

CALIFORNIA STATE UNIVERSITY, NORTHRIDGE

THE IMPACT OF RACE/ETHNICITY, NEIGHBORHOOD, AND PARENTAL
INFLUENCES ON YOUTH MENTAL HEALTH STATUS AND SERVICE USE

A thesis submitted in partial fulfillment of the requirements
For the degree of Master of Arts in
Psychology, Clinical Psychology

by

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August 2018

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DEDICATION

This thesis is dedicated to:

I would like to dedicate this thesis to my loving friends and family members, especially my mother and father, Graciela and Alberto Chavez. If it weren't for their love, encouraging words, and prayers, this project would have not been possible. I also dedicate this project to my amazing fiancé, Ruben. Without his love, encouragement, and words of wisdom, this project would have been impossible to complete. Third, I would like to dedicate this project to those in my research lab who have provided nothing short but laughter, love, and support. My research family has instilled so much encouragement throughout this process.

ACKNOWLEDGEMENTS

I would like to sincerely thank my committee members who have committed and supported my efforts in writing this thesis.

First and foremost, to my chair, Dr. Martinez, thank you for all the feedback throughout this thesis process as well as your patience and commitment when working with me. You have instilled a passion in me for research and statistics throughout my time as your mentee. I cannot thank you enough for helping me grow both personally and professionally. You have helped me in numerous ways when it came to this project and throughout my graduate program at California State University, Northridge. I cannot thank you enough for all that you have done.

To Dr. Berzenski, I sincerely thank you for helping me with my statistical models. Learning MPLUS and MPLUS Syntax has been a learning experience for me, however you have made me grasp this new territory quickly. Your guidance has helped me throughout this entire process. Thank you for your patience when working with me. It has been a great pleasure working with you.

To Dr. Banerjee, thank you for providing me with amazing feedback throughout this study. Your feedback has helped me understand and learn new information worth indicating all throughout this project. You have helped me grasp new perspectives which has made this project both informative and interesting. I appreciate all your feedback throughout this process. It has also been a great pleasure working with you.

TABLE OF CONTENTS

Signature Page	ii
Dedication	iii
Acknowledgments	iv
List of Tables	vii
Abstract	viii
CHAPTER I – INTRODUCTION	1
Theoretical Framework: Ecological Systems Theory	1
The Microsystem	2
The Mesosystem	4
The Exosystem and Macrosystem	5
Theoretical Framework: Phenomenological Variant of Ecological Systems Theory	6
CHAPTER II – REVIEW OF LITERATURE	8
The Significance of Context for Youth Development	8
Neighborhood Context	8
Family Context	10
Overview of Youth Mental Health Status	11
Depression	11
Anti-social Behavior	12
Context and Mental Health Status	13
The Influence of Neighborhood Context on Mental Health Status	14
Neighborhood Context, Mental Health & Depression	14
Neighborhood Context, Mental Health & Anti-social Behavior	15
The Impact of Parental Influences on Mental Health Status	17
Parental Influence, Mental Health, & Depression	17
Parental Influence, Mental Health, & Anti-Social Behavior	18
Race/Ethnicity, Mental Health Status & Mental Health Service Use	19
Current Study	22
Purpose	22
Hypotheses	23
CHAPTER III – METHODOLOGY	24
Study Design	24
Measures	25
Data Analytic Strategy	30
CHAPTER IV – RESULTS	32
Data Screening and Descriptives	32
Model Determination	34
Overall Model	34
Multigroup Path Models	38
Perceived Neighborhood Safety and Internalizing/Externalizing Problems	41
Parental Influence and Internalizing/Externalizing Problems	42

Racial/Ethnic Differences Between Internalizing/Externalizing Problems and Service Use	42
Correlation: Neighborhood Safety and Parental Influence	43
CHAPTER V – DISCUSSION	44
REFERENCES	55

LIST OF TABLES

Figure 1: Multigroup structural equation modeling path estimates for perceived neighborhood safety, parental influence, youth mental health status, and service use by race/ethnicity	31
Table 1. Descriptive Statistics	33
Table 2. Measure Descriptives	34
Table 3. Correlation Matrix of Study Variables	34
Table 4. Unstandardized Path Estimates	36
Figure 2: Overall Model: Standardized Path Estimates	36
Figure 3. Multigroup Model Standardized Path Estimates by Race/Ethnicity	41

ABSTRACT

THE IMPACT OF RACE/ETHNICITY, NEIGHBORHOOD AND PARENTAL INFLUENCES ON YOUTH MENTAL HEALTH STATUS AND SERVICE USE

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Neighborhood context and parental influences are two major factors that are known to impact the mental health development of adolescents. Both factors have been extensively studied in either contributing or preventing youth from developing internalizing or externalizing mental health problems, such as depression and antisocial behavior (ASB). Specifically, researchers have investigated how perceived neighborhood safety, family cohesion, parental-engagement, and parent-child communication either serves as a protective factor or a risk factor for mental health problems within adolescents. This is consistent with Bronfenbrenner's Ecological Systems Theory (1977) that highlights the influence of numerous systems in adolescent mental health development, where appropriate levels of parental influences and a safe neighborhood will lead to positive mental health development. Neighborhood context and parental influences falls under the microsystem, which has a direct impact on adolescent mental health development due to these contexts being the 'immediate' social setting in which the adolescent is involved in (Lomas. 2015). Researchers have also documented that when youth develop mental health problems, racial/ethnic disparities exist in whether youth access mental health services to address those problems. Specifically, Latinx and African American youth demonstrate higher levels of unmet mental health need relative to their White counterparts, and these disparities often depend on the type of mental health problems (internalizing vs. externalizing) exhibited in youth. The

current study examined the extent to which perceived neighborhood safety and parental influences were associated with mental health status and whether this led to receipt of mental health services and how that differed by problem type and ethnicity. The study goals were achieved using multigroup structural equation modeling in MPLUS, version 8.0 (Muthén & Muthén, 2017). Results revealed that the path between perceived neighborhood safety and externalizing ASB was significant. However, the path between perceived neighborhood safety and internalizing depressive symptoms was non-significant. The paths between parental influence and internalizing depressive symptoms as well as and externalizing ASB behaviors were also significant. Lastly, the path between internalizing depressive symptoms and mental health service use was significant but did not vary by race/ethnicity strongly based on beta coefficients. Results did illustrate that African American youth were likely to receive services when exhibiting depressive symptoms in comparison to Latinx and White youths. The current study has multiple policy implications; the study suggests that there should be interventions specifically targeted at improving neighborhood contexts and parenting characteristics as they can serve as protective factors against mental health status (Kruger et al., 2007; Yu et al., 2006). Additionally, research shows that there are racial/ethnic disparities in mental health service use; however based on the current study findings, there should also be an increased awareness of how these disparities vary by problem type (Martinez, Gudiño, & Lau, 2013).

CHAPTER I
INTRODUCTION

Theoretical Framework: Ecological Systems Theory

Researchers have attempted to understand the possible factors that impact negative mental health development, specifically adolescent depression and antisocial behavior (ASB). Theorists and researchers within the realm of developmental psychopathology have shared an interest and appreciation for the significant role that extra-individual influences play in the mental health development of adolescents (Cauce et al., 2002). Theories pertaining to the etiology of child and adolescent mental health symptoms progressed from a focus on distinctive characteristics of the individual and later began to emphasize the role of outside contexts, such as the family and one's neighborhood (Coulton et al., 2007). Most social scientists have come to an agreement that every adolescent exists within an intricate, yet complex, set of environmental systems that influence his or her mental wellbeing (Cauce et al., 2002).

A well-regarded theory that attempts to explain the variation in youth mental health development is the Ecological Systems Theory (EST) proposed by Bronfenbrenner (1977). According to this theory, the social environment consists of multiple domains that influence youth mental health development; each domain is defined by how close that domain is to the adolescent (Cauce et al., 2002). For instance, the closest influence to the adolescent is the family which is then followed by contexts such as a youth's school, neighborhood, and community (Cauce et al., 2002). According to Lomas (2015), Bronfenbrenner argued that youths' psychological and physical functioning are intricately tied within four sociocultural domains that increase in level. These systems are known for influencing individual development, such as mental health development; these systems include the microsystem, mesosystem, exosystem and

the macrosystem (Guo, Li, Liu, & Sun, 2015). EST is essentially the reciprocal accommodation between the youths and their ever-changing environments (Bronfenbrenner, 1977). According to Bronfenbrenner (1977), in order for researchers to understand the intricate adolescent development, researchers must go past the direct observation of behavior and examine how one or more influencers, such as one's family and their neighborhoods, affect adolescent mental health development.

The Microsystem

The first 'system' that may significantly impact youth mental health development is known as the microsystem, which will be the main focus of this research study. According to Lomas (2015), the microsystem refers to the 'immediate' social setting of the individual. The microsystem is essentially the various association between the developing individual and an environment within an immediate setting that contains that individual (Bronfenbrenner, 1977). This is the lowest and closest system to the child or developing adolescent and essentially contains the organizations with which the individual has direct and absolute contact with (Ryan, 2001; Neal & Neal, 2013).

There has been extensive research on how the family structure is considered to fit under the microsystem level in which the youth are believed to have an explicit role, specific experiences and social interactions with others (Neal & Neal, 2013; Guo, Li, Liu, & Sun, 2015). The family is one of the immediate domains in which youths engage with in-person and thus have a direct impact on overall youth development (Guo, Li, Liu, & Sun, 2015). Bronfenbrenner (1961) proposed a "Theory of Optimal Levels" in which he indicates that overall positive development in children and youths requires an equilibrium of both parental encouragement and control, essentially a positive family dynamic. According to Bronfenbrenner (1961), if a youth

has too little or too much of these parental characteristics, it may be detrimental for youth mental health development.

Family cohesion, parental engagement, and parent-child communication have been extensively researched as it pertains to either positive or negative mental health development among youths (Griffin et al., 2000; Jacobson & Crockett, 2000; Martinez & Eddy, 2005). Family cohesion is defined as the emotional connectedness, degree of help, support and commitment family members may provide for one another (Harris & Molock, 2000; Olson, Russell, & Sprenkle, 1983). According to Badiee and Andrade (2018), family cohesion fits into the microsystem and is examined as having a direct influence on youth mental health development. Parental engagement and parent-child communication have also been shown to have a direct influence on youth mental health development (Harris & Molock, 2000; Yu et al., 2006). Parental engagement, or parental involvement, is defined as any parental behaviors, attitudes, styles, or activities that take place within or outside school grounds to support a child's academic and or behavioral successes (Young, Austin, & Growe, 2013). Lastly, parent-child communication is defined as the verbal and nonverbal interaction between a child and a parent within a family system (Munz, 2016). Overall, these three factors that make up parental influence has been shown to influence youth mental health status extensively and should therefore be researched more thoroughly.

The neighborhood structure is also considered to fit under the microsystem level (Krishnan, 2010; Cantillon, 2006). Neighborhood context has been extensively researched to explain youth mental health problems; research has confirmed that neighborhood context is often associated with youth mental health status (Hill & Maimon, 2013). The term, neighborhood context, is known for being a packaged variable in that there are numerous factors that lie among

the neighborhood that may facilitate in youth mental health development (Krishnan, 2010). For example, the quality of one's neighborhood, such as perceived safety, accessibility, and cohesion, are known for shaping youth mental health development (Krishnan, 2010).

Neighborhoods are important to study as youths mature and spend less quality time with their families and more time within their neighborhoods (Bronfenbrenner & Morris, 2006; Leventhal et al., 2009). It is because of this reason that the influence of neighborhoods on youth development must be considered within any analysis such as in this project (Urban, Lewin-Bizan, & Lerner, 2009).

The Mesosystem

The second 'system' that may significantly impact youth's mental health development is known as the mesosystem; like the microsystem, the mesosystem is also critical to understand for this research study. According to Bronfenbrenner (1977), the mesosystem is an overall system of smaller microsystems; essentially, microsystems are nested within a mesosystem and consists of the interrelations among major settings which contain the evolving individual within a certain point of his or her life (Neal & Neal, 2013; Bronfenbrenner, 1977). For young adolescents, often the mesosystem consists of relations among the school, family, peer group, church, or camp (Bronfenbrenner, 1977). Overall, the mesosystems allow individuals to move beyond the two-party setting relations and thus pervade the lives of adolescents in every dimension possible (Swick & Williams, 2006).

Often, researchers view the neighborhood setting as either a microsystem or a mesosystem (Bronfenbrenner, 1986). With regards to the neighborhood context, this setting could facilitate the interactions between the adolescent and the family, school, peers and faith settings (Smith, Faulk, & Sizer, 2016; Bronfenbrenner, 1986). According to Voydanoff (2001),

the mesosystem connection between the neighborhood setting and the family setting are strong due to the families and adolescent's being embedded within the social networks of their local communities. Voydanoff (2001) states that the family setting, for instance, parents, can modify how they will monitor and regulate their adolescent's behavior based on how they were influenced by their neighborhood setting. Overall, research has shown that there exists a linkage between an adolescent's family setting and the neighborhood in which they reside. An adolescent's neighborhood becomes a reality for the adolescent and their parents as without this strong linkage families tend to fall into chaos when not aware of how one setting affects the other (L'Abate, 1990; Swick & Williams, 2006).

The Exosystem and Macrosystem.

The exosystem and the macrosystem have also been extensively examined by psychologists for impacting adolescent mental-health development (Bronfenbrenner, 1977). Despite these two systems being equally as critical in adolescent mental health development, they will not be used as the theory foundation for this study but will be briefly explained to fully understand Bronfenbrenner's Ecological System's Theory. First, the exosystem is known as being the third 'system' in which the child is not an active participant in comparison to either the mesosystem and microsystem (Mason, Cheung, Walker, 2004; Ryan, 2001; Bronfenbrenner, 1977; Neal & Neal, 2013). This system embraces social structures that incorporates the immediate settings that the individual is often found in (Bronfenbrenner, 1977). Various settings and structures include the overall world of work, mass media, informal social networks, transportation, and communication facilities (Bronfenbrenner, 1977). Lastly, the macrosystem is the outermost layer of the systems (Ryan, 2001). The macrosystem exists within an intricate and convoluted interactive model that are within the environmental domains that encompasses

ideological beliefs, cultural traits, cultural values, customs, and laws (Mason, Cheung, Walker, 2004; Bronfenbrenner, 1977; Ryan, 2001). These beliefs and cultural traits permeate the culture and the society as whole and are significant to examine as they carry information and beliefs that directly or implicitly bestow motivation and meaning to the society (Bronfenbrenner, 1977). These four systems have been known for being responsible in influencing youth mental health and behavioral development.

Theoretical Framework: Phenomenological Variant of Ecological Systems Theory

Although Bronfenbrenner's EST model is widely used to explain adolescent mental health development that may be dependent on certain types of contexts, the EST does not explain how ethnicity, race, and one's perceptions of experiences may affect adolescent mental health status. According to Spencer, Dupree, and Hartmann (1997), the developers of the Phenomenological Variant of Ecological Systems Theory (PVEST), it is not just the experiences that an adolescent may face that affects their mental health development, it is also the adolescent's perception of their experiences and the interconnection with cultural context that may influence how an adolescent behaves. In other words, how an adolescent perceives their experience or context may influence whether that individual adopts or rejects certain behaviors and/or engages or avoids certain activities (Spencer, Dupree, & Hartmann, 1997).

According to Spencer and colleagues (1997), we should incorporate factors such as race, ethnicity, and culture to explain why some youths who experience similar life events as some youths may exhibit resiliency while others may exhibit psychopathology. PVEST is both an all-inclusive and process-oriented human development theory that considers human diversity when individuals interact with their psychological and physical ecologies that lead to certain development (Spencer, 2006). Overall, this theory 'unpacks' and examines how diverse

individual-context interactions may be the source and/or predictors of either productive or poor coping mechanisms (Spencer, 2006).

Throughout research studies, psychologists have either chosen to ignore the race variable or examined the variable when studying deficits, social problems, pathology, or deviance (Spencer, 2006). PVEST is a unique theory since it allows researchers to appropriately examine the race variable that is both socially constructed and sometimes uncomfortable to analyze (Spencer, 2006). Spencer (2006) also indicates that an advantage of the PVEST model is that it allows researchers to address the ‘net stress’ that some individuals may feel due to *imbalance* between several challenges that they encountered and whether they have available support systems. Characteristics such as race, social class, gender, color, nativity, immigration status, or certain faith group memberships have been analyzed as sources of human *imbalance* that PVEST successfully addresses compared to other developmental theories (Spencer, 2006; Chestang, 1972; Bulhan, 1985; Darity & Myers, 1998).

CHAPTER II

REVIEW OF LITERATURE

The Significance of Context for Youth Development

Researchers have moved beyond studying only individual characteristics to explain youth mental health development (Coulton et al., 2007). Developmental psychologists and other researchers within the field of psychology have come to an agreement that adolescents exist within an intricate set of environmental contexts that may influence his or her mental wellbeing (Cauce et al., 2002). These contexts may range anywhere from faith groups, schools, neighborhoods, to family settings (Smith, Faulk, & Sizer, 2016; Bronfenbrenner, 1986). Although these settings may be of equal influence to adolescent mental health development, this project will focus on the influence of one's neighborhood and family context on youth mental health development.

Neighborhood Context

As Wilson (2009) elegantly stated, an individual's neighborhood is the place in which everyday practices and activities of life occurs. Neighborhoods become significantly meaningful as any individual connects with their environment which is then ingrained to one's existing identity (Wilson, 2009). According to Wilson (2009), neighborhoods create and form small communities; within every community, residents of that neighborhood begin to share the same experiences regardless of whether the neighborhood is an affluent one or a disadvantaged one. Different types of neighborhoods will elicit different residential responses with regards to the suffering or celebration of quality and availability of housing, school districts, job attainment, businesses, health care, and human services (Wilson, 2009). Overall, neighborhoods are known

for creating most of one's life story and can therefore leave a lasting effect on its residents (Wilson, 2009).

Clearly, studying one's neighborhood context is critical for all humans, but one may argue that studying this environmental context is more significant when looking at the adolescent population. According to researchers, examining an adolescent's neighborhoods in relation to their mental health development is important to study as most youths mature and begin to spend less time with their families and more time within their prospective neighborhoods (Bronfenbrenner & Morris, 2006; Leventhal et al., 2009). Although studying the neighborhood context as a whole is critical, researchers have begun to study specific parts of one's neighborhood and its effect on adolescent mental health development. For instance, some researchers have been interested in studying how observable neighborhood features affect mental health while other researchers have been more interested in examining how youth perceives his or her neighborhood and how that effects mental health development (Jones, Heim, Hunter, & Ellaway, 2014; Perkins Meeks, & Taylor, 1992; Wandersman & Nation, 1998; Curtis, Dooley, & Phipps, 2004; Schwab-Strone et al., 1995).

Studying the youth's perceptions of neighborhood context is critical in understanding mental health development. According to researchers, it is important to focus on perceived neighborhood safety during the adolescent period since it is a factor that is strongly associated with psychological and social wellbeing (Martin-Storey & Crosnoe, 2014). Researchers have also shown that neighborhoods serve as a protective influence for individual youth resilience and identity development (Martin-Storey & Crosnoe, 2014). As mentioned by Spencer, Dupree, and Hartmann (1997), it is not just the experiences that an adolescent may face that affects their mental health development but how they perceive what they experience. Perceptions, such as

perceptions of one's neighborhood safety, should therefore be examined as it influences whether adolescents reject or adopt certain behaviors (Spencer, Dupree, & Hartmann, 1997).

Family Context

Whether through direct actions or indirect examples, parents mold the lives of their children from the moment of birth to early adulthood (Aufseeser, Jekielek, & Brown, 2006). Although the adolescent years is a sensitive and important developmental stage in which youths become increasingly independent from their families, parents can still play a significant role in adolescent wellbeing by providing support to their child as they explore their identity (Santrock, 2014; Sacks et al., 2014; Borkowski, Ramey, & Bristol-Power, 2001). The family/parent structure is believed to have a significant impact on youth mental health development since the majority of youths engage with their parents daily and thus learn from their parents (Aufseeser, Jekielek, & Brown, 2006; Bronfenbrenner, 1977; Guo, Li, Liu, & Sun, 2015). According to researchers, parents are known for making direct and indirect investments in their youths by providing material resources, instilling knowledge, maintaining the home, and by providing other economic and social support (Langton & Berger, 2011). Researchers have also shown that close parent-child communication, family bonding and cohesion all have positive effects on adolescent mental health development (Hair et al., 2005; Parker & Benson, 2004; Resnick, Ireland, Borowsky, 2004).

Research has shown that parents can provide economically, psychologically, socially and emotionally. Although parents can provide in these areas, youths need an equilibrium of these characteristics to appropriately develop positively; too much or too little of these factors will lead to negative mental health development (Bronfenbrenner, 1961). It is for this reason alone that researchers have been interested in examining whether these factors can either serve as

protective or risk factors for adolescents' wellbeing. Thus, studying parental influences has also been significant to examine to attempt to explain adolescent mental health development.

For the purpose of this study, perceived neighborhood safety and parental influences are of interest and how they often cause internal and external symptoms such as depression and ASB to manifest. Adolescent depressive symptoms and ASB should be of concern as they lead to increased mental health prevalence rates and possible debilitating consequences.

Overview of Youth Mental Health Status

Depression

Depression is known for being a group of emotions and behaviors that have proven to statistically occur with one another (Petersen et al., 1993). Clinical depression and depressive symptoms are two separate yet overlapping concepts. An individual is diagnosed with clinical depression when a mental health provider notices that the presence, severity, and duration of depressive symptoms are causing significant distress and impairing an individual's current functioning (American Psychiatric Association, 2013). According to the American psychiatric Association (2013), several symptoms include: (1) feelings of decreased interest, (2) decreased concentration (3) worthlessness/guilt, (4) changes in sleep (5) fatigue (6) sadness, and (7) thoughts of death or suicide. Regardless of having a diagnosis in depression disorder, up to 15% of adolescents have experienced depressive symptoms at any given time (Bhatia & Bhatia, 2007). Depressive symptoms and depression disorder is known for having numerous negative outcomes. Several consequences include the negative impact on adolescent development and growth, academic problems, relationships whether with relatives or peers (Kann et al., 2000; Brent, 2001).

Depression is among the most common and debilitating of all mental disorders (Wang,

2003; Pratt & Brody, 2008). The prevalence rates for depression is estimated to be 8.1% of youth between the ages of 12 to 17 and 8.7% of young adults between the ages of 18 and 25 have experienced at least one depressive episode (Substance Abuse and Mental Health Services Administration, 2009). Of the 12-to 17-year-olds, 6% had at least one major depressive episode with severe impairment (Substance Abuse and Mental Health Services Administration, 2009). Unfortunately, suicide is the third leading cause of death for all ages who may be affected by depression (Centers for Disease Control and Prevention, 2009). For instance, among adolescents in grade 9th-12th in the United States in 2013, 17% of students considered attempting suicide within that year alone (Kann et al., 2014). Clearly, depression during adolescent years, regardless of ethnic/race, is a significant public health concern and should therefore continue to be examined (Horowitz & Garber, 2006).

Antisocial Behavior

Adolescent delinquency and ASB are major public health concerns (Mason et al., 2010). ASB is broadly defined to include concealed (e.g. theft, telling lies) and apparent (e.g. raising one's voice, temper, hostility, outbursts, physical destructiveness, and non-compliance) behavior problems among adolescents (McCart, Priester, Davies, & Azen, 2006). The individuals who have been largely responsible for the rise in crime rates have been adolescents within the United States (Dodge, Coie, & Lynam, 2008). According to Blumstein (2000), since 1965, just the homicide statistics alone by adolescents who are 18 years and younger have increased the crime rate by approximately 400%. It is imperative to know that homicide is not just one example of youth ASB. ASB has been known for being subcategorized into dimensions that illustrate functions and forms. Several forms of ASB can include direct attack (e.g. verbal or physical), relational, damage of one's property or theft (Crick & Grotpeter, 1995). ASB is known for being

caused by either youths' anticipation of self-serving outcomes or as some defensive response to either provocation or goal blocking (Little, Henrich, Jones, & Hawley, 2003). Longitudinal studies have shown that aggressive behaviors emerge as children enter adolescent years (Loeber et al., 1998). According to the U.S. Department of Justice (2003), adolescent years is when critical and serious acts of violence increase according to age-crime curves.

Researching ASB within youths has been critical as often time adolescents are responsible for over half of all the crimes (Howell, Krisberg, & Jones, 1995). ASB within youth is worth investigating as criminal careers often begin during early adolescent years which unfortunately costs the American society roughly about \$2.6 to \$5.3 million (Cohen & Piquero, 2009). This alone has caused a growing attentiveness by policy and public makers in youth crime prevention by focusing on early youth interventions (Farrington & Welsh, 2007). To date, citizens of America have been paying extra taxes to indirectly fund interventions that could reduce youth crime (Cohen, Rust, Steen, & Tidd, 2004). In fact, a recent study has shown that American citizens are spending more money on prevention programs to deter adolescents from the law in comparison to other programs such as drug treatment for non-violent offenders, having more police in one's neighborhood, and spending on prisons (Cohen, Rust, & Steen, 2006).

Context and Mental Health Status

There are a multitude of factors that can significantly impact the mental health development of youths. According to Bronfenbrenner (1977), in order for researchers to understand the complexity of adolescent development and examine what may drive unique mental health developmental patterns among youths, researchers must examine various contexts that go past the direct observation of youth behavior. The following literature aims to examine

the interconnection between mental health status and environmental context, specifically neighborhood context and parental influence and its relationship with adolescent depression and ASB.

The Influence of Neighborhood Context on Mental Health Status

Certain community characteristics, particularly high-risk neighborhoods, have impacted adolescent mental health development in a negative way (Kim, 2010; Dodge, Coie, & Lynam, 2008). High-risk neighborhoods are communities that have problems pertaining to crime and safety (Wandersman & Nation, 1998). High-risk neighborhoods are also communities characterized by low socioeconomic status, poverty, as well as single family households (Wandersman & Nation, 1998). A neighborhood could be characterized as having two types of incivilities, social (e.g. problems pertaining to levels of vandalism/graffiti, disorderly behavior, gang presence, etc.) and physical (e.g. problems pertaining to the quality of the physical environment, litter, unkempt lots, etc.) (Jones, Heim, Hunter, & Ellaway, 2014; Perkins Meeks, & Taylor, 1992; Wandersman & Nation, 1998). High-risk neighborhoods have been responsible for negative mental health youth outcomes as seen in the following mental health domains.

Neighborhood Context, Mental Health & Depression

It is difficult to pinpoint the cause of depressive symptoms and/or depression as there are several possible causes. Although the majority of the research studies focuses on individual characteristics as predictors of depressive symptoms, researchers have also focused on examining the role of the environment, specifically the neighborhood, on manifested depressive symptoms (Wilson-Genderson & Pruchno, 2013). According to Mair, Roux and Galea (2008), the idea that contextual features may have a relationship to mental health has an extensive scientific history. This research interest piqued by the theoretical conversations of the ecologic

determinants of mental health and also the availability of multilevel statistical analyses, spatial analysis, and multilevel structural equation analyses which has allowed researchers to control for individual confounders when assessing the relationship between neighborhoods and mental health (Mair, Roux & Galea, 2008; Wilson-Genderson & Pruchno, 2013).

Various research studies have established the relationship between perceived neighborhood safety and depressive symptoms within adolescents. One study confirmed that children between the ages of 4 and 11 who perceived their neighborhoods as safe had fewer emotional issues, conduct disorders and hyperactivity (Curtis, Dooley, & Phipps, 2004). Overall, this study concluded that lower quality neighborhoods, where quality was operationalized by safety, cohesiveness and problems, was associated with emotional outcomes for children (Curtis, Dooley, & Phipps, 2004). In the Wilson-Genderson and Pruchno study (2013), they controlled for age, sex, and income in a population of older adults and found a statistical significance between perceived neighborhood safety and depressive symptoms. A recent study found that Latinx adolescent who reported feeling unsafe within their neighborhood due to existing neighborhood problems and a low perception of neighborhood social cohesion, were more likely to report depressive symptoms (Echeverría et al., 2008). Overall, these past research studies have added to the existing and growing literature that focused on the impact of environmental or ecological attributes on individual well-being, specifically depressive symptoms (Wilson-Genderson & Pruchno, 2013; Natsuaki et al., 2007).

Neighborhood Context, Mental Health & Anti-Social Behavior

Associations between neighborhood characteristics and youth antisocial development have been widely explored within psychological research (Leventhal & Brooks-Gunn, 2000). In fact, numerous studies investigated the associations between neighborhood factors and ASB

among youths (Shaw et al., 2003; Vieno et al., 2010; Trentacosta et al., 2009). Neighborhood context has been associated with externalizing problems such as ASB, where modest associations, between neighborhood context and ASB, exists in childhood years and stronger associations exist in early youth samples (Beyers, Bates, Pettit, & Dodge, 2003). For instance, results from a research study that incorporated 6th – 10th grade students revealed that ASB was predicted when they reported having exposure to violence and encountered feelings of neighborhood unsafety (Schwab-Strone et al, 1995). Pettit and colleague (1999), found that when youths experienced low perceptions of neighborhood safety and spent more time with peers without supervision, youths experienced more ASB than others. Several researchers have tried to understand why certain neighborhood characteristics manifest mental health symptoms such as ASB. Researchers have argued that perhaps neighborhood safety concerns come from a consistently decreasing social control and reduced community cohesion that causes a sense of threat and fear in youths to emerge which then causes them to enact externally (Brown, Perkins, & Brown, 2004). Others such as Leventhal and Brooks-Gunn (2000), argue that perhaps neighborhood environments that are characterized by crime and exposure to delinquent peers may be strong negative learning environment during pivotal childhood years that neighborhood risk predicts ASB within young adolescents. Regardless of the cause, researchers are aware that the neighborhood setting is a powerful context that affects youths in plentiful ways (i.e. externally) and should therefore continue to be examined. Although research in this area is scarce and outdated in terms of the relationship between perceived neighborhood safety and manifestations of ASB, more research should be performed to add to the literature on how perceptions of neighborhood safety impacts ASB among youth.

The Impact of Parental Influences on Mental Health Status

Research has established that there are several contexts that influence adolescent mental health development; however, research pertaining to the influence of the family context on youth mental health development has received the most attention (Steinberg & Morris, 2001). Research on the influence of one's family environment has been heavily focused on parent-adolescent relationships despite a small but growing emergence on the influence of sibling relationships (Steinberg & Morris, 2001). Overall, research on parental influence has shown to have either positive or negative effects on adolescent mental health development. Parental influence is comprised of family cohesion, parental-engagement, and parent-child communication; each have shown to effect adolescent mental health development differently (Ornelas, Perreira, & Ayala, 2007).

Parental Influence, Mental Health, & Depression

Family cohesion and parenting practices (e.g. parental engagement and parent-child communication) has been extensively examined in relation to youth mental health development. For instance, there has been research that has empirically linked adolescent perceptions of family cohesion to adolescent mental well-being and happiness (Harris & Molock, 2000). According to Harris and Molock (2000), adolescent youths who perceive their families as having low levels of cohesion may be at-risk to developing depression. (Harris & Molock, 2000). One study confirmed that the lack of cohesion led adolescents to meet the criteria for depression two times more likely than adolescents who perceived their family as cohesive (Reinherz et al., 2003).

Research has also indicated that parenting practices such as parental engagement and parent-child communication are also known for playing a significant role in its relation to

depressive symptoms among youths. According to Yu and colleagues (2006), parent-adolescent communication and parental engagement are significant determinants of whether an adolescent experiences depression. Yu and colleagues (2006) found that youths who were depressed perceived lower levels of parental engagement and lower levels of parent-child communication than adolescents who reported not feeling depressed. Clearly, family cohesion and parenting practices, such as parental engagement and parent-child communication, have been shown to have a strong link to adolescent depression.

Parental Influence, Mental Health, & Anti-Social Behavior

Research has established that certain familial characteristics, such as family cohesion, parental engagement, and parent-child communication can cause ASB manifestations to occur among youth. For instance, research has illustrated that youths who have exhibited ASB actually grew up among families that were characterized as having low levels of familial cohesion (Deković, Janssens, & As, 2003). Another research study found that family cohesion is negatively associated with adolescent ASB problems; this indicates that higher levels of perceived family cohesiveness was associated with lower levels of ASB among adolescents (Richmond & Stocker, 2006).

Familial cohesion is not the only family factor that is known for being influential of youth ASB, parenting practices have also been examined throughout. Parental engagement has been extensively studied as a possible protective factor against ASB. Loeber and Farrington (2000) found that low levels of parental engagement and high levels of parental punishment was related to the development of youth ASB. Research has established that parents who show a combination of monitoring and healthy involvement help protect their adolescent against developing negative outcomes such as delinquent behaviors and violent offending (Furstenberg

et al., 1999; Gorman-Smith et al., 2004). Parental knowledge and engagement has also been thoroughly examined as a potential protective factor for youth (Bacchini, Concetta, & Affuso, 2011). According to Bacchini, Concetta, and Affuso (2011), both parental knowledge and engagement has a negative association with ASB thus confirming past literature that emphasizes the protective function of these parental characteristics who may be at high-risk for developing ASB.

Parental characteristics such as familial cohesion and parental engagement help create a familial balance and is known for being associated with communication and parental support (Ceballo, Ramirez, Heran, & Maltese, 2003). Parent-child communication has also proven to be associated with ASB among youths. Good communication between parents and offspring is a great indication of a supporting family and thus helps youths not feel alone; research has shown that high levels of parent-child communication pertaining to their children's activities and problems has reduced ASB among youths (Bacchini, Concetta, & Affuso, 2011; Barnes & Farrell, 1992). Research has shown that parental control by itself is not enough in deterring youths from engaging in ASB, parents should also ensure to improve in their communication with their children (Bacchini, Concetta, & Affuso, 2011).

Race/Ethnicity, Mental Health Status & Mental Health Service Use

It is well understood that mental health problems occurs across every race; however, who attains mental health services is often dependent on ethnicity and the types of mental health problems. Unfortunately, when mental health needs are left untreated, these disorders may be debilitating in later years (Kataoka, Zhang, & Wells, 2002). Racial/ethnic mental health disparities have received increasing attention over the years, as it has been found that unmet mental health needs are highest among racial/ethnic minority adolescents (Chow, Jaffee, &

Snowden, 2003; Yeh et al., 2003). Research has shown that compared to Caucasian adolescents, Hispanic youth were more in need of mental health services and did not receive care, followed by African American youth (Kataoka, Zhang, & Wells, 2002). According to Yeh and colleagues (2003), these unmet needs may be due to barriers that range from individual attitudes towards help seeking, to systematic factors such as one's accessibility to mental health services. Current research has also focused on the type of mental health problems, internalizing or externalizing problems, as an important determinant of who obtains mental health services (Gudiño et al., 2009). For instance, researchers studied a diverse sample of adolescents who had existing contact with multiple public sectors and found that both African American (46%) and Latinx (48%) youths who exhibited externalizing issues had similar mental health service use rates to non-Hispanic White (55%) youth (Gudiño et al., 2009). Conversely, when it came to internalizing problems, non-Hispanic White youth had higher rates of mental health service use (72%) compared to African Americans (56%) and Latinx youth (41%).

Gudiño, Martinez, and Lau (2012) found that African Americans were less likely than non-Hispanic Caucasian adolescents to have attained services after one year of encountering the child welfare system. They found similar results to the Gudiño et al. (2009) study in that African American youths were likely to attain mental health services after exhibiting externalizing behavior need. Interestingly, Caucasian youth were the only subgroup that led to a greater likelihood of service use when they exhibited the presence of internalizing mental health need (Gudiño, Martinez, & Lau 2012). Although race/ethnicity did not formally moderate the relationship between internalizing need and service use, this finding illustrates that there do exist mental health needs across ethnicities and that problem type plays a significant role in who attains mental health services.

In Martinez, Gudiño, and Lau (2013), they found similar findings in that African American (10.9%) youth were less likely to receive any specialty mental health services in comparison to Caucasian youth (21.8%). When it came to mental health problem type, externalizing problem severity was a predictor regarding attainment of mental health services for both Caucasian and African American youth; despite similar findings, externalizing problem severity was strongest for African American youths as compared to Caucasian youth (Martinez, Gudiño, & Lau, 2013). When it came to internalizing problem severity, Caucasian youth were more likely to attain mental health services in comparison to African American and Latinx youth (Martinez, Gudiño, & Lau, 2013). Overall, these results reveal how race/ethnicity moderated the relationship between mental health status problem type and mental health service use. This illustrates the complex relationship between ethnicity and mental health service use when considering mental health problem type, and should therefore be examined further (Martinez, Gudiño, & Lau, 2013).

Current Study

Purpose

The purpose of the current study was to examine the extent to which perceived neighborhood safety and parental influences (e.g. family cohesion, parental engagement, and parental communication) were associated with mental health status (e.g., depression and ASB), and whether this led to receipt of mental health services. A secondary goal of the current study was to examine whether race/ethnicity moderated the relationship between mental health problem type (externalizing vs. internalizing) and receipt of mental health services. Specifically, this study attempted to replicate previous literature that has shown that White individuals were more likely to attain mental health services when displaying internalizing depressive symptoms and less likely when displaying externalizing anti-social behavior in comparison to Latinx and African American individuals.

Hypotheses

Based on the review of literature in Chapter II, the following aims and research hypotheses were developed.

Aim I: To examine how perceived neighborhood safety is associated with mental health status in adolescents.

- A. Perceived Neighborhood Safety will have a negative relationship with depression and ASB; specifically, higher rates of perceived neighborhood safety will lead to lower scores on depression and ASB among youths.

Aim II: To examine how parental influence (e.g. family cohesion, parental engagement, and parental communication) is associated with mental health in adolescents.

- A. Parental influence will have a negative relationship with depression and ASB; specifically, higher rates of parental influence will lead to lower scores on depression and ASB among youths.

Aim III: To examine whether race/ethnicity moderates the relationship between mental health status (e.g. depressive symptoms, and ASB) and receipt of mental health services.

- A. The relationship between mental health status problem type (e.g. internalizing vs externalizing) and mental health service use will depend on Race/ethnicity. Specifically, African American and Latinx youth will have a similar association between externalizing behavior problems and service use, compared to Caucasians. However, African American and Latinx youth will have a weaker association between internalizing behaviors problems and service use, compared to Caucasian youth.

CHAPTER III
METHODOLOGY

Study Design

This research study used existing data from the second, third and fourth wave of the National Longitudinal Study of Adolescent Health (Add Health). The second wave was collected between April and December 1996 (Popkin & Udry, 1998). The third wave was measured between August 2001 and April 2002 (Gordon-Larsen, Adair, Nelson, Popkin, 2004). The fourth wave was measured between April, May and early June of 2007 (Harris, 2013). The Add Health project is a well-established, nationally representative, longitudinal study that began in 1995 (The National Longitudinal Study of Adolescent Health: Research Design; Popkin & Udry, 1998). The first wave of the Add Health project examined adolescents between 7th to 12th grade (The National Longitudinal Study of Adolescent Health: Research Design; Popkin & Udry, 1998). The Add Health project was created to describe the hidden conditions of youth health and youth behaviors while stressing the abundant effects of various contexts that exist within adolescent life (Popkin & Udry, 1998). The overall collection of the data was established by the Institutional Review Board as the authors followed informed consent system within the University of North Carolina at Chapel Hill (Popkin & Udry, 1998). The project consisted of data that was gathered from the youths, siblings, parents, peers, significant partners, class peers, and school staff (Popkin & Udry, 1998).

A list of all high schools in the United States was created, 26,666, in which a stratified sample of 80 high schools were chosen for the Add Health project (Popkin & Udry, 1998). Of those 80 selected schools, only 52 met requirements and gave consent to participate in the Add health project; the remaining 28 high schools were replaced by other high schools (The National

Longitudinal Study of Adolescent Health: Research Design). The sample was stratified by region, school type, ethnicity mix and size, and region (Popkin & Udry, 1998). Within each school, a roster of students enrolled was collected; 200 adolescent students were chosen from each high school, middle school pair which ultimately created a self-weighting sample (Popkin & Udry, 1998). Overall, this allowed the Add Health project to illustrate representativeness.

Measures

Predictor Variables

Neighborhood Safety

Neighborhood characteristics were accessed during the Add Health in-home interviews (“Neighborhood”) scale that was conducted during Waves I-II; for this study, this predictor variable was derived from Wave II. Adolescents answered three subjective questions pertaining to neighborhood safety. Adolescents answered in a dichotomous manner, where 0=*yes* and 1=*no*, on whether youths knew most of the people in their neighborhood or have stopped on the street to talk to someone who resided within their neighborhood. The scale demonstrated adequate internal consistency for the overall sample across Wave II (Cronbach’s $\alpha = .61$). These items were summed together to create a neighborhood safety scale for the current study.

Parental Influence

Four characteristics were examined to create the parental influence latent variable. These measures included: (1) family cohesion, (2) parent-child communication, (3) parental engagement, and (4) parental monitoring (Ornelas, Perreira, & Ayala, 2007). Family cohesion and parenting characteristics were accessed during the Add Health in-home interviews (“Protective Factors” and “Relations with Parents”) scale that was conducted during Waves I-II; these predictor variables derived from Wave II.

Family Cohesion

Family cohesion was measured by adding responses to adolescent reports of three specific items. These items included questions that pertained to perceived familial fun, understanding and provided attention to the adolescent (Ornelas, Perreira, & Ayala, 2007). For example, youths answered the following question, “How much do you feel that people in your family understand you?” and chose an answer between a response choice ranged from 1 = *not at all* to 5 = *very much*. The scale demonstrated good internal consistency for the overall sample across Wave II (Cronbach’s $a = .79$). These three items were summed together to create a family cohesion scale that was then used for the overall analysis.

Parent-Child Communication

Parent-child communication was calculated as the total sum of four different items that the adolescent encountered with their mother within the last four weeks. Parent-child communication pertained to talking to their mother separately about the adolescent’s life, school work, and personal problems. For example, participants were asked if they “talked about someone [the adolescent was] dating or a party [the adolescent attended] within the past four weeks” in which they responded in a dichotomous manner where 0=*no* and 1=*yes* (Harris, 2013). The scale demonstrated a good internal consistency for the overall sample across Wave II (Cronbach’s $a = .64$). These four items were summed together to create a parent-child communication scale that was then used for the overall analysis.

Parental Engagement

Lastly, parental engagement was calculated as a sum of five different activities that mothers partook separately with their adolescents over the span of a month. These four different items pertained to adolescents attending church events with their mothers, participating in sports,

shopping, attending the movies, plays, concerts, sports events or museums together and working on school projects together. For example, participants were asked if they played a sport with their mother within the past month in which they responded in a dichotomous manner where 0=*no* and 1=*yes*. The scale demonstrated low internal consistency for the overall sample across Wave II (Cronbach's $a = .39$). Overall, the four items used to create the parental-engagement measure were summed together which was later used in the overall project analysis.

Originally, the current study attempted to include all items of the parental engagement scale used from a previous study, (i.e. 6 items); the previous study incorporated both mothers and fathers for the parental engagement scale (Ornelas, Perreira, & Ayala, 2007). This existing measure, although adequate internal reliability, was re-modified as it lowered adolescent completion rate for the individual items due to incorporating both parents; therefore, for this current study, only questions pertaining to mother-child engagement was kept.

Parental Monitoring

Parental monitoring was calculated as a sum of seven different household rules and guidelines (Ornelas, Perreira, & Ayala, 2007). The type of parental monitoring items pertained to weekend and weekday curfews, knowing their child's friends, limiting the amount and type of television shows, monitoring food choice, and setting rules for suitable clothing (Ornelas, Perreira, & Ayala, 2007). For instance, participants were asked if their parents allowed them to make their own decisions pertaining to weekend curfew times in which they responded in a dichotomous manner where (0=*no* and 1=*yes*). The scale demonstrated adequate internal consistency for the overall sample across Wave II (Cronbach's $a = .654$). These seven items were summed together to create a parental monitoring scale. Due to parental monitoring not loading onto the latent variable, parental influence, parental monitoring was no longer included

within the current project; more detailed information is found in the results. Overall, in the current study, we constructed a parental influence factor using the core scales of family cohesion, parent-child communication, and parental-engagement.

Outcome Variables

Internalizing Mental Health Need - Depression

Depression was accessed during the Add Health in-home interviews (“Social Psychology and Mental Health”) scale that was conducted during Waves I-IV; for this study, these status variables were derived from Wave III. Participants were asked a variety of questions that examined depressive symptoms youths experienced within the past 7 days. A short-form of the Center for Epidemiological Studies – Depression Scale (CES-D), 6 items, was created to measure depressive symptoms within youths. These items included, but are not representative of all items, feeling bothered by things, unable to shake off the blues, difficulty concentrating, feelings of depression and sadness. For example, participants were asked, within the past week did you experience sadness. Adolescents response choice ranged from 0=*never or rarely* to 3=*most of the time or all of the time* (Harris, 2013). An overall mood score was computed to sum up all the six questions. The scale demonstrated good internal consistency for the overall sample across Wave III (Cronbach’s $a = .81$).

Externalizing Mental Health Need - Antisocial Behaviors

ASB was accessed during the Add Health in-home interviews (“Delinquency and Violence”) scale that was conducted at Waves I-IV; for this study, these variables derived from Wave III. Participants were asked how often they engaged in property-related damage and violent behavior within the past month; a total of 10 items were included for this measure (Chen & Jaffee, 2017). These items included, but are not representative of all items, damaging a

person's property, selling drugs, going into someone's home or building and stealing items, being involved in a group (e.g. gang) fight, and other acts that illustrate ASB (Chen & Jaffee, 2017). Participants chose a response choice (0 = *never*; 1 = *one or two times*; 2 = *three or four times*; 3 = *five or more times*) (Chen & Jaffee, 2017). ASB was summed to get a count of the amount of ASB the adolescent committed within that month (Chen & Jaffee, 2017). The scale demonstrated good internal consistency for the overall sample across Wave III (Cronbach's $\alpha = .70$).

Mental Health Service Use

Mental health service use was accessed during the Add Health in-home interviews ("Access to Health Services, Health Insurance") scale that was conducted at Waves I-IV; for this study, this status variable derived from Wave IV. Adolescents answered one question pertaining to mental health services, if within the past year the adolescents received psychological or emotional counseling, which was asked in a dichotomized style where 0=*no* and 1=*yes* (Cummings, 2014).

Data Analytic Strategy

The study goals were achieved using multigroup structural equation modeling in MPLUS, version 8.0 (Muthén & Muthén, 2017). The parental influence construct consisted of family cohesion, parental engagement, and parent-child communication; thus, parental influence was a latent variable for the current study.

In terms of the good model fit, this was indicated by values that are greater than .90 for the Comparative Fit Index (CFI) while also considering less than .07 for the root mean squares error approximation (Bentler, 1990; Steiger, 2007). The study consisted of several predictor variables that derived from Wave 2. As mentioned previously, the predictor variables included perceived neighborhood safety and parental influence. The outcome variables included the mental health status of adolescents, specifically depression and ASB; these variables derived from Wave 3. Another outcome variable was mental health service use which derived from Wave 4. In addition, race/ethnicity was examined as a potential moderator between the relationship of mental health status and service use. To determine whether race moderated the relationship between mental health status type and mental health service use, equality constraints were applied one at a time and chi-square difference tests were conducted to determine whether the structural path between mental health status type and service use varied by race/ethnicity.

Figure 1 best represents the current study.

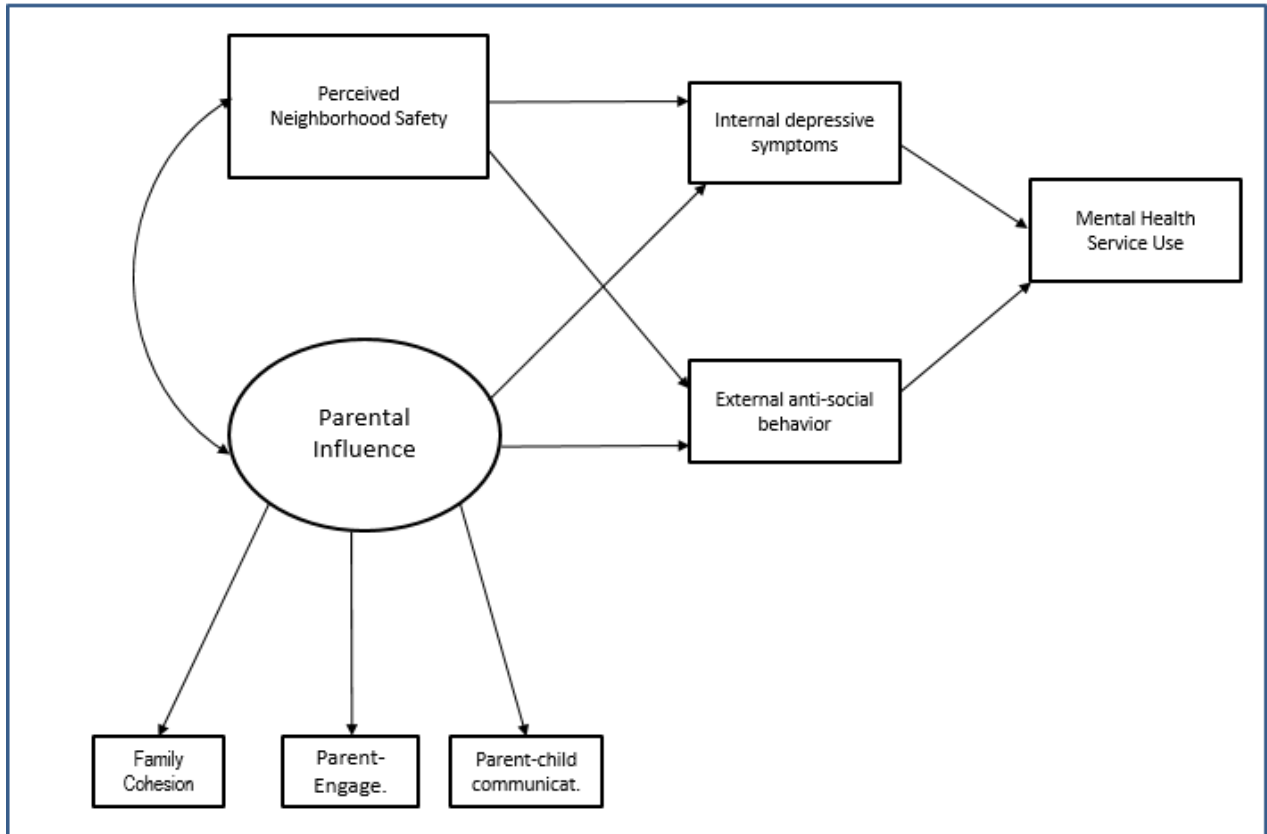


Figure 1. Multigroup structural equation model path estimates for perceived neighborhood safety, parental influence, youth mental health status, and service use by race/ethnicity

CHAPTER IV

RESULTS

Data Screening and Descriptives

This study utilized data from the Add Health project which contained a nationally representative sample of adolescents. The Add Health sample included 20,745 youths at the initial study assessment which is Wave 1. Participants in the current study included a subsample of youths that self-identified as being Caucasian, Latinx, or African American ($n = 18,264$) in Wave 2 and whether they answered the mental health service use question at Wave 4 ($n = 13,989$). Both African American ($n = 241$) and Latinx youth ($n = 190$) were less likely to receive specialty mental health service use relative to White youth ($n = 952$) when answering ‘yes’ to attaining mental health services, $F(2, 13,986) = 28.479$, $p < .001$. Prior to moving forward to the data screening analysis, we also conducted a chi-square analysis to determine whether ethnicity/race differed statistically in terms of answering ‘no’ to the mental health service use inquiry. The chi-square test was significant, $\chi^2(2) = 56.74$, $p = .000$; this indicated that the three racial groups did significantly differ in terms of not seeking mental health services. Specifically, White youth were likely to report ‘no’ to attaining mental health services ($n = 7,360$) as compared to African American ($n = 3,012$) and Latinx youth ($n = 2,234$). This analysis should be taken lightly due to ethnic/racial sample size differences. The descriptives of the current study subsample are displayed below in Table 1.

Data screening revealed some skewness and kurtosis where skewness and kurtosis between -2 and 2 are acceptable to prove normal distribution (George & Mallery, 2010). The parent-child communication total score, ASB total score, and service use score were both skewed and kurtotic. When regarding the parent-child communication measure, the skewness was 2.88

while kurtosis was 63.42; for ASB, skewness was 3.62 while kurtosis was 17.60. Last, when regarding the mental health service use measure, the measure yielded a 2.69 skewness and a 5.23 kurtosis. This skewness and kurtosis is expected due to the nature of the variables. Prior to running any analyses, there was also a check for multivariate normality; Mahalanobis distance was calculated for each of the participants on all variables of interest. There were several outliers; the youths were kept in the study due to their age being within the range of the overall study. The following tables include the measure descriptives and bivariate correlation chart.

Table 1.
Sample Descriptive Statistics (n =13,989)

	N (%)	M	SD
Age			
Wave 1		14.17	1.65
Wave 2		16.17	1.65
Wave 3		21.90	1.78
Wave 4		28.90	1.78
Sex			
Female	7,467 (53.4%)		
Male	6,522 (46.6%)		
Ethnicity			
Hispanic	2,424 (17.3%)		
Non-Hispanic White	8,312 (59.4%)		
African American	3,253 (23.3%)		
Parental Income		45.93K	49.04K

Table 2:
Measure Descriptives

	N (%)	M	SD
Neighborhood Safety		0.26	0.33
Family Cohesion		3.73	0.85
Parental-Child Communication		0.55	0.35
Parent Engagement		0.30	0.22
Depression		0.43	0.47
ASB		0.05	0.11
Mental Health Service Use			
Yes	1,383 (9.9%)		
No	12,606 (90.1%)		

Table 3.
Correlation Matrix of Study Variables

Variable	1	2	3	4	5	6	7
1. Neigh Safety	-						
2. Family Cohesion	-0.14**	-					
3. Parental Commu.	-0.04**	0.14**	-				
4. Parental Engage.	-0.09**	0.25**	0.27**	-			
5. Depression	0.05**	-0.16**	0.02	-0.05**	-		
6. ASB	-0.02	-0.08**	-0.03*	-0.03**	0.11**	-	
7. MH Service Use	0.02*	-0.05**	0.04**	-0.01	0.10**	0.02	-

* $p < .05$, ** $p < .01$

Model Determination

Overall Model

Prior to running the final model where race/ethnicity grouping was applied, the overall model without grouping was first explored. The overall model included all the predictors (i.e. neighborhood safety and parental influence) and outcomes (depression, ASB, and service use) from Waves 2 to 4. Parental influence was first initially comprised of the individual indicators: family cohesion, parental engagement, parent-child communication, and parental monitoring.

The overall model suggested a moderate fit to the data, $\chi^2 = 748.346$, $df = 25$, $p < .001$, CFI = .849; RMSEA = .043. Due to the parental monitoring indicator loading poorly and negatively onto the latent variable, the inclusion of parental monitoring resulted in a poorer measurement model. Model results suggested that parental monitoring reflected a dimension of parental influence that was distinct from other dimensions measured in the current study; thus, parental monitoring was not an acceptable indicator of the overall parental influence latent variable and was therefore excluded. When examining the factor loadings of family cohesion, parent-child communication, and parental-engagement onto the latent variable, results suggested that they each loaded positively and moderately strong onto the factor.

Once parental monitoring was removed as one of the indicators creating the latent variable, parental influence, fit statistics were analyzed once more for the overall model where grouping was not applied. The overall model suggested a moderate fit to the data, $\chi^2 = 605.376$, $df = 18$, $p < .001$, CFI = .872; RMSEA = .046. Although the CFI was not above .90, the RMSEA was below the .05 threshold, thus, the model was not altered to meet the recommended CFI as the RMSEA numerical value indicated a good model fit. Additionally, the CFI increased substantially once the parental monitoring indicator was removed. See Table 4 for the unstandardized path estimates and Figure 2 for all standardized path estimates of the overall model.

Table 4.

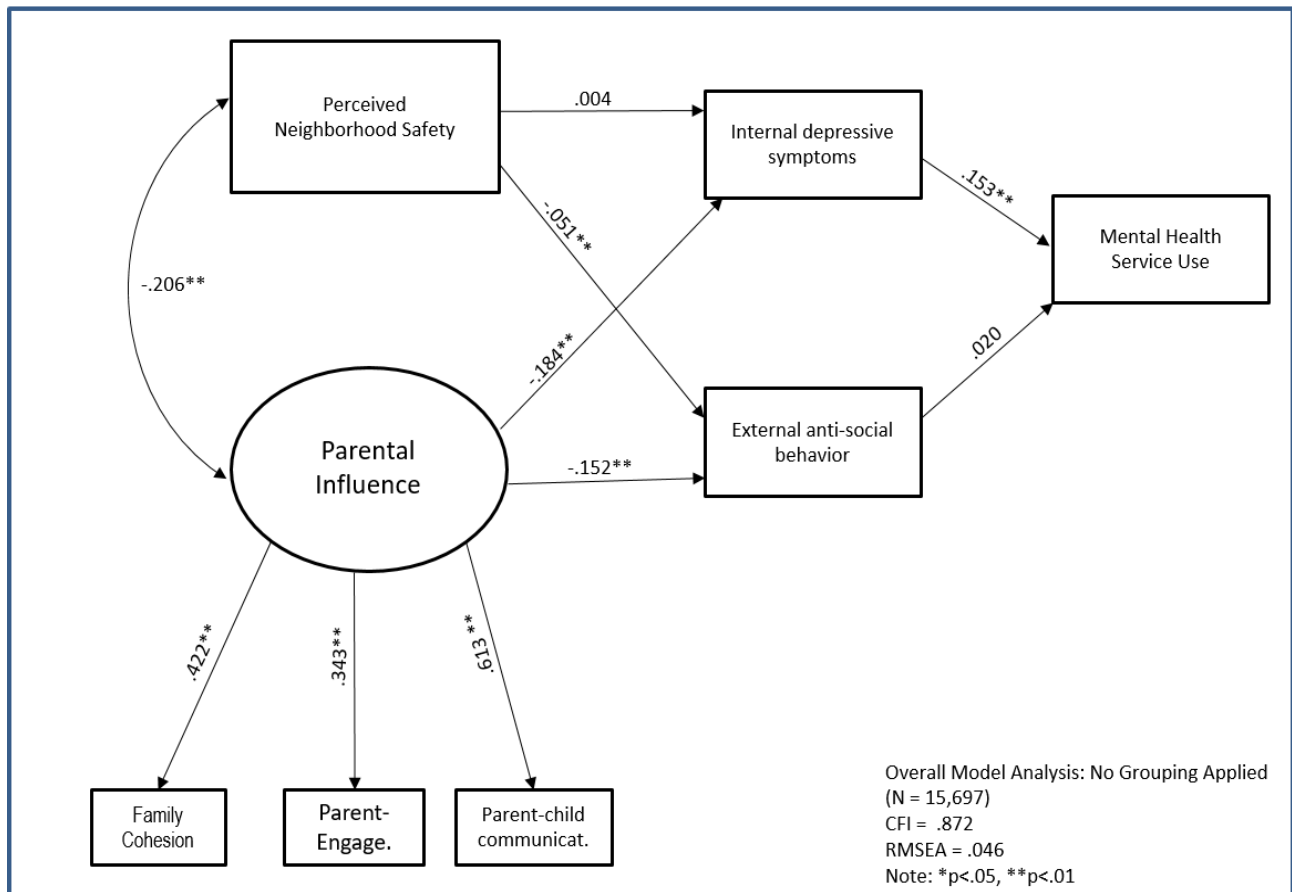
Unstandardized Path Estimates

	<i>b</i>	95% CI
Perceived Neighborhood Safety→Depression	0.02	-0.02 - 0.04
Perceived Neighborhood Safety→ASB	-0.02**	-0.03 - -0.01
Parental Influence → Depression	-0.24**	-0.28 - -0.20
Parental Influence→ASB	-0.05**	-0.06 - -0.04
Depression→Service Use	0.33**	0.27 - 0.38
ASB→Service Use	0.18	-0.08 - 0.44

Note. * $p \leq .05$, ** $p \leq .01$.

Figure 2.

Overall Model: Standardized Path Estimates



Prior to applying race/ethnicity grouping, the standardized path estimates demonstrated multiple significant path estimates consistent with the current study hypotheses. First, when examining the effect of perceived neighborhood safety on youth mental health status, results revealed a significant negative relationship between perceived neighborhood safety and ASB. This result indicates that higher scores on perceived neighborhood safety were associated with lower ASB scores; this is consistent with one of the project's hypotheses. When examining the effect of perceived neighborhood safety on youth mental health, results revealed a nonsignificant positive relationship between perceived neighborhood safety and depression.

When examining the effect of parental influence on youth mental health status, results revealed a significant negative relationship between parental influence, ASB, and depression. These results indicate that higher scores on parental influence were associated with lower ASB and depression scores; this is consistent with one of the project's hypotheses. Furthermore, when examining the effect of depression on mental health service use, results revealed a significant positive relationship between depression and service use. This result indicates that youth depression status led to subsequent mental health service use. When examining the effect of ASB on mental health service use, results revealed a nonsignificant positive relationship between ASB and service use. When examining the correlation between parental influence and perceived neighborhood safety, results revealed a significant negative correlation between the two factors. This result indicates that higher scores on perceived neighborhood safety were associated with lower parental influence scores; although this path was not a proposed hypothesis, this result was expected based on past literature.

Multigroup Path Models

To examine whether race/ethnicity moderated the relationship between mental health status type and mental health service use, we first compared a fully constrained model to a fully unconstrained model where it was expected for there to be a significant chi square difference. The fully constrained model suggested a moderate fit to the data, $\chi^2 = 574.741$, $df = 54$, $p < .001$, CFI = .871; RMSEA = .045; the fully unconstrained model suggested a moderate fit to the data, $\chi^2 = 619.013$, $df = 41$, $p < .001$, CFI = .857; RMSEA = .055. Chi-square difference tests were used to determine whether these models differed significantly with each other when accounting for race/ethnicity. When comparing the two models, results indicated that there was a significant difference between the fully constrained and fully unconstrained models, $\chi^2 = 44.272$, $df = 13$, $p < .05$; this suggested that this path differed significantly by race/ethnicity. This then led to follow-up comparisons.

Follow-up comparisons proceeded which compared the fully constrained model to multiple constrained models where the path between mental health status (i.e. depression and ASB) and mental health service use were released one at a time by ethnicity/race. Due to our hypotheses being specific to comparisons between White youths compared to the two racial/ethnic minority youth's groups, the necessary ethnic/race contrasts for internalizing and externalizing to mental health service use pathways were released and further examined.

First, we examined whether race/ethnicity differed when examining the paths between internalizing depressive symptoms and mental health service use. To examine whether African American youth differed significantly from White and Latinx youth when examining the path between internalizing depressive symptoms and mental health service use, this path was released while constraining White and Latinx youth together. This model suggested a moderate fit to the

data, $\chi^2 = 575.276$, $df = 53$, $p < .001$, CFI = .871; RMSEA = .046. Chi square difference test revealed that race/ethnicity did not differ significantly across the models, $\chi^2 = .535$, $df = 1$, $p = .465$. To examine whether Latinx youth differed significantly from White and African American youth when examining the path between internalizing depressive symptoms and mental health service use, this path was released while constraining White and African American youth together. This model suggested a moderate fit to the data, $\chi^2 = 573.777$, $df = 53$, $p < .001$, CFI = .871; RMSEA = .046. Chi square difference test revealed that race/ethnicity did not differ significantly across the models, $\chi^2 = .964$, $df = 1$, $p = .326$. To examine whether White youth differed significantly from Latinx and African American youth when examining the path between internalizing depressive symptoms and mental health service use, this path was released while constraining Latinx and African American youth together. This model suggested a moderate fit to the data, $\chi^2 = 573.619$, $df = 53$, $p < .001$, CFI = .871; RMSEA = .046. Chi square difference test revealed that race/ethnicity did not differ significantly across the models, $\chi^2 = 1.12$, $df = 1$, $p = .290$.

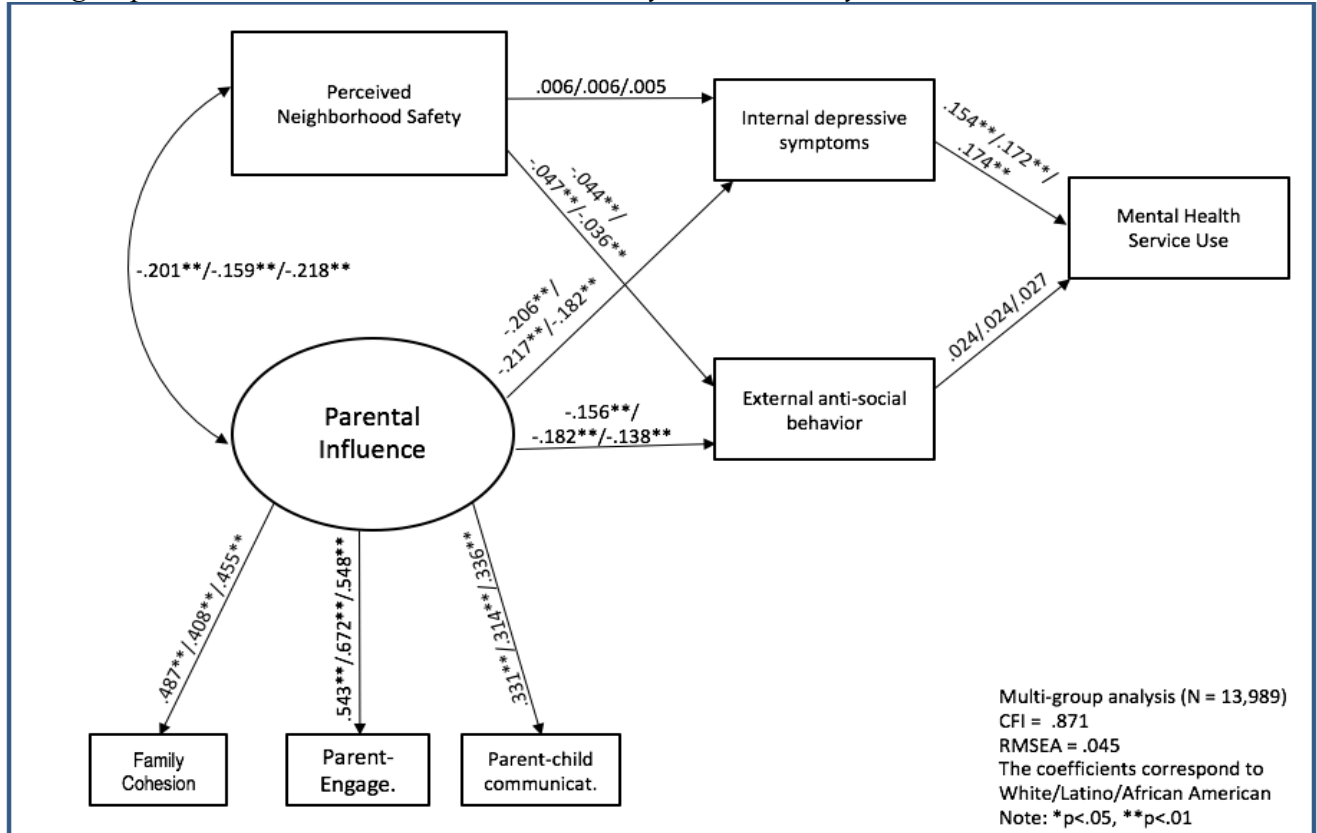
We then examined whether race/ethnicity differed when investigating the paths between externalizing ASB and mental health service use. To examine whether African American youth differed significantly from White and Latinx youth when examining the path between externalizing ASB and mental health service use, this path was released while constraining White and Latinx youth together. This model suggested a moderate fit to the data, $\chi^2 = 573.288$, $df = 53$, $p < .001$, CFI = .871; RMSEA = .046. Chi square difference test revealed that race/ethnicity did not differ significantly across the models, $\chi^2 = 1.45$, $df = 1$, $p = .229$. To examine whether Latinx youth differed significantly from White and African American youth when examining the path between externalizing ASB and mental health service use, this path

was released while constraining White and African American youth together. This model suggested a moderate fit to the data, $\chi^2 = 575.2215$, $df = 53$, $p < .001$, CFI = .871; RMSEA = .046. Chi square difference test revealed that race/ethnicity did not differ significantly across the models, $\chi^2 = .474$, $df = 1$, $p = .491$. To examine whether White youth differed significantly from African American and Latinx youth when examining the path between externalizing ASB and mental health service use, this path was released while constraining African American and Latinx youth together. This model suggested a moderate fit to the data, $\chi^2 = 575.788$, $df = 53$, $p < .001$, CFI = .871; RMSEA = .046. Chi square difference test revealed that race/ethnicity did not differ significantly across the models, $\chi^2 = 1.05$, $df = 1$, $p = .306$.

Overall, when comparing the fully constrained model to each constrained model where the path between mental health status type (i.e. depression and ASB) and mental health service use was released one at a time by each race/ethnicity, chi square difference tests showed that race/ethnicity did not differ significantly. Additionally, for each model comparison, the fully constrained model fit better to the existing data, $\chi^2 = 574.741$, $df = 54$, $p < .001$, CFI = .871; RMSEA = .045. Due to there being no significant differences across race/ethnicity, the fully constrained model was chosen as the final model as it was the most parsimonious model; interpretations of each hypothesis were based on the fully constrained model. See Figure 3 for all standardized path estimates for the model.

Figure 3

Multigroup Model: Standardized Path Estimates by Race/Ethnicity



Perceived Neighborhood Safety and Internalizing/Externalizing Problems

It was hypothesized that perceived neighborhood safety would have a negative relationship with ASB and depression. It is imperative to note that racial/ethnic differences were not intended to be examined along these specific paths, therefore this hypothesis applied to all ethnic/racial backgrounds. For all racial/ethnic groups, there was a significant negative effect of perceived neighborhood safety on externalizing ASB. This result indicates that higher scores on perceived neighborhood safety were associated with lower ASB scores; this is consistent with one of the project’s hypotheses. Inconsistent with the hypothesis, the path between perceived neighborhood safety on internalizing depressive symptoms illustrate non-significance across all race/ethnic grouping. This result indicates that higher scores on perceived neighborhood safety were not associated with lower depression scores.

Parental Influence and Internalizing/Externalizing Problems

It was hypothesized that parental influence would have a negative relationship with depression and ASB. Racial/ethnic group differences were not intended to be examined along these specific paths. For all racial/ethnic groups, there was a significant negative effect of parental influence on externalizing ASB. This result indicates that higher scores on parental influence were associated with lower ASB scores; this is consistent with one of the project's hypotheses. Similarly, for all racial/ethnic groups, there was a significant negative effect of parental influence on internalizing depressive symptoms. This result indicates that higher scores on parental influence were associated with lower depressive scores; this is also consistent with one of the project's hypotheses.

Racial/Ethnic Differences Between Internalizing/Externalizing Problems and Service Use

It was hypothesized that the relationship between mental health status problem type (e.g. internalizing vs. externalizing) and mental health service use would depend on race/ethnicity. Specifically, it was predicted that African Americans and Latinx youths would have a similar association between externalizing problem type and service use compared to White youths. However, it was predicted that African American and Latinx youth would have a weaker association between internalizing problem type and service use compared to Caucasian youths.

First, when examining the effect of internalizing depressive symptoms on mental health service use, results revealed a significant positive relationship between internalizing depressive symptoms and service use across all ethnic/race groups. When examining ethnic/racial group differences, results showed that African Americans exhibited the largest effect, followed by Latinx youth and White youth; this is inconsistent with past literature and the current study's hypothesis. This result indicates that African American youths were more likely to use mental

health services when they had higher scores on depressive symptoms compared to Latinx and White youths. Second, when examining the effect of externalizing ASB on mental health service use, results revealed non-significance across all ethnic/racial groups. This result indicates that for all racial/ethnic groups, having externalizing ASB problems did not lead youths to subsequent mental health service use.

Correlation: Neighborhood Safety and Parental Influence

Apart from the three proposed hypotheses, the correlation between perceived neighborhood safety and parental influence was also examined regardless of ethnic/racial differences. When examining the correlation between parental influence and perceived neighborhood safety, results revealed a significant negative relationship between the two predictors. This result indicates that higher scores on perceived neighborhood safety led to lower scores on parental influence scores.

CHAPTER V

DISCUSSION

The objective of this study was to examine the extent to which perceived neighborhood safety and parental influences were associated with youth mental health status, and whether this led to subsequent receipt of mental health services in a sample of transitional age youth. A secondary goal of the current study was to examine whether race/ethnicity moderated the relationship between mental health problem type and receipt of mental health services. These aims were based on past literature that were intended to be replicated within this current study.

It was first hypothesized that perceived neighborhood safety would have a negative relationship with ASB and depression. Consistent with this hypothesis, results revealed a significant negative relationship between perceived neighborhood safety and ASB. This finding was consistent with past literature that has demonstrated how perceived neighborhood safety may indeed act as a youth protective factor when youths perceive their neighborhood as safe (Beyers, Bates, Pettit, & Dodge, 2003). Although significant, the effects were small across all ethnic/racial groups; significance may have likely been driven by the large sample size. Overall, the findings of this hypothesis revealed that examining neighborhood context is worth exploring to understand the possible manifestations of youth ASB. Clearly, it is important to study the effects of one's neighborhood context, as it may explain youth's psychosocial adjustment, such as ASB (Vieno et al., 2010).

Inconsistent with the first hypothesis however, the effect of neighborhood safety on depression was non-significant. This contradicts past literature that has documented an existing relationship between perceived neighborhood safety and youth depressive symptoms (Wilson-Genderson & Pruchno, 2013; Curtis, Dooley, & Phipps, 2004; Echeverría et al., 2008; Natsuaki

et al., 2007). This nonsignificant finding may have been due to the location of the current study, which was North Carolina. For instance, when examining ethnicity, youth perceptions of neighborhood safety, and mean annual parental income, most adolescents self-identified as white, perceived their neighborhood safe, and had parents who made an annual income of \$45,930 or more. This is consistent with Timberlake (2006) who ran a trend analyses pertaining to ethnic and socioeconomic makeup of neighborhoods during the 1990's and found that more than 80% of Caucasian children were physically born into non-disadvantaged or low poverty neighborhoods. The relationship between perceived neighborhood safety and youth depressive symptoms have often been explored in states and cities such as New Jersey, Chicago, Los Angeles County, and New York where high diverse families are available which often is correlated to being disadvantaged neighborhoods that may undergo pressing issues (Wilson-Genderson & Pruchno, 2013; Echeverría et al., 2008; Latkin & Curry, 2003). It is often these urban neighborhoods that have youths develop mental health problems. With this said, perhaps it may have been important to examine high-risk neighborhoods and its youth, rather than examining youths who resided in a safe neighborhood; perhaps this might have yielded a significance between the effect of perceived neighborhood safety and internalizing depressive symptoms.

It was also hypothesized that parental influence would have a negative relationship with ASB and depression. Consistent with this hypothesis, results showed that there was a significant negative relationship between parental influence, ASB, and depression. First, the finding that parental influence had a negative relationship with ASB is consistent with past research. For instance, research has shown that factors such as high family cohesion and parent-child communication may act as a protective factor for youth against developing ASB (Richmond &

Stocker, 2006; Furstenberg et al., 1999; Gorman-Smith et al., 2004; Bacchini, Concetta, & Affuso, 2011; Barnes & Farrell, 1992). Other research has shown that certain parental influences, such as low parental engagement, may act as a risk factor for developing youth ASB (Loeber & Farrington, 2000). When family cohesion, parental engagement, and parent-child communication were combined to create a latent construct of “parental influence”, it was found that that parental influence overall acted as a protective factor against youth ASB. According to Bacchini, Concetta, and Affuso (2011), parental influence indicators, such as parental communication, may protect youth against negative emotional experiences which then gives youth’s the perception that their parent care for them and consistently watch over them. It is perhaps these perceptions that youths internally encounter that may encourage them to think before enacting in ASB behaviors (Bacchini, Concetta, & Affuso, 2011; Ungar, 2005). This reasoning could explain the existing negative effect between parental influence and ASB.

Second, the finding that parental influences have a negative relationship with depression is consistent with past research. For instance, research has shown that individual factors such as low family cohesion, parent-child communication, and parental engagement can act as a youth risk factor for developing depression (Harris & Molock, 2000; Yu et al., 2006; Reinherz et al., 2003). When family cohesion, parental engagement, and parent-child communication were combined to create a latent construct of “parental influence”, it was found that that parental influence overall acted as a protective factor against youth depressive symptoms. According to Frojd and colleagues (2007), perhaps parental characteristics reduce youth susceptibility to depressive symptoms because parents often attempt to ask for information from youths and communicate to their youth which inevitably illustrates concern for their adolescent’s well-being. Similar to the Bacchini, Concetta, & Affuso (2011) reasoning, it may be this parental concern

and worry that youths see that allow them to communicate and engage with their parents effectively, ultimately lowering their chances of developing depressive symptoms. Overall, for both youth ASB and depressive symptoms, the knowledge of a child's well-being may be derived from parental characteristics such as parental engagement, communication and cohesion which can then be explored further by the parent(s) and possibly intervened prior to any negative youth manifestation were to occur.

The third hypothesis attempted to examine whether race/ethnicity moderated the relationship between mental health problem type and receipt of mental health services. Specifically, the current study attempted to replicate previous findings where we predicted a stronger association between externalizing ASB and mental health service use for African American and Latinx youth compared to White youth, and a weaker association between internalizing depressive symptoms and mental health service use for African American and Latinx compared to White youth (Gudiño et al., 2009; Gudiño, Martinez, & Lau., 2012; Martinez, Gudiño, & Lau, 2013). As indicated earlier, to test whether race/ethnicity moderated the relationship between mental health status type and mental health service use for the third hypothesis, we compared a fully constrained model to multiple constrained models where the path between mental health status (i.e. depression and ASB) and mental health service use was released one at a time by ethnicity/race. Results indicated that there were no racial/ethnic differences throughout either models thus we remained with the fully constrained model, due to parsimony, to interpret our results.

Prior to examining how model path vary by race/ethnicity, results showed that externalizing ASB did not lead youths to attain mental health services while internalizing depressive symptoms led youths to attain mental health services. These results reveal the

opposite of what was expected. Often, externalizing symptoms lead to mental health service use in comparison to internalizing symptoms as they are more recognized and addressed within youth populations due to their behaviors being observed either in school and/or in other public settings (Merikangas et al., 2011). Services for any internalizing disorders such as mood and anxiety disorders may require the individual to self-recognize that he or she should attain mental health services to receive treatment; sometimes it may require close observation by a family member (Merikangas et al., 2011). Inconsistent with previous literature, when looking at externalizing ASB and whether race/ethnicity moderated the relationship between ASB and service use, there was no significance at all. This indicates that for all race/ethnic groups, having externalizing ASB problems did not lead to any mental health services.

Inconsistent with previous literature and the current study hypothesis, when examining the path between internalizing depressive symptoms to mental health service use, although all ethnic/racial backgrounds were found to be significant, certain ethnicities/races yielded stronger effects not consistent with previous literature. For instance, the strongest effect regarding the internalizing depressive symptoms to mental health service use path was yielded by African American youth, followed by Latinx, and then White youth. This reveals that African American youth were more likely to attain mental health services when displaying internalizing depressive symptoms compared to Latinx and White youth. This is inconsistent with previous research. For instance, past researchers have found that often White youth attain mental health services more when exhibiting internalizing symptoms followed ethnic/minority youth (Martinez, Gudiño, & Lau, 2013). Past findings have also indicated that there exist substantial racial/ethnic disparities when examining internalizing disorders, thus causing white youth to have higher rates in attaining mental health services (Merikangas et al., 2011). These disparities are due to barriers

such as concerns of stigma, financial barriers to service access, and/or perceived lack of culturally-competent or effective therapeutic services that may have prevented or discouraged help-seeking behavior within ethnic/racial youth populations (Merikangas et al., 2011; Pumariega et al., 1998; Wu et al., 2001; Angold et al., 2002; McMiller & Weisz, 1996; Cauce et al., 2002; Martinez, Gudiño, & Lau, 2013; Cunningham & Freiman, 1996). Despite numerous research that illustrates how white youth tend to have a stronger attainment in mental health services when exhibiting internalizing depressive symptoms, that did not take place within this study.

Due to the inconsistent findings, it is believed that perhaps there lied a limitation within this study that could possibly explain some of the inconsistent findings within this study. For instance, when considering the mental health service use variable, this variable was a binary variable in which youths answered either yes or no to seeking mental health services within the past 12 months. Due to the mental health service variable not being entirely nuanced and having uneven responses (i.e. 9.9% Yes, 90.1% No), this may have been the reason why our third hypothesis was not fully met within this study. If the mental health service use variable was a continuous measure, where perhaps the measure was on a Likert scale and included dispersed variability, the overall hypothesis and significance may have possibly been detected for all paths between problem type and mental health service use. Future studies should analyze a different variable that is more statistically sensitive as it may lead to the results that were initially proposed in this study. Another possible limitation is when mental health service use was measured within this study; this binary question was asked in Wave 4. By the time this question was asked, 6 years had passed since Wave 3. Youths were no longer youths but were now transitional age youths which may have impacted results tremendously.

Last, although not a hypothesis, the correlation between perceived neighborhood safety and parental influence was explored. Results indicated a negative relationship between perceived neighborhood safety and parental influence. This indicates that high perceptions of neighborhood safety led to lower scores on parental influence. Research has suggested that parental characteristics and family characteristics are strongly related to one's neighborhood of residence (Shuey & Leventhal, 2017). According to Pinderhughes and colleagues (2001), neighborhood instability may compromise positive parenting behaviors. For instance, research has shown that when parents reside among neighbors who are unemployed and have a limited familial income, parents are seen displaying less warmth and higher levels of harsh discipline and monitoring behaviors (Jarrett, 1997; Simons, Johnson, Conger, & Lorenz, 1997). Other research studies have contradicted these previous findings and found that low neighborhood safety and neighborhood concerns represents a significant psychological factor that influences a child's parent to be more empathetic and concerned toward their child (Vieno et al., 2010; Coulton, Korbin, & Su, 1996; Jarrett, 1997). Regardless, due to the youths within this study having higher scores on the perceived neighborhood safety measure, the opposite finding of what has been found in the literature was present within this study. Although there have been correlational findings that link neighborhood conditions and parenting together, there are few studies that have attempted to estimate the causal association within this area (Shuey & Leventhal, 2017). Overall, it is known that parenting is influenced by neighborhood safety perceptions in a manner that may in fact alter youth mental health status and act as a risk factor (Vieno et al., 2010). The notion that neighborhood context effects parenting characteristics such as engagement, communication, and cohesion supports the complexity of the mesosystem within the EST model proposed by Bronfenbrenner (1977).

There are some limitations to consider when interpreting the current study's findings. When considering race/ethnicity, there existed unequal sample sizes of the racial/ethnic groups; the sample makeup was mostly composed of Caucasian youths, thus equal comparisons were not entirely feasible within this analysis. When considering the neighborhood safety measure, the current study focused on youth's perceptions of one's neighborhood; neighborhood physical characteristics were not examined which may be considered a limitation. Although examining physical features was not measured in the current study, research has shown that an individual's perception may be equally as significant defining behavior and/or influencing mental health (Meyer, Casro-Schilo, & Aguilar-Gaxiola, 2014). Nonetheless, future research should attempt to incorporate both subjective and objective measures of the neighborhood to get a better understanding of the impact neighborhood context has on youth mental health status (Meyer, Casro-Schilo, & Aguilar-Gaxiola, 2014). When regarding the perceived neighborhood safety scale, multiple items were more related to the concept of neighborhood cohesion; this itself is also a limitation. Research has shown that perceptions of neighborhood cohesion are associated with higher levels of neighborhood safety (Wen, Kandula, & Lauderdale, 2007; King, 2008). For instance, research has shown that residents who report having greater levels of neighborhood cohesion perceived their neighborhood as safer compared to residents who reported lower levels of neighborhood cohesion (De Jesus et al., 2010). Perhaps, the current study should have added an extra layer by including the impact of perceived neighborhood cohesion and its effect on mental health status or omitted the perceived neighborhood safety entirely. Lastly, the current study did not include any control variables; several control variables such as age, socioeconomic status and gender could have been controlled within the current study which might have altered our current study results.

When considering the latent variable of parental influence, multiple individual indicators that created the factor, parental engagement and parent-child communication, were modified to increase completion rate and/or internal reliability. Initially, parental-engagement utilized both mothers and fathers, however due to low adolescent completion rate, only questions pertaining to mothers were kept within the study to avoid losing numerous participants; unfortunately, this lowered the measures internal reliability. Other limitations pertain to the number of waves used for this analysis. Perhaps more data waves would have been more beneficial for the current study to test out the long-term impact of environmental context on mental health status. For instance, we were limited to neighborhood questions during Waves 1 and 2 during data collection. Although research has shown that a single point measure is a good indicator for youth's neighborhood environment over time and that neighborhood origin is more reflective of symptom manifestation than concurrent neighborhoods; this analysis was limited as we were unable to examine the influence of moving or changing one's neighborhood on youth mental health status in Waves 3 or 4 (Kunz et al., 2003; Wheaton & Clark, 2003; Barr, 2018). Lastly, one may argue that it is difficult to disentangle the effects of the family and the effects of one's neighborhood from each other; this alone illustrates how the mesosystem may affect mental health in a complex manner and should therefore be further explored (Leventhal & Brooks-Gunn, 2003; Bronfenbrenner, 1977).

Despite these limitations, the current study has various strengths worth mentioning. For instance, the Add Health data is a longitudinal on-going project that allowed this study to take advantage of all waves. For instance, all predictors of the study were examined in Wave 2, all mental health outcomes were examined in Wave 3, and mental health service use was examined in Wave 4. Examining the paths between neighborhood safety and mental health outcome was a strength as much of the neighborhood research is cross-sectional or based on a single point in time.

Another strength of this study included the large sample size and ethnic diversity of the Add Health project (Echeverría et al., 2008). Although the ethnic/race group was not equal within this study, the current project consisted of a large sample size. Additionally, the current study focused on self-report measures of perceived neighborhood safety and parental influence. The significant paths between these predictors and outcomes illustrate that youth perceptions are powerful in manifesting internalizing and externalizing symptoms. This is consistent with the PVEST theoretical model mentioned earlier which argues that it is not just the experiences that adolescents face that affects their mental health development, it is also the adolescent's perception of their experiences and the interconnection with cultural context that may influence how an adolescent behaves. Lastly, the application of analytic methods to examine whether race/ethnicity moderated the relationship between mental health problem type and mental health service use is a significant strength of this study.

The current study has multiple policy implications should the findings of this research be replicated once more. For instance, the findings from this study suggests that there should be interventions specifically targeted at improving neighborhood contexts as they can serve as protective factors against mental health status (Kruger et al., 2007). Regarding parental influence and its effect on youth mental health status, risk prevention interventions should include both the youths and their parents and should address areas such as communication and engagement as they are protective factors (Yu et al., 2006). These risk prevention intervention strategies may be significant among young pre-teen adolescent's and youths during the beginning of their risk trajectories (Yu et al., 2006). According to Yu and colleagues (2006), parent's may have a more influential impact during this developmental phase; parent's influencing youth's behaviors afterwards may require more intensive intervention. Research has shown that there exist mental

health service use disparities within ethnic groups, however based on the current study findings, there should also be an increased awareness of these disparities based on problem type (Martinez, Gudiño, & Lau, 2013).

Researchers should continue to examine the effects of these contextual domains on other youth mental health status. For instance, future studies should explore the relationship between perceived neighborhood safety and parental influence on mental health status such as substance use and anxiety. In addition, how these contextual domains affect youth academic achievement should also be examined. Although this study did not examine how ethnicity/race moderated the relationships between all paths, future studies should attempt to examine how ethnicity/race impacts the paths between neighborhood safety, parental influence and mental health status. Further research should also examine how cultural values, gender, SES, and age affects the relationship between the moderates the relationship between mental health status type and mental health service use.

The findings of this study are important to consider. First, this study further provides support for the EST, PVEST theory and past research findings that have examined the effect of perceived neighborhood safety and parental influence on youth mental health status. These findings illustrate that when examining the mental health status of youths, scientists and mental health providers should consider how one's neighborhood and familial context affects them. Furthermore, the findings suggest a more complicated relationship between race/ethnicity and mental health service use than what has been consistently implied in previous racial/ethnic disparity research. The findings of this research suggest that researchers and mental health providers should understand the nuances among race/ethnicity, perceived neighborhood safety, parental influence, mental health status and service use.

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