-LRT, LMR-LRT, and BRLT allow for nested model comparison utilizing chi-square difference testing, with a significant p-value suggesting that a given solution has significantly better fit than the solution with one fewer profiles (Nylund, Asparouhov, & Muthén, 2007). For example, if a 3-profile solution is statistically significant (p < .05), this solution demonstrates relatively better fit compared to the 2-profile solution. It is possible that the various fit indices conflict and suggest different model solutions during the model comparisons; therefore, it is important to also consider the theoretical and conceptual rationale for each solution, in addition to fit statistics, with preference for the most parsimonious, conceptually sound model solution (Asparouhov & Muthén, 2014; Nylund et al., 2007). Entropy scores, which range between 0 and 1, are also reported,
describing the extent of the separation between profiles, with higher values suggesting better separation (Ramaswamy, Desarbo, Reibstein, & Robinson, 1993). When entropy is higher, one can be more certain that an individual belongs in their most likely profile.

The second aim of the study was to understand whether teacher and classroom characteristics (i.e., teacher race, teacher years of experience, classroom racial composition) are associated with group membership. I utilized the 3-step method for predictors of latent profile variables (R3STEP; Asparouhov & Muthén, 2013; Vermunt, 2010). After the estimation of the latent profiles (Step 1), a most likely profile variable is created, a nominal variable that represents which of the profiles to which an individual has the highest probability of belonging (Step 2). This is determined using the posterior distribution obtained during the estimation of the LPA. Step 3 then utilizes multinomial regression to explore which teacher and classroom characteristics are significant predictors of latent profile measurement. The R3STEP method has many advantages over other methods of assigning individuals to their most likely group and conducting standard multinomial logistic regression, as it is able to account for measurement error in the most likely profile variable. Unfortunately, R3STEP is limited in its ability to handle missing data, resulting in list-wise deletion of any cases with missing data. In the case of this study, 19 teachers (18.4%) were missing self-report data regarding their race and years of experience.

The third aim of the study was to understand whether latent profile membership is associated with student behaviors. Specifically, I examined whether negative student behaviors differed according to teachers’ probabilities of membership in each teaching practices profile. According to (Asparouhov & Muthén, 2014), the BCH approach (Bakk
& Vermunt, 2016) is preferred when predicting continuous distal outcomes from latent profiles. This method uses a weighted multiple group analysis, where weights reflect measurement error of the latent profiles variable (Asparouhov & Muthén, 2014). After conducting the LPA, the second step of the BCH method is to determine the measurement error for the most likely profile variable (Asparouhov & Muthén, 2014). The third step is to estimate the LPA using the most likely profile variable, fixing the measurement error of the most likely profile to the values computed in the second step. The BCH method will test whether there are mean differences across the latent profiles for each outcome, including observed instances of student non-compliance, disruptions, verbal aggression, physical aggression, and profanity.

Results

Descriptive Statistics and Bivariate Correlations

Descriptive statistics for all study variables are presented in Table 6. With regard to classroom management techniques, teachers generally demonstrated high use of monitoring, attention and responsiveness, control, and proactive behavior management, with no teachers scoring lower than a 1 on these scales, and with means above the midpoint of the scale (M$s = 3.00, 2.55, 3.18, 2.50$, respectively). In contrast, the scores for teacher and student meaningful participation and cultural responsiveness were low, with no teachers scoring above a 3.2 for either variable and with the means below the midpoint of the scale (M$s = 1.80, 1.21$, respectively). Zero-order correlations demonstrated that classroom management techniques were highly correlated with one another (all $r$s $>.5$).
Although teacher race was not correlated with any of the study variables, teacher years of experience was weak-moderately positively related to all classroom management techniques (all $r_s > .20$). The percentage of white students in the classroom was moderately positively related to attention and responsiveness, control, meaningful participation, and cultural responsiveness ($r_s > .25$). Additionally, all six classroom management techniques were moderately negatively associated with student non-compliance, disruptions, verbal aggression, and physical aggression, with correlations ranging from -.25 to -.67. Only monitoring ($r = -.21$) and meaningful participation ($r = -.21$) were associated with profanity.

**Latent Profiles of Classroom Management Techniques**

A series of models with up to five latent classes was fit using the observed classroom management techniques of monitoring, attention and responsiveness, control, proactive behavior management, teacher and student meaningful participation, and cultural responsiveness in 103 classrooms. The best fit for the latent profile analysis of classroom management techniques included three profiles (see Table 7 for fit statistics and Figure 6 for a graphical representation of the three-profile model). As compared to the 2-profile solution, the 3-profile solution demonstrated a lower AIC, BIC, adjusted BIC, and significantly improved fit according to the LMR, VLMR, and Bootstrapped LRT values. Although the 4-profile solution had lower AIC, BIC, and adjusted BIC values as well as a significant bootstrapped LRT test than the 3-profile solution, it did not demonstrate a significant improvement in fit according to the LMR and VLMR tests. Additionally, the 4-class solution did not enhance theoretical meaning, as it only split the
high-quality profile into high and mid-high profiles. In turn, the more parsimonious 3-profile solution was chosen. Entropy for the three-profile solution was .90.

The three-profile solution indicated high-, medium-, and low-quality teachers (Figure 6). High quality teachers (n = 25, 34%) demonstrated higher use of all six classroom management techniques than other teachers, with medium-quality (n = 39, 37.9%) teachers scoring the next highest on all practices, and low-quality (n = 29, 28.1%) teachers demonstrating the lowest use of all practices. The relative frequency of use of each practice within each profile was generally consistent across each profile. In all profiles, teachers demonstrated the highest levels of monitoring, control, proactive behavior management, and anticipation and responsiveness. In all three classes, meaningful participation was the second-lowest dimension of quality, followed by culturally responsive teaching practices. Examination of the standard errors of the point estimates (i.e., mean +/- 1SE) indicted distinction between the indicators within each profile. The posterior probabilities for the 3-class solution, indicating the likelihood of being correctly classified within each profile, were .97, .96, and .95, for the high, medium, and low profiles, respectively.

**Association of Teacher and Classroom Characteristics and Profiles**

Table 8 presents the results of the multinomial regression that tested the association between teacher and classroom characteristics and the profiles of teacher practices was examined. No significant differences were found related to teacher race; Black and other minority teachers were as likely as White teachers to be categorized into high, low, and medium profiles. Teachers with more years of experience were no more or less likely to be in the low or medium profile than the high profile. However, classrooms
with higher proportions of white students were significantly less likely to be in the low and medium profile than the high profile.

Association between Profiles and Student Behaviors

In order to determine whether the means of six student behaviors (noncompliance, disruptions, verbal aggression, physical aggression, profanity) differed across the three latent profiles, an overall chi-square test was conducted to examine latent profile differences for each of the six behaviors, with pairwise chi-square tests following to identify the specific differences among the three profiles (see Table 9). For noncompliance, disruptions, verbal aggression, physical aggression, the chi-square test indicated significant differences across profiles. For each of these variables, students in low-quality classrooms demonstrated more negative behaviors than students in both medium- and high-quality classrooms. In addition, for disruptions, students in medium-quality classrooms demonstrated more of these behaviors than students in the high-quality classrooms. For profanity, the overall chi-square was non-significant.

Discussion

The goals of the present study were to examine profiles of teaching practices to understand how culturally responsive teaching practices operated in relation to other classroom management techniques within an individual teacher. Results revealed three teaching profiles based on observers’ ratings of classroom management techniques: (1) high quality, (2) mid quality, and (3) low quality. These results indicate that although culturally responsive teaching practices were low amongst all teachers, those who demonstrate higher quality in other domains of classroom management also demonstrate the highest levels of cultural responsiveness. In addition, I find that classrooms with a
higher percentage of white students are more likely to be in higher quality classrooms and that students in higher quality classrooms are less likely to demonstrate negative behaviors such as disruptions or physical aggression.

**Profiles of Teacher Practices**

Teachers in high quality classrooms demonstrated higher use of all six classroom management techniques, followed by mid-, and finally low-quality teachers. In general, this indicates that teaching practices tend to cluster together – teachers who are rated as competent at one classroom management technique tend to be rated as competent at others as well, and teachers who do not demonstrate competence are in need of improvement across a variety of practices. Specifically relevant to my research question, these results demonstrate that culturally responsive teaching can be seen as an extension of high quality teaching – teachers who are more likely to demonstrate competence in other domains of classroom management are also more likely to engage in culturally responsive practices. It is likely that teachers who are more culturally responsive are in general more aware of the needs of their students, are better able to establish and maintain order within the classroom, and elicit students’ engagement in classroom activities. Previous qualitative work has demonstrated that utilizing culturally responsive teaching practices may allow teachers to more effectively manage their classrooms. For example, a case study conducted in an urban middle school classroom with a high number of African American students demonstrated how the teacher’s use of cultural humor and culturally congruent demonstrations of affect and emotion was related to her ability to monitor classroom behaviors, establish control, encourage participation, and
generally contribute to a safe and productive learning environment (Monroe & Obidah, 2004).

However, these results also demonstrate that culturally responsive teaching practices, as assessed in this study, are not utilized extensively in middle school classrooms, even in this sample of classrooms with high concentrations of Black/African American students and with a majority of Black/African American teachers. In addition, the particular measure of culturally responsive teaching utilized in this study was developed for use within the community context, so the practices evaluated were intended to be especially responsive to the cultural background of urban, Black/African American youth (e.g., using call and response techniques). This was not a general measure of cultural responsiveness that could be applied broadly to various groups of non-White students (e.g., students’ identities are reflected in classroom materials). This makes it particularly surprising that no teachers scored above the scale midpoint and highlights the need for intentional and explicit training regarding culturally responsive teaching practices. Considering that the current study was conducted in the context of a randomized control trial of a professional development intervention aiming to enhance the presence of culturally responsive teaching practices, it will be essential to re-examine these research questions after teachers do receive this explicit training and coaching. A latent transition analysis will allow for examinations regarding whether different profile structures emerge with an increased presence of these practices, whether some teachers are particularly receptive to professional development and change their practices according, and whether high use of culturally responsive teaching practices contributes to significant reductions in negative classroom behaviors. Additionally, if changes are
detected in these practices after the intervention, it will contribute to the validation of this measure for these constructs within this population.

It is also important to note that teachers in all profiles also tended to score low in meaningful participation. Although not directly assessed in this study, it is possible that cultural responsiveness is inherently linked with meaningful participation; teachers who are responsive to students’ cultural backgrounds are also likely to better able to encourage their contribution, collaborations, and leadership within the classroom (Bondy, Ross, Gallingane, & Hambacher, 2007). This may be particularly true in the context of the current study, considering that the vast majority of students were non-White.

**Relationship of Teacher and Classroom Characteristics with Profiles**

In classrooms with higher proportions of White students, teachers were more likely to be classified as high-quality. This likely reflects school-level dynamics, as higher-quality teachers tend to be concentrated within schools with more White students (Darling-Hammond, 2004; Peske & Haycock, 2006). Schools with higher percentages of White students tend to have higher levels of financial resources, smaller class sizes, and more comprehensive curricular offerings (Darling-Hammond, 2004), which attract and retain higher-quality teachers (Guarino, Santibanez, Daley, & Brewer, 2004). Considering that the racial composition of students in classrooms as assessed by observers in this study reflected school-level demographics, the distribution of more White students in higher-quality classrooms is likely an artifact of school-level processes related to teacher recruitment and retention.

Unlike classroom composition, teacher characteristics (i.e., race, years of experience) were not related to profile membership. Considering that I identified profiles
according to quality, and did not find that culturally responsive teaching operated independently of other dimensions of high-quality classroom management, it is not surprising that teacher race did not emerge as a significant predictor of profile membership. Whereas I may have expected Black teachers to utilize more culturally responsive practices (Garcia & Guerra, 2004; Nieto, 1999; Saffold & Longwell-Grice, 2008; Sleeter, 2001; Villegas & Irvine, 2010), there is no evidence to suggest that teachers differ systematically according to race on other more traditional indicators of quality.

It was surprising that teacher years of experience did not emerge as a significant predictor of profile membership, particularly considering the structure of the profiles identified in this study. Prior research has demonstrated that teacher years of experience is related to more effective classroom management strategies (Martin, Yin, & Mayall, 2006; Ritter & Hancock, 2007; Unal & Unal, 2012). In fact, teacher years of experience is often used as a proxy for teacher quality, especially in large-scale quantitative studies that examine patterns of student outcomes according to structural characteristics of educational environments (Wenglinsky, 2000). With almost half of the sample reporting 9 or more years of experience, it is possible that I did not capture enough variability in this sample to detect differences according to years of experience. Alternatively, some researchers have argued that there is a curvilinear or asymptotic relation between teaching experience and quality, postulating that more senior teachers may not continue to learn or grow or may tire in their jobs (Darling-Hammond, 2000). Additionally, some researchers have generally criticized the use of years of experience as a measure of quality, arguing that it is teacher’s preparation, continued professional development, and
collaboration with other teachers that contribute to their effectiveness (Darling-Hammond, 2000; Rosenholtz, Bassler, & Hoover-Dempsey, 1986). The current study suggests that years of experience does not necessarily map on to higher levels of quality in classroom management; it may be more meaningful to examine characteristics such as job satisfaction or burnout and opportunities for professional development and continued learning as predictors of quality.

**Mean Differences in Classroom Behaviors across Profiles**

These results also show that students in low-quality classrooms demonstrated significantly more negative classroom behaviors than students in medium- and high-quality classrooms. This finding is consistent with extant prior research that has demonstrated that a variety of classroom management techniques, including active monitoring and supervision, specific praise, establishing clear expectations and delivering clear instructions, actively engaging students in the learning process, are often associated with fewer behavioral problems in the classroom (see Simonsen et al., 2008 for a review). Students in medium-quality classrooms only demonstrated significantly higher levels of disruptions than high-quality classrooms. This may reflect a threshold effect, indicating that a certain level of competence in classroom management may be sufficient to thwart disturbances in the classroom.

**Implications and Significance**

Results from the current study highlight important implications for understanding and improving teachers’ classroom management techniques in the classroom. First, results indicate that there is a subset of teachers who are rated as demonstrating poor classroom management techniques in general; these teachers are in need of
comprehensive training on building a positive classroom environment that is structured, engaging, productive, and encourages student learning and growth. Identifying these teachers is especially important considering that their students demonstrate higher levels of negative classroom behaviors, which can lead to reduced academic learning and discipline referrals (Bradshaw et al., 2010; Skiba, Peterson, & Williams, 1997; Wright & Dusek, 1998). In a review of pre-service teaching training programs, Freeman, Simonsen, Briere, and MacSuga-Gage (2014) found that less than half of the programs utilized materials that contained evidence-based classroom management practices, demonstrating a need for improved training on classroom management (Freeman et al., 2014).

In addition, the very low prevalence of cultural responsiveness and meaningful participation in this study indicates that all teachers are in need of training regarding these practices. These two domains of classroom management reflect sociocultural participation-centered techniques (Hickey & Schafer, 2011), which not only build orderly and productive classrooms, but collaborative and engaging ones as well. However, teachers tend to receive more training in more traditional teacher-directed classroom management techniques, where teachers establish and maintain order through rules, routines, expectations, incentives, and their own perceptions of students’ needs (Freeman et al., 2014), which is reflected in higher scores on classroom control, monitoring, anticipation and responsiveness, and proactive behavior management. In contrast, this study indicates that teachers may need particular training focusing on enhancing joint engagement and participation through incorporating student perspectives and responding to students’ cultural backgrounds.
However, because culturally responsive teaching practices emerged as an extension of classroom management quality, the nature of the profiles identified in this study do not allow us to make any conclusions regarding the influence of culturally responsive teaching practices on student behaviors independently from the importance of general classroom management techniques. It is, therefore, difficult to determine whether culturally responsive teaching practices are particularly effective for reducing student behavior problems, and consequently whether they have any implications for reducing disproportionality, above and beyond other classroom management techniques. As mentioned earlier, it will be important to determine whether these profiles and conclusions change after the intervention program at which point we will likely see teachers who utilize these practices in their classroom with more frequency (at least sometimes, if not a lot of the time or almost continuously). This research will help contribute to our understanding of the relative impact of equity-implicit and equity-explicit interventions (Gregory et al., 2016). Research regarding equity-explicit professional development and coaching programs is so limited (Bottiani et al., 2017), it is impossible to make any conclusions regarding the relative strength of these approaches. The necessity of developing and evaluating equity-explicit interventions with the same degree of rigor that has been applied to other programs that utilize an equity-implicit approach is apparent.

Currently, there exists a stark gap between the extensive theoretical and pedagogical literature describing and promoting culturally responsive teaching practices and the lack of systematic research evaluating the impact of these practices (Young, 2010). Culturally responsive practices are inherently complex and are difficult to
operationalize, categorize, and measure in a systematic manner (K. A. Morrison, Robbins, & Rose, 2008). They are often presented in the literature as case studies, focused on a single teacher or group of teachers who have transformed their teaching practices according to the backgrounds of the students in their classroom; the overwhelming use of this methodology also serves to highlight the infrequency with which these practices are implemented. This study is one of few to systematically capture the use of culturally responsive practices in the classroom through observations, and contributes to a growing body of literature concerned with both examining the complexity of culturally responsive teaching while also integrating these practices into a holistic understanding of effective classroom management and teaching practices.

**Limitations and Future Directions**

Although this study makes important contributions to both the literature on culturally responsive teaching practices and classroom management in general, it is not without limitations. First, the data is cross-sectional, with classroom practices and student behaviors captured simultaneously. It is, therefore, impossible to distinguish between the effects of the teachers’ classroom management profile on student behaviors and the potential impact that student behaviors may be having on teacher practices. It is likely that teachers adapt their classroom management according to the behaviors of their students. The only conclusion that can be reached in the current study is that classrooms with higher quality teachers tend to have, on average, students with higher levels of negative classroom behaviors. A longitudinal analysis and in the context of the intervention can more accurately speak to the causality between teacher practice and
student behavior, and determine whether change in teacher practice contributes to change in student behavior as expected.

Another limitation of the study lies in the inability to link to any other student- or classroom-level data, due to concerns of anonymity. This limitation manifests itself in various ways in the current study. First, I did not have access to student demographic characteristics (e.g., race, SES) or school records of academic achievement (e.g., test scores, grade retention) or disciplinary actions. For example, to understand whether classroom racial composition impacts profiles of teaching practices, I relied on observers’ counts of the number of white students present during the observation time period. This clearly confounds skin color with race and culture, and does not take into consideration students’ own identities. Although research has documented that skin color has significant implications for experiences of discrimination and disparities in academic and financial outcomes regardless of racial or ethnic background (Herring, Keith, & Horton, 2004), this is likely not the most appropriate approach for a study on cultural responsiveness, which attempts to address more implicit aspects of culture. Data regarding student- or classroom-level SES would facilitate analyses that could help disentangle the confounding of race and class that persists in urban, heavily non-White areas within the United States. School records of academic achievement or disciplinary actions would provide a more robust assessment of the student outcomes of interest and would better be able to speak to the implications of classroom management techniques for reducing disproportionality.

Additionally, although the strengths of conducting non-participant classroom observations have been well-documented for their standardization, reliability, and
objectivity (Mashburn, Meyer, Allen, & Pianta, 2014), they are limited in that they only provide a brief snapshot of teaching practices. It is possible that teachers utilized the classroom management strategies to different degrees during unobserved times; however, these concerns are mitigated by the fact that three observations were conducted and the intra-class correlations across the three time periods were high. Similarly, although all observers demonstrated adequate inter-rater reliability, it is possible that there was an element of systematic observer bias, whereby observers were more likely to rate teachers at similar levels across all teaching practices, contributing to the high-medium-low pattern that was identified in this study.

Relatedly, there are also advantages to understanding an individual students’ perceptions of teacher practices, which were not captured in this study. Examining student perceptions presumes that students are actively processing and making meaning from teacher practices and other classroom events, as opposed to being passively and uniformly affected by them (Schunk & Meece, 1992). It is possible that it is students’ perceptions of their teachers’ ability to manage their classroom, and especially to respond to their cultural background (see Howard, 2001), that influences student behavioral outcomes, regardless of whether these practices are being utilized within the classroom as a whole.

An additional challenge relates to the measurement of culturally responsive teaching practices specifically. The measure of cultural responsiveness utilized in this study captured practices believed to be responsive to the particular population of students participating in the research and intervention, namely urban, African-American adolescents. This approach has considerable strengths, as the measure is inherently
relevant to the context in which the study and intervention will take place, which is particularly important for a program aimed to improve culturally responsive practices. It also describes concrete, as opposed to theoretical or hypothetical, practices that teachers should be using, which aids in clarity for both observers who are trying to evaluate the presence of these practices and teachers who are trying to enhance their use of them.

However, there are also significant limitations to this approach. It will be inappropriate to utilize this measure in other cultural contexts, including in both other relatively homogenous groups of students of color (e.g., Latinos, Native Americans) and heterogeneous student populations. The measure will need to be re-conceptualized in order to capture practices that are culturally responsive in other contexts.

In addition, whereas this measure does capture practices that are aligned with the cultural background of urban, Black/African American youth, it does not capture practices that explicitly challenge issues of power and systemic bias and openly confront racial and social injustices. These aspects of culturally responsive teaching are very infrequently applied in both pedagogy and practice (K. A. Morrison et al., 2008; Young, 2010), although they are included as an important component in the seminal writings by Gay (2010) and Ladson-Billings (1995, 2000). The goal of these practices is not exclusively to bridge gaps between the home and school culture for non-White students, but also to directly confront bias, prejudice, and systems of power (Derman-Sparks, 1989; Derman-Sparks & Olsen-Edwards, 2010). It is possible that a measure of these practices may be more generalizable to diverse student populations, including homogenous White classrooms (Derman-Sparks & Ramsey, 2011; Gaias, Shivers, & Dumka, 2017), and may have implications not only for the behavioral and academic
outcomes for non-White students, but also for reducing racial biases and discrimination and improving inter-group relations. Future research should integrate these practices into a more comprehensive examination of culturally responsive practices. Finally, whereas the conceptualization of cultural responsiveness in this study, and many others, has focused on culture as it relates to race and ethnicity, there are other dimensions of culture (e.g., socio-economic status, linguistic background) that also impact students’ experiences in the classroom, and can be more thoroughly integrated into culturally responsive theory and practice in the future.

Conclusion

Within the current literature, effective classroom management practices and culturally responsive teaching practices are often conceptualized and examined independently of one another. This is not reflective of actual teaching practice, where educators integrate a variety of strategies into their work and interactions with students of various backgrounds throughout the day. The implications of this siloed research can contribute to an over- or under-emphasis of the importance of particular aspect of classroom management, which can influence training and professional development of some domains and not others. The current study integrates these two disparate bodies of literature, demonstrating that culturally responsive teaching practices may operate as an extension of otherwise high-quality teaching. Teachers who demonstrate adequate control, monitoring, anticipation of and responsiveness to problems, proactivity, and classroom participation, will also likely be more likely respond to their students’ cultural backgrounds. The results of this study demonstrate that while a subset of teachers is in need of comprehensive training on general classroom management techniques, all
teachers can improve their use of practices related to meaningful participation and cultural responsiveness.

**General Discussion**

Adolescents spend a large portion of their day in their schools and classrooms, interacting with peers and teachers and engaging in curricular and non-curricular activities. The processes that occur within adolescents’ school contexts shape many dimensions of their socio-emotional development, reflected in their behavior, engagement and motivation, and outlook for the future. However, despite the importance of the school context, there remains much that is unknown about the way in which schools can build resilience and respond to the needs and backgrounds of underrepresented and marginalized students. The purpose of this dissertation, therefore, was to explore school and classroom practices that can play a role in supporting students who may not be fully served in the current educational system, with the goal of enhancing educational equity.

Study 1 examined whether three aspects of school climate – safety, connectedness, and services – moderated the relation between armed conflict exposure, community violence victimization, and community violence witnessing on both developmental competence and externalizing behaviors for Colombian adolescents. None of the school climate variables significantly interacted with armed conflict exposure. However, results for community violence exposure reflected an amplified disadvantages model (Gaias, Lindstrom Johnson, et al., 2017), whereby adolescents who both perceived high levels of community violence and low levels of positive school climate also reported higher levels of externalizing behaviors and lower levels of developmental competence.
For adolescents who witnessed violence, building a school community and sense of belonging (i.e., connectedness), eliminating threats and fear of violence and victimization (i.e., safety), and enhancing school support for personal and non-academic problems (i.e., services) may reduce externalizing behaviors. For adolescents who experienced direct victimization from community violence, the latter dimension of school climate – services – is particularly important for enhancing developmental competence. This is one of the first studies to examine specific dimensions of school climate as moderators of exposure to violence, as opposed to a more general amalgamation of climate. This approach better informs the actions that schools can take to promote resiliency for violence-affected youth, both by specifying which components of climate are likely most important to improve and by identifying which adolescents may be most affected by those improvements.

Study 2 focused on culturally responsive teaching practices, which aim to reduce misalignment between students’ home and school environments by integrating students’ cultural backgrounds as referents and resources within the classroom (Gay, 2010; Ladson-Billings, 1995). Although culturally responsive teaching practices are a promising means for reducing disparities in academic and disciplinary outcomes between students of color and their White counterparts, this is one of the first studies to my knowledge that integrates the study of culturally responsive teaching practices with other important dimensions of teaching, and particularly, classroom management. Our results highlight two important conclusions. First, culturally responsive teaching practices can be considered an extension of high quality teaching – teachers who engage in high-quality classroom management techniques are also more likely to demonstrate higher levels of
cultural responsiveness than other teachers. However, second, teachers in general demonstrate very low levels of culturally responsive teaching practices, even in predominantly non-White classrooms, taught primarily by non-White teachers, utilizing a measure of cultural responsiveness developed for the local context. This second conclusion highlights the need for developing and evaluating professional development and training programs that focus on culturally responsive teaching and classroom management techniques.

Together, these results provide important and novel information regarding school and classroom practices that have the potential to respond to the needs and backgrounds of marginalized youth, who may not be supported in current educational systems. This dissertation intentionally and explicitly draws attention to inhibiting processes that adolescents may be experiencing within their communities, schools, and society (e.g., community violence; cultural misalignment; systems of oppression; political conflict) and promotive processes that may be particularly responsive to the unique challenges present in those contexts. However, it is important to note that although we attempted to ground the ecological processes we examined within the adolescents’ sociocultural contexts, we did not examine developmental outcomes that may be particularly important within the contexts of focus. For example, there may be cultural values prevalent in Colombian society (e.g., contributions to family, pride, enthusiasm) that may more accurately reflect developmental competence in that context and may be more affected by school and community conditions that the outcomes utilized in this study. Similarly, for students of color, positive ethnic or racial identity may be an important outcome of high-quality classroom management practices, particularly cultural responsiveness, that likely
facilitates academic self-efficacy and contributes to the reduction in achievement gaps and disproportionality in disciplinary actions. These outcomes may not typically be included in developmental models for White adolescents within the United States, and were not included as outcomes in the current study, but may reflect developmental competencies that may be valued and socialized within the specific contexts of focus. Although there is value in understanding the role of school and classroom practices for developmental outcomes that are frequently used in research, practice, and policy, future research should explore additional outcomes that may be particularly reflective of adaptive or maladaptive development within the sociocultural contexts of focus (Fuller & García Coll, 2010; Garcia Coll et al., 1996).

Despite this limitation, by recognizing that there exist school or classroom practices that may be especially promotive within particular sociocultural contexts, we can better inform both theory and practice than research that does not take into consideration the unique developmental processes that adolescents face within these contexts. This dissertation encourages theorizing regarding the conceptualization of adolescents’ lived experiences within their schools and classrooms. The two studies presented in this dissertation utilize different approaches to operationalizing and measuring the ongoing processes that students are experiencing within their educational settings, with Study 1 capturing students’ own perceptions of their school contexts, and Study 2 observing interactions that are occurring at the classroom level. The strengths and weaknesses of each approach can inform the other, recognizing the value of both understanding phenomenological experiences as the drivers of development as well as the role of classroom practices in establishing engaging and productive learning
environments. These approaches also inform intervention and practice in different ways. Study 1 speaks to the importance of understanding an individual’s lived experience in their community settings in order to identify how their specific experiences within their school context can be enhanced (although significant main effects also emphasize the importance of improving school climate for all students). Study 2, on the other hand, demonstrates the value of improving teacher practices regardless of individual student experiences, indicating both a group of teachers in need of comprehensive classroom management training as well as certain classroom management techniques in which all teachers need additional training. Although neither study was able to capture or speak to both levels of measurement, it is likely a combination of these approaches that will enhance the educational experiences of marginalized students and contribute to educational equity.

It is also important to recognize the interrelated nature of these approaches to conceptualization, measurement, and intervention. School and classroom practices affect students’ phenomenological experiences within them; the aggregation of these phenomenological experiences then have implications for the practices that are implemented on both the school and classroom level. For example, in Study 2, although only classroom-level teacher practices were measured, the quality of these practices establish a classroom environment that facilitates individual students’ interactions and engagement within these environments that drive both academic and socio-emotional development. In contrast, although we only capture individual student experiences in Study 1, these perspectives can inform the ways in which school-level characteristics can be enhanced to promote positive development. At both levels of measurement, grounding
both of these studies within the lived experiences and unique social ecologies of adolescents, and capturing the processes that are occurring within their educational contexts, this dissertation provides important recommendations for schools to enhance practices that can promote development for marginalized youth.
References


Derman-Sparks, L., & Ramsey, P. G. (2011). *What if all the kids are white?: Anti-bias multicultural education with young children and families*. Teachers College Press.


101


Kliwer, W., Murrelle, L., Mejia, R., Torres de G., Y., & Angold, A. (2001). Exposure to violence against a family member and internalizing symptoms in Colombian adolescents:


Table 1.

**Student Demographics**

<table>
<thead>
<tr>
<th>Student Characteristics</th>
<th>N(%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Female</td>
<td>972(52.3%)</td>
</tr>
<tr>
<td>Grade</td>
<td></td>
</tr>
<tr>
<td>Sixth</td>
<td>297(16%)</td>
</tr>
<tr>
<td>Seventh</td>
<td>284(15.3%)</td>
</tr>
<tr>
<td>Eighth</td>
<td>308(16.6%)</td>
</tr>
<tr>
<td>Ninth</td>
<td>354(19.1%)</td>
</tr>
<tr>
<td>Tenth</td>
<td>317(17.1%)</td>
</tr>
<tr>
<td>Eleventh</td>
<td>297(16%)</td>
</tr>
<tr>
<td>Parental Educational Status</td>
<td></td>
</tr>
<tr>
<td>Did not finish primary</td>
<td>Mother: 177(9.5%)</td>
</tr>
<tr>
<td></td>
<td>Father: 186(10%)</td>
</tr>
<tr>
<td>Did not finish high school</td>
<td>Mother: 310(16.7%)</td>
</tr>
<tr>
<td></td>
<td>Father: 239(12.9%)</td>
</tr>
<tr>
<td>High school</td>
<td>Mother: 581(31.3%)</td>
</tr>
<tr>
<td></td>
<td>Father: 507(27.3%)</td>
</tr>
<tr>
<td>Technical school</td>
<td>Mother: 119(6.4%)</td>
</tr>
<tr>
<td></td>
<td>Father: 103(5.6%)</td>
</tr>
<tr>
<td>Undergraduate degree</td>
<td>Mother: 113(6.1%)</td>
</tr>
<tr>
<td></td>
<td>Father: 90(4.8%)</td>
</tr>
<tr>
<td>Post-secondary education</td>
<td>Mother: 150(8.1%)</td>
</tr>
<tr>
<td></td>
<td>Father: 154(8.3%)</td>
</tr>
<tr>
<td>Unsure</td>
<td>Mother: 407(21.9%)</td>
</tr>
<tr>
<td></td>
<td>Father: 578(31.1%)</td>
</tr>
</tbody>
</table>
Table 2.
Descriptive statistics and zero-order correlations amongst study variables.

<table>
<thead>
<tr>
<th></th>
<th>1.</th>
<th>2.</th>
<th>3.</th>
<th>4.</th>
<th>5.</th>
<th>6.</th>
<th>7.</th>
<th>8.</th>
<th>9.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Armed conflict</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Witnessing</td>
<td>.32**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Victim</td>
<td>.29**</td>
<td>.40**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Delinq.</td>
<td>.29**</td>
<td>.49**</td>
<td>.40**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Violent</td>
<td>.27**</td>
<td>.42**</td>
<td>.30**</td>
<td>.55**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Drugs</td>
<td>.23</td>
<td>.46**</td>
<td>.27**</td>
<td>.51**</td>
<td>.47**</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. Ed. Engage</td>
<td>-.03</td>
<td>-.01</td>
<td>.01</td>
<td>-.10**</td>
<td>-.04</td>
<td>-.06**</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. Soc. Comp.</td>
<td>-.11**</td>
<td>-.09**</td>
<td>-.10**</td>
<td>-.18**</td>
<td>-.15**</td>
<td>-.14**</td>
<td>.29**</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9. Goals</td>
<td>-.09**</td>
<td>-.03</td>
<td>-.02</td>
<td>-.05</td>
<td>-.06*</td>
<td>-.03</td>
<td>.36**</td>
<td>.21**</td>
<td></td>
</tr>
<tr>
<td>10. Hope</td>
<td>-.09**</td>
<td>-.06*</td>
<td>-.04</td>
<td>-.08**</td>
<td>-.05*</td>
<td>-.08**</td>
<td>.41**</td>
<td>.23**</td>
<td>.56**</td>
</tr>
<tr>
<td>11. Ed. Asp.</td>
<td>-.08**</td>
<td>-.06*</td>
<td>-.07**</td>
<td>-.05*</td>
<td>-.06*</td>
<td>-.08**</td>
<td>.39**</td>
<td>.21**</td>
<td>.53**</td>
</tr>
<tr>
<td>12. Safety</td>
<td>-.09**</td>
<td>-.10**</td>
<td>-.13**</td>
<td>-.25**</td>
<td>-.10**</td>
<td>-.12**</td>
<td>.33**</td>
<td>.17**</td>
<td>.14**</td>
</tr>
<tr>
<td>13. Connect</td>
<td>-.08**</td>
<td>-.08**</td>
<td>-.14**</td>
<td>-.25**</td>
<td>-.13**</td>
<td>-.13**</td>
<td>.33**</td>
<td>.32**</td>
<td>.20**</td>
</tr>
<tr>
<td>14. Services</td>
<td>-.07**</td>
<td>-.08**</td>
<td>-.06*</td>
<td>-.23**</td>
<td>-.15**</td>
<td>-.14**</td>
<td>.30**</td>
<td>.26**</td>
<td>.20**</td>
</tr>
<tr>
<td>15. Grade</td>
<td>-.07**</td>
<td>-.15**</td>
<td>-.12**</td>
<td>-.24**</td>
<td>.02</td>
<td>.20**</td>
<td>-.02</td>
<td>.07**</td>
<td>.10**</td>
</tr>
<tr>
<td>16. Sex</td>
<td>.04</td>
<td>.12**</td>
<td>.01</td>
<td>.13**</td>
<td>.15**</td>
<td>.09**</td>
<td>-.06*</td>
<td>.05**</td>
<td>-.04</td>
</tr>
<tr>
<td>17. Parent Ed.</td>
<td>-.06*</td>
<td>-.10**</td>
<td>-.07**</td>
<td>-.01</td>
<td>.00</td>
<td>-.02</td>
<td>-.00</td>
<td>.04</td>
<td>.03</td>
</tr>
</tbody>
</table>

N: 1808, 1830, 1838, 1838, 1819, 1827, 1696, 1780, 1644
Mean: .93, 14.89, 2.41, 7.51, .74, 1.40, 3.57, 4.08, 3.83
SD: 1.40, 7.70, 3.07, 6.49, 1.50, 1.97, .54, .78, .43
Min: 0.00, 0.00, 0.00, 0.00, 0.00, 0.00, 1.00, 1.00, 1.00
Max: 5.00, 48.00, 19.00, 42.00, 12.00, 9.00, 4.00, 5.00, 4.00

Table 2 continued.

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Armed conflict</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Witnessing</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Victim</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Delinq.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Violent</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Drugs</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. Ed. Engage</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. Soc. Comp.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9. Goals</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10. Hope</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11. Ed. Asp.</td>
<td>.52**</td>
<td>.01</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12. Safety</td>
<td>.20**</td>
<td>.13**</td>
<td>.01</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>13. Connect</td>
<td>.22**</td>
<td>.22**</td>
<td>.52**</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>14. Services</td>
<td>.22**</td>
<td>.20**</td>
<td>.40**</td>
<td>.57**</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>15. Grade</td>
<td>.04</td>
<td>.09**</td>
<td>-.21**</td>
<td>-.21**</td>
<td>-.18**</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>16. Sex</td>
<td>-.06*</td>
<td>-.07**</td>
<td>.06*</td>
<td>.12**</td>
<td>.05*</td>
<td>-.04</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>17. Parent Ed.</td>
<td>.05</td>
<td>.04</td>
<td>.01</td>
<td>-.02</td>
<td>-.03</td>
<td>.01</td>
<td>.06*</td>
<td>1</td>
</tr>
</tbody>
</table>

| N         | 1630 | 1679 | 1611 | 1772 | 1758 | 1857 | 1847 | 1540 |
| Mean      | 3.60 | 3.70 | 3.25 | 3.07 | 3.12 | 8.54 | .47  | 3.31 |
| SD        | .60  | .54  | .77  | .55  | .69  | 1.68 | .50  | 1.62 |
| Min       | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 6    | 0    | 1.00 |
| Max       | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | 11   | 1    | 7.00 |

Table 1. Results of structural equation model including omnibus interaction test for moderation of exposure to violence variables by school climate.

<table>
<thead>
<tr>
<th></th>
<th>Externalizing Behaviors</th>
<th>Developmental Competence</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B(SE)</td>
<td>Beta</td>
</tr>
<tr>
<td>Armed Conflict</td>
<td>.14(.03)**</td>
<td>.12</td>
</tr>
<tr>
<td>Victimization</td>
<td>.09(.02)**</td>
<td>.18</td>
</tr>
<tr>
<td>Witnessing</td>
<td>.09(.01)**</td>
<td>.47</td>
</tr>
<tr>
<td>School Climate</td>
<td>-.40(.07)**</td>
<td>-.26</td>
</tr>
<tr>
<td>Armed Conflict x School</td>
<td>-.06(.04)</td>
<td>-.05</td>
</tr>
<tr>
<td>Climate</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Victimization x School</td>
<td>-.03(.02)</td>
<td>-.06</td>
</tr>
<tr>
<td>Climate</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Witnessing x School</td>
<td>-.03(.01)*</td>
<td>-.12</td>
</tr>
<tr>
<td>Climate</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Grade</td>
<td>.10(.02)**</td>
<td>.10</td>
</tr>
<tr>
<td>Sex</td>
<td>.42(.07)**</td>
<td>.13</td>
</tr>
<tr>
<td>Parental Education</td>
<td>.05(.02)*</td>
<td>.05</td>
</tr>
</tbody>
</table>

Note. *** p < .001, ** p < .01, * p < .05
Table 2.
*Simple slopes for significant exposure to violence x school climate interactions*

<table>
<thead>
<tr>
<th></th>
<th>Witnessing → Externalizing Behaviors</th>
<th>Victimization → Developmental Competence</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B(SE)</td>
<td>B(SE)</td>
</tr>
<tr>
<td>High Safety</td>
<td>.08(.01)***</td>
<td>--</td>
</tr>
<tr>
<td>Average Safety</td>
<td>.09(.01)***</td>
<td>--</td>
</tr>
<tr>
<td>Low Safety</td>
<td>.10(.01)***</td>
<td>--</td>
</tr>
<tr>
<td>High Connectedness</td>
<td>.08(.01)***</td>
<td>--</td>
</tr>
<tr>
<td>Average Connectedness</td>
<td>.09(.01)***</td>
<td>--</td>
</tr>
<tr>
<td>Low Connectedness</td>
<td>.10(.01)***</td>
<td>--</td>
</tr>
<tr>
<td>High Services</td>
<td>.07(.01)***</td>
<td>.01(.01)</td>
</tr>
<tr>
<td>Average Services</td>
<td>.09(.01)***</td>
<td>-.01(.00)</td>
</tr>
</tbody>
</table>
Table 3.

*Teacher demographics*

<table>
<thead>
<tr>
<th>Teacher Characteristics</th>
<th>N(%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Female</td>
<td>64(62.1%)</td>
</tr>
<tr>
<td>Race/Ethnicity</td>
<td></td>
</tr>
<tr>
<td>Black/African American</td>
<td>47(45.6%)</td>
</tr>
<tr>
<td>White/Caucasian</td>
<td>23(22.3%)</td>
</tr>
<tr>
<td>Asian/Pacific Islander</td>
<td>7(6.8%)</td>
</tr>
<tr>
<td>Other race/ethnicity</td>
<td>7(6.8%)</td>
</tr>
<tr>
<td>Hispanic</td>
<td>0(0%)</td>
</tr>
<tr>
<td>Native American</td>
<td>0(0%)</td>
</tr>
<tr>
<td>Years of Teaching Experience</td>
<td></td>
</tr>
<tr>
<td>1(^{st}) year</td>
<td>6(5.8%)</td>
</tr>
<tr>
<td>1-3 years</td>
<td>14(13.6%)</td>
</tr>
<tr>
<td>4-8 years</td>
<td>17(16.5%)</td>
</tr>
<tr>
<td>9 or more years</td>
<td>47(45.6%)</td>
</tr>
</tbody>
</table>
Table 6.
Descriptive statistics and zero-order correlations amongst study variables

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
</tr>
<tr>
<td>1. Monitoring</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Attention &amp;</td>
<td>1.00</td>
<td></td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Responsiveness.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Control</td>
<td>.76**</td>
<td></td>
<td>.67**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Proactive</td>
<td>.65**</td>
<td>.89**</td>
<td>.67**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Behavior</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Management</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Meaningful</td>
<td>.66**</td>
<td>.74**</td>
<td>.52**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Participation</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Cultural</td>
<td>.54**</td>
<td>.65**</td>
<td>.53**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Responsiveness</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. Teacher race:</td>
<td>.05</td>
<td>.16</td>
<td>.08</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Black</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. Teacher race:</td>
<td>-.06</td>
<td>-.13</td>
<td>-.07</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>White</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9. Teacher race:</td>
<td>.01</td>
<td>-.03</td>
<td>-.03</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10. Teacher years</td>
<td>.23*</td>
<td>.20*</td>
<td>.27*</td>
<td>.26**</td>
<td>.30**</td>
<td>.24*</td>
<td>.03</td>
<td>-.21</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>of experience</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11. Class % White</td>
<td>.07</td>
<td>.24*</td>
<td>.26*</td>
<td>.18</td>
<td>.27*</td>
<td>.22*</td>
<td>-.15</td>
<td>-.07</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12. Non-comply</td>
<td>-.39**</td>
<td>-.41**</td>
<td>-.35**</td>
<td>-.44**</td>
<td>-.42**</td>
<td>-.36**</td>
<td>-.15</td>
<td>.05</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>13. Disruptiveness</td>
<td>-.59**</td>
<td>-.65**</td>
<td>-.58**</td>
<td>-.67**</td>
<td>-.56**</td>
<td>-.46**</td>
<td>-.02</td>
<td>.13</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>14. Verbal</td>
<td>-.35**</td>
<td>-.44**</td>
<td>-.49**</td>
<td>-.44**</td>
<td>-.36**</td>
<td>-.32**</td>
<td>-.14</td>
<td>.06</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Aggression</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>15. Physical</td>
<td>-.25**</td>
<td>-.43**</td>
<td>-.36**</td>
<td>-.37**</td>
<td>-.27**</td>
<td>-.30**</td>
<td>-.14</td>
<td>.06</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Aggression</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>16. Profanity</td>
<td>-.21*</td>
<td>-.17</td>
<td>-.18</td>
<td>-.12</td>
<td>-.21*</td>
<td>-.13</td>
<td>-.15</td>
<td>.17</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>N</td>
<td>103</td>
<td>95</td>
<td>103</td>
<td>103</td>
<td>103</td>
<td>103</td>
<td>84</td>
<td>103</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mean</td>
<td>3.00</td>
<td>2.55</td>
<td>3.18</td>
<td>2.50</td>
<td>1.80</td>
<td>1.21</td>
<td>.56</td>
<td>.37</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SD</td>
<td>.67</td>
<td>.71</td>
<td>.59</td>
<td>.66</td>
<td>.64</td>
<td>.55</td>
<td>.50</td>
<td>.45</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Min</td>
<td>1.42</td>
<td>1.00</td>
<td>1.70</td>
<td>1.17</td>
<td>0.50</td>
<td>.33</td>
<td>.00</td>
<td>.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Max</td>
<td>4.00</td>
<td>4.00</td>
<td>4.00</td>
<td>3.83</td>
<td>3.22</td>
<td>2.57</td>
<td>1.00</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>-------------------------------</td>
<td>----</td>
<td>-----</td>
<td>-----</td>
<td>------</td>
<td>------</td>
<td>------</td>
<td>------</td>
<td>------</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Attention &amp; Responsiveness.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Control</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Proactive Behavior</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Management</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Meaningful Participation</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Cultural Responsiveness</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. Teacher race: Black</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. Teacher race: White</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9. Teacher race: Other</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10. Teacher years of experience</td>
<td>.21</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11. Class % White</td>
<td>.29*</td>
<td>.17</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12. Non-comply</td>
<td>.13</td>
<td>-.07</td>
<td>.02</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>13. Disruptiveness</td>
<td>-.13</td>
<td>-.23*</td>
<td>-.31**</td>
<td>.52**</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>14. Verbal Aggression</td>
<td>.11</td>
<td>-.21*</td>
<td>-.29**</td>
<td>.23**</td>
<td>.56**</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>15. Physical Aggression</td>
<td>.11</td>
<td>-.14</td>
<td>-.11</td>
<td>.26**</td>
<td>.47**</td>
<td>.43**</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>16. Profanity</td>
<td>-.00</td>
<td>-.11</td>
<td>-.08</td>
<td>.12</td>
<td>.29**</td>
<td>.38**</td>
<td>.34**</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>N</th>
<th>Mean</th>
<th>SD</th>
<th>Min</th>
<th>Max</th>
</tr>
</thead>
<tbody>
<tr>
<td>84</td>
<td>3.25</td>
<td>.98</td>
<td>1.00</td>
<td>4.00</td>
</tr>
<tr>
<td>103</td>
<td>2.60</td>
<td>.42</td>
<td>0.00</td>
<td>0.42</td>
</tr>
<tr>
<td>103</td>
<td>20.96</td>
<td>.16</td>
<td>1.33</td>
<td>0.00</td>
</tr>
<tr>
<td>103</td>
<td>1.33</td>
<td>.13</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>103</td>
<td>1.33</td>
<td>.34**</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>103</td>
<td>1.33</td>
<td>1.33</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Note:** The table continues with additional data not shown here.
Table 4.  
*Fit statistics for latent profile analysis of teacher classroom management techniques*

<table>
<thead>
<tr>
<th>Classes</th>
<th>Log likelihood</th>
<th>AIC</th>
<th>BIC (adj. BIC)</th>
<th>LMR (VLMR) p values</th>
<th>Bootstrap LRT p values</th>
<th>Entropy</th>
<th>Class proportions</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>-479.63</td>
<td>987.27</td>
<td>1024.15 (979.93)</td>
<td></td>
<td></td>
<td></td>
<td>53 (51.4%)</td>
</tr>
<tr>
<td>2</td>
<td>-417.06</td>
<td>888.13</td>
<td>959.27 (873.98)</td>
<td>.08 (.08)</td>
<td>&lt;.001</td>
<td>.890</td>
<td>50 (48.6%)</td>
</tr>
<tr>
<td>3</td>
<td>-354.08</td>
<td>776.16</td>
<td>865.74 (758.34)</td>
<td>.01 (.01)</td>
<td>&lt;.001</td>
<td>.903</td>
<td>29 (28.1%)</td>
</tr>
<tr>
<td>4</td>
<td>-332.11</td>
<td>746.23</td>
<td>854.25 (724.74)</td>
<td>.48 (.48)</td>
<td>&lt;.001</td>
<td>.899</td>
<td>40 (38.8%)</td>
</tr>
<tr>
<td>5</td>
<td>-311.01</td>
<td>718.02</td>
<td>844.48 (692.86)</td>
<td>.23 (.24)</td>
<td>&lt;.001</td>
<td>.919</td>
<td>26 (25.2%)</td>
</tr>
<tr>
<td>Characteristic</td>
<td>Medium Estimate (SE)</td>
<td>Low Estimate (SE)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>------------------------</td>
<td>----------------------</td>
<td>-------------------</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Black</td>
<td>-0.35(0.65)</td>
<td>-0.59(0.70)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other Minority</td>
<td>-0.10(0.34)</td>
<td>0.91(1.08)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Years of Experience</td>
<td>-0.20(0.34)</td>
<td>-0.42(0.33)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Class % White</td>
<td>-8.72(4.30)*</td>
<td>-12.81(6.36)*</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note. * indicates significant difference (p < .05) as compared to High class
Table 9.
Mean differences in student behaviors across the latent profiles

<table>
<thead>
<tr>
<th></th>
<th>Overall $\chi^2$, p-value</th>
<th>High&lt;sub&gt;1&lt;/sub&gt; Mean (SE)</th>
<th>Medium&lt;sub&gt;2&lt;/sub&gt; Mean (SE)</th>
<th>Low&lt;sub&gt;3&lt;/sub&gt; Mean (SE)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Noncompliance</td>
<td>17.17, &lt;.001</td>
<td>1.04(.31)&lt;sub&gt;3&lt;/sub&gt;</td>
<td>1.66(.45)&lt;sub&gt;3&lt;/sub&gt;</td>
<td>5.95(1.16)&lt;sub&gt;1,2&lt;/sub&gt;</td>
</tr>
<tr>
<td>Disruptions</td>
<td>66.32, &lt;.001</td>
<td>10.10(1.21)&lt;sub&gt;2,3&lt;/sub&gt;</td>
<td>22.36(2.17)&lt;sub&gt;1,3&lt;/sub&gt;</td>
<td>45.72(4.99)&lt;sub&gt;1,2&lt;/sub&gt;</td>
</tr>
<tr>
<td>Verbal Aggression</td>
<td>29.78, &lt;.001</td>
<td>.13(.05)&lt;sub&gt;3&lt;/sub&gt;</td>
<td>.31(.10)&lt;sub&gt;3&lt;/sub&gt;</td>
<td>1.41(.24)&lt;sub&gt;1,2&lt;/sub&gt;</td>
</tr>
<tr>
<td>Physical Aggression</td>
<td>15.85, &lt;.001</td>
<td>.08(.03)&lt;sub&gt;3&lt;/sub&gt;</td>
<td>.04(.02)&lt;sub&gt;3&lt;/sub&gt;</td>
<td>.44(.10)&lt;sub&gt;1,2&lt;/sub&gt;</td>
</tr>
<tr>
<td>Profanity</td>
<td>5.02, .081</td>
<td>.08(.04)&lt;sub&gt;3&lt;/sub&gt;</td>
<td>.10(.05)</td>
<td>.26(.07)&lt;sub&gt;1&lt;/sub&gt;</td>
</tr>
</tbody>
</table>

Note. Subscripts following a mean score represent a statistically significant difference on chi-square test of independence at the p < .05 level between the column class and the subscript denoted (i.e., 1 = high profile, 2 = medium profile, and 3 = low profile).
Figure 1. Measurement model outlining externalizing behaviors and developmental competence. Unstandardized parameter estimates are presented first, with standard errors in parentheses, and standardized betas following the comma. All paths significant (p < .001).

Ed. Engage = Educational Engagement, Soc Comp = Social Competence, Ed. Exp = Educational Expectations. \( \chi^2(19) = 91.05, p < .001 \), RMSEA = .05 [.04, .06], SRMR = .04, CFI = .97, TLI = .96
Figure 2. Structural equation model examining exposure to violence predicting externalizing behaviors and developmental competence. Unstandardized parameter estimates are presented first, with standard errors in parentheses, and standardized betas following the comma. Solid lines indicate significant paths (** p < .01, * p < .05). Dotted lines indicate marginal paths (+ p < .1). Dashed lines refer to non-significant paths. $\chi^2(88) = 360.39, p < .001$, RMSEA = .041 [.036, .045], SRMR = .029, CFI = .93, TLI = .90.
Figure 3. Structural equation model examining interaction between school safety and exposure to violence according to significant omnibus tests. Unstandardized parameter estimates are presented first, with standard errors in parentheses, and standardized betas following the comma. Solid lines indicate significant paths (*** p < .001, ** p < .01, * p < .05). Dotted lines indicate marginal paths (+ p < .1). Dashed lines refer to non-significant paths. Bolded paths refer to significant or marginal interaction terms. Parent Ed = Parental Level of Education. $\chi^2(124) = 463.11, p < .001$, RMSEA = .038 [.035, .042], SRMR = .035, CFI = .91, TLI = .90
Figure 4. Structural equation model examining interaction between school connectedness and exposure to violence according to significant omnibus tests. Unstandardized parameter estimates are presented first, with standard errors in parentheses, and standardized betas following the comma. Solid lines indicate significant paths (** p < .001, * p < .01, * p < .05). Dotted lines indicate marginal paths (+ p < .1). Dashed lines refer to non-significant paths. Bolded paths refer to significant or marginal interaction terms. $\chi^2(123) = 522.19, p < .001$, RMSEA = .042 [.038, .046], SRMR = .038, CFI = .90, TLI = .89
Figure 5. Structural equation model examining interaction between school services and exposure to violence according to significant omnibus tests. Unstandardized parameter estimates are presented first, with standard errors in parentheses, and standardized betas following the comma. Solid lines indicate significant paths (** p < .01, * p < .05). Dotted lines indicate marginal paths (+ p < .1). Dashed lines refer to non-significant paths. Bolded paths refer to significant or marginal interaction terms. \( \chi^2(124) = 414.08, p < .001 \), RMSEA = .035 [.032, .039], SRMR = .031, CFI = .92, TLI = .91
Figure 6. Latent profiles of teacher classroom management practices. Values on the y-axis represent average scores on the 0-4 point Likert-type observational rating scale for each of the classroom management techniques. Means are presented followed by SE in parentheses.