

DISSERTATION

MEASURING ADOLESCENT SENSE OF BELONGING: DEVELOPMENT OF AN  
INSTRUMENT INCORPORATING GENDER, ETHNICITY, AND AGE

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## ABSTRACT

### MEASURING ADOLESCENT SENSE OF BELONGING: DEVELOPMENT OF AN INSTRUMENT INCORPORATING GENDER, ETHNICITY, AND AGE

Studies incorporating the Interpersonal Theory of Suicide (ITS) have largely excluded the association of adolescents with the ITS construct, thwarted belonging. A closer examination of the ITS was necessary, due to its potential for providing information regarding suicide risk. The purpose of this study was to develop a Sense of Belonging Measure, to examine whether and how the construct, thwarted sense of belonging, applied to adolescents, specifically by gender, ethnicity, and age group.

Data ( $N = 10,148$ ) from the National Comorbidity Survey-Adolescent Supplement (NCS-A, 2001-2004) was analyzed. Adolescents aged 13-18 completed the the survey. An exploratory factor analysis and Chronbach's alpha testing determined that the variables in the Sense of Belonging Measure reliably measured the concepts that the literature identified as being related to adolescent belonging.

A three way analysis of variance (ANOVA) produced statistically significant main effects of age groups, and of ethnicity, on sense of belonging. An unexpected statistically significant interaction effect of gender and ethnicity on sense of belonging was produced.

It is recommended that this measure be clinically tested in mental health settings, to further determine the utility of the construct "thwarted sense of belonging," in its application to adolescents.

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“For with God, all things are possible.”  
Matthew 19:26

## DEDICATION

*To my beloved parents, Byron and Mary Ann Frierson,*

*To whom I always felt that I belonged*

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## DEFINITION OF TERMS

**Adolescence.** Adolescence is “the period between childhood and adulthood (i.e., ages 10-19 years in the United States) marked by changes that occur in physical, cognitive, and social-emotional capacities” (Dixon, Scheidegger, & McWhirter, 2009, p. 302).

**Risk factor.** Risk factors are “measurable characteristics of each subject in a specific population that precedes the outcome of interest and which can be used to divide the population into groups on the basis of their relative risk for that outcome” (Conwell, Duberstein, & Caine, 2002, p. 194).

**Need to belong, drive to belong, and belongingness.** Van Orden et al. (2010) base the development of their construct, “thwarted belonging,” upon the seminal work of Baumeister and Leary (1995). In developing their theory of the need to belong, Baumeister and Leary define the need to belong as “the pervasive drive to form and maintain at least a minimum quantity of lasting, positive and significant interpersonal relationships” (p. 497). Baumeister and Leary use the terms “need to belong, drive to belong, and belongingness” interchangeably (p. 497). Accordingly, the three terms were used interchangeably throughout this study.

**Thwarted belonging.** Thwarted belonging is the affective experience which occurs when the need to belong is unmet (Van Orden et al., 2010).

**Sense of belonging.** The sense of belonging incorporates the awareness that one has formed and maintained stable interpersonal relationships characterized by positive interactions which occur in the context of concern for each other’s welfare (Baumeister & Leary, 1995).

## **Terms of Identity**

**Culture.** Culture is defined as the shared learned behavior and “belief systems and value orientations that influence customs, norms, practices, and social institutions” of a group of people (American Psychological Association [APA], 2002, p. 380). Culture is reflected in the attitudes, consciousness, language, and roles of a group of people (Goldston, Molock, Whitbeck, Murakami, Zayas, & Hall, 2008).

**Ethnicity.** This term “convey(s) cultural distinctness derived mostly from national origin, language, religion, or a combination thereof...ethnic identification...includes valuation and attribution of inferior/superior social status, and it changes as a function of historical processes” (Garcia-Coll, Lamberty, Jenkins, McAdoo, Crni, Wasik, & Garcia 1996, p. 1898).

**Race.** “...race is a social construction wherein individuals labeled as being of different races on the basis of physical characteristics are often treated as though they belong to biologically defined groups” (Goldston et al., 2008, p. 14).

**Non-Hispanic Black, Non-Hispanic White, and Hispanic.** Terminology used in the survey from which this study’s data was collected.

**African-American, White, and Hispanic.** Terminology used in this study’s literature review and theory.

## **Terms of Designation**

**Female sex.** Female sex is defined as “characteristic of girls or women; a woman or a girl; a female person” (Merriam-Webster, 2016, p. 1).

**Male sex.** Male sex is defined as “characteristic of boys or men; a man or a boy; a male person” (Merriam-Webster, 2016, p. 1).

**Gender.** The term gender refers to “phenomena and issues related to social and cultural influences. Gender is whatever a culture defines as masculine and feminine” (Canetto, 1997, p. 340). The categories of femininity and masculinity are specific to culture and are transient. They are only understood in context (Canetto, 1997).

**Sex.** The term sex refers to innate structural and physiological characteristics related to reproduction” (Lott & Maluso, 1993, p. 99). In a section listed as “Sex,” the respondents of the National Comorbidity Survey-Adolescent Supplement (2001-2004), which was the source of secondary data for this study, indicated on the survey form that they were either male or female.

### **Terms of Suicidal Behavior**

**Nonfatal suicidal behavior.** The suicidal act that a person survived will be referred to as “nonfatal suicidal behavior.” The terminology is based on the outcome of the suicidal behavior rather than on the presumed motivation. Intent is not a trustworthy predictor of outcome. Not every suicidal death is intended; conversely, not everyone who survives a suicidal act planned to live (Canetto, 1997, p. 340).

**Fatal suicidal behavior and suicide.** These two terms will be used interchangeably throughout this study and are defined as “suicidal acts that resulted in death” (Canetto, 1997, p. 340).

**Suicidal behavior, not otherwise specified.** This term refers to either fatal or nonfatal suicide behavior or to cases in which information about the outcome of the suicidal act is not available or is irrelevant (Canetto, 1997).

## Chapter 1: Introduction

### Background

The need to belong is a fundamental human motivation. Human beings have an inescapable drive to develop and maintain lasting, positive, and significant interpersonal relationships. “A great deal of human behavior, emotion, and thought is caused by this fundamental interpersonal motive” (Baumeister & Leary, 1995, p. 497).

The term “belonging” found prominence within the hierarchy of needs described by Maslow (1970). Maslow argued that individuals have a psychological and basic human need to feel that they belong. Maslow described the need for belonging as the “hunger for contact, for intimacy, for belongingness, and maintained that “maladjustment and more severe pathology” would occur when belonging needs are unmet (p. 44).

The construct of *thwarted* belonging is one of three constructs which frame the Interpersonal Theory of Suicide (Van Orden, Witte, Cukrowicz, Braithwaite, Selby, & Joiner, 2010). (This theory will be referred to as “the ITS” for the remainder of this study.) Belonging variables are associated with suicide because when belonging is obstructed, the variables “are observable indicators that a fundamental human psychological need is unmet” (Van Orden et al., 2010, p. 581). According to Van Orden et al., when the belonging need is unmet-a state that they refer to as “thwarted belongingness,” a desire for death develops...” (p. 581).

The authors contended that the most lethal form of suicidal desire “is caused by the simultaneous presence of two interpersonal constructs-thwarted belongingness and perceived burdensomeness” (p. 575). Habituation to the physically painful and fearful aspects of self-harm could result in the acquired capability to commit suicide, the third construct of the ITS.

Limitations exist, however, regarding the association of thwarted belonging with the ITS, and therefore the utility of the ITS. Baskin, Wampold, Quinana, and Enright (2010) warned that the subjects of studies examining the Interpersonal Theory of Suicide were primarily White European males. Also, studies that examined the ITS were conducted primarily with adults and college undergraduates. Caution was therefore warranted in making inferences to youth.

Because studies incorporating ITS did not include diverse populations of adolescents, a closer examination of the ITS was necessary, due to its potential for providing information regarding suicide risk. Unfortunately, to properly examine all three constructs of ITS would have been beyond the scope of this dissertation. Therefore, only the construct, thwarted belonging, as it applied to adolescents, was explored. An ethnic, gender, and age perspective was provided.

Wallace and Chhuon (2012) reported that the *adolescent's* need for belonging is especially cogent as issues of inclusion reign in adolescence. For early and mid-adolescence, the need to belong and have valued membership in a setting may take precedence over all other concerns (Goodenow, 1993). Accordingly, the influence of belonging upon other at risk behavior, in addition to suicidal behavior, was also studied.

**Relevance of the thwarted belongingness construct.** The construct of thwarted belonging was chosen for examination due to its unique potential to contribute to the body of social work research. Clients in public agencies, non-profits, and private clinics (just a few environments in which social workers serve) frequently feel unattached, isolated, alone, and desperate. Social workers serving such clients would benefit from having an improved understanding of their client's needs, specifically the needs that are associated with belonging. Information regarding *adolescent* belonging, informed by ethnicity, gender, and age, is especially scarce. Information provided in this study can enrich the body of literature, and assist

social workers in their efforts to better serve their clients. This research provided information which can assist social workers in protecting clients from further risk.

### **Purpose of the Study**

The purpose of this study was to develop a Sense of Belonging Measure, which was created specifically for this study. The measure was used to examine whether and how the construct, thwarted sense of belonging, applied to adolescents, specifically by gender, age, and ethnicity. The measure was also used to examine whether or not there was a difference between males and females, in the estimated mean scores of sense of belonging. In addition, the Sense of Belonging Measure was used to examine whether or not there was a difference between ethnicities in the estimated mean scores of sense of belonging. Finally, the Sense of Belonging Measure was used to examine whether or not there was a difference between adolescent age groups, in the estimated mean scores of sense of belonging.

### **Rationale for the Study**

**Need to belong.** Chubb and Fertman (1992) described the need to belong as a basic human need. Male and female adolescents reported fewer internalizing and externalizing problems when they felt a sense of belonging (Newman, Lohman, & Newman, 2007). Understanding and addressing the *adolescent's* sense of isolation and disconnection can assist the social worker in assessing a plethora of at risk behaviors beyond the risk of suicidal behavior.

However, a lack of research exists regarding the adolescent's need to belong. Accordingly, examining the construct of thwarted sense of belonging and introducing the variables of age, ethnicity, and gender provide a necessary contribution to the body of literature. Such an examination has utility for the social worker for the following reasons:



To assist in the protection of adolescents in the U.S., and to add to the scarce availability of literature addressing adolescent sense of belonging, a study of belonging was warranted. Examining adolescent sense of belonging and its association with not only suicidal behavior, but at risk behavior in general, was necessary. Importantly, literature reviewed for this study was *only* found in journals *other than* social work journals. Clearly, a literary contribution from the field of social work regarding the importance of adolescent sense of belonging was overdue.

It is important that social work practitioners understand the importance of a sense of belonging for their adolescent clients. Practitioners will make more informed decisions in assessment and treatment as they understand not only the importance of belonging, but the influence of ethnicity, gender, and age upon sense of belonging. It is important that social workers disseminate this study's information to their immediate clients, and to the broader community.

The broader community in this sense includes *any system*, (e.g. family, school, public agency, and private organization) which includes adolescents. Informed by research regarding adolescents' need to belong, practitioners within each system will be enabled to utilize informed assessment and treatment for the benefit of their adolescent clients. Such practitioners will be enabled to act pre-emptively to assure that adolescents who have a limited sense of belonging are recognized, treated, and thereby prevented from growing vulnerable to at risk behaviors.

### **Research Questions**

The research investigated if and how the construct of thwarted belonging applies to the adolescent population, with specific focus on gender, ethnicity, and age.

1. Are theoretically proposed factor groupings for the Sense of Belonging Measure (Parent Belonging, Family Belonging, Peer Belonging, and Ethnic Belonging) replicated in empirical factor analyses of national survey data?
2. Do the variables on the Sense of Belonging Measure actually measure the concepts that the literature identifies as being related to adolescent belonging?
3. Utilizing the Sense of Belonging Measure to measure belonging for adolescents, does the construct, “thwarted sense of belonging,” apply to adolescents, specifically by gender, ethnicity, and age?
  - a. 3.1 Is there a Main Effect of gender on sense of belonging?
  - b. 3.2 Is there a main effect of ethnicity on sense of belonging?
  - c. 3.3 Is there a main effect of age on sense of belonging?

In order to determine whether and how the construct, thwarted sense of belonging, applies to adolescents, by gender, ethnicity, and age, terms must be defined. Because several definitions could be used for any given term, an examination of the literature was performed to provide clarity. The terms are divided into the following: key terms, terms of identity, terms of designation, and terms of suicidal behavior. Please see Definition of Terms in preliminary pages.

### **Delimitations**

This study used secondary data retrieved from the National Comorbidity Survey-Adolescent Supplement (NCS-A, 2001-2004) which surveyed DSM IV mental disorders among adolescents ages 13-18 in the U.S. The survey was conducted from February 2001 to January 2004, in the coterminous states of the U.S. A total of 10,148 adolescents, aged 13-18 years,

completed interviews. The sample was based on a dual framed design in which one sample was recruited from the National Comorbidity Survey-Replication (NCS-R, 2001-2003) households and the other from a representative sample of schools in the same communities as the NCS-R households. Further descriptions of these surveys are found in Chapter 3.

This study presented an opportunity to assess the need to belong for adolescents, within the context of the NCS-A. However, respondents were requested to identify themselves as Non-Hispanic White, Non-Hispanic Black, Hispanic, and Other. “Other” was constructed from other smaller response categories. Ethnicities examined in *this* study were those mentioned above. In the data analyses of this study, the variables of Non-Hispanic White, Non-Hispanic Black, and Hispanic were used to represent the term “race” which, in this study, was a crude measure of ethnicity. Studies of Hispanics were specified as “Hispanic,” although the two terms, “Latino” and “Hispanic” were used interchangeably by the U.S. Census Bureau (Humes, Jones, & Ramirez, 2011).

As this study addressed issues of ethnicity, the ethnicities studied in the literature review were specified. In the methodology and data analysis, the terms Non-Hispanic White, Non-Hispanic Black, and Hispanic, were used, as those were the terms used in the NCS-A. Studies of African-Americans presented in Chapter 2 were specified as African American. Otherwise, assume that individuals mentioned in the studies were of the White majority.

The NCS-A respondents were asked to identify themselves as “male” or “female” in a category designated as “Sex.” No choice was offered on the survey form for the respondent to identify themselves in any other way that the respondent may have preferred. Therefore, the data

was categorized according to “male” and “female.” In the data analyses of this study, the variables of male and female were used to represent the term “sex” which, in this study, was a crude measure of gender.

The National Comorbidity Survey (NCS-A) asked adolescent respondents about their families. The questions asked simply about “your family.” Various family configurations were not specified in the NCS-A, and were not specified in this study’s data analysis.

Data for the NCS-A study was free and available through the University of Michigan’s Inter-university Consortium for Political and Social Research (ICPSR). Upon submission and approval of an ICPSR data application packet, access to the data was granted by ICPSR. The contact person for the university’s website was Mr. Arun Mathur (A. Mathur, personal communication, April 22, 2016).

Regarding usage of the NCS-A survey instrument, the usage requirement stated that, according to the “fair use” law, the instruments are “not to be used for any purpose other than private study, scholarship, or research” ( National Comorbidity Survey-Adolescent Supplement, 2016).

Certain aspects of intersectionality were not be presented in this study. The missing aspects of intersectionality (e.g. income, class, poverty) will not be discussed, as that data was not provided in the NCS-A. Therefore, a detailed presentation of intersectionality was beyond the scope of this study (Discussion with Dissertation Committee, 06/01, 2015).

### **Researcher’s Perspective**

**Personal statement.** Working as a clinician in the Child and Family Assistance Center, located within the hospital at Ft. Carson, Colorado, I interact throughout the day with adolescents, whose parents are active duty military personnel. These active duty parents are

stationed literally around the world: at times the family members are members allowed to accompany the service member parent/s to their duty stations; at other times, accompaniment is not possible. Children who remain stateside frequently live with the remaining parent, or, if both parents serve, the adolescents live with family friends or extended family members.

Because the military represents a diverse population, countless ethnic groups, including individuals of all ages, are represented in our patient clientele. Daily, I hear ongoing stories of adolescents moving, changing schools, changing friends, changing homes, moving across country, moving back to Ft. Carson, moving overseas, and then moving back stateside. Parents are separated from children, children are separated from one another, and immediate family members are separated from extended family.

Do these adolescents feel that they belong, anywhere? Do they feel that they belong to their own families that are disrupted by deployments and trainings? Do they feel that they belong to their schools, populated by other displaced children? Do the students feel that they belong to their families, which are separated, reconfigured, reunited, and separated and reconfigured again? Do they feel that they belong to their communities, which change every year? This study addresses several questions that intrigue me as a clinician working in a mental health clinic. I am grateful for the opportunity to search for answers.

## Chapter 2: Literature Review

### Introduction

“Humans have the need to herd, to flock, to join, and to belong” Maslow (1987, p. 20).

An examination of construct of adolescent sense of belonging and the relevance of that construct to at risk behavior is provided in this literature review. The variables of gender (male and female) and ethnicity (White, African-American, and Hispanic) are examined, regarding the adolescent population. A review of the facets of human development, ethnicity, gender, and at risk behavior, and biases associated with those facets, are explored. Throughout the literature review, support for the variables contained in the Sense of Belonging Measure, are emphasized.

Literature examining the ethnic and gender aspects of adolescent belonging is sparse. Regarding the literature addressing adolescent sense of belonging, the primary body of literature involves the study of White European adult males. Ethnic consideration of adolescent males and females, addressing adolescent sense of belonging is scarce. Presented in this chapter is a compilation of the literature that *is* available for this discussion, for the purpose of better serving minority adolescent males and females in their homes, schools, and communities.

The review is divided into seven sections. First, an overview of human development is provided. Gendered relationships, females’ need for more autonomy in relationships, and males’ need for more dependency in relationships is presented. Belonging is described and family relationships are examined in terms of the potential to provide freedom for growth, or to stymie, especially the females within the family unit. The relationship of females to their ethnicity, and the resulting effect upon males, is reviewed.

Second, conceptual frameworks emphasizing the scaffolding of the ecological system (e.g. social class, ethnicity, and race) are presented. Bringing attention to the pervasive influence of racism, the developmental process of minority youth is discussed. Human development is considered within the context of specific ecological circumstances.

Beyond discussing belonging as a basic human need, the third section describes the need to belong as a universal need with cultural implications. Because issues of inclusion predominate in adolescence, the adolescent sense of belonging is examined. The reasoning for the interchangeable use of the terms “belonging” and “sense of connectedness” closes this section.

Systems of belonging are presented in section four. Various configurations of family are discussed, followed by parental belonging. Components of school belonging are reviewed, as well as peer belonging, in terms of individual and group belonging. Ethnicity and belonging are discussed in section five; gender and belonging are examined in section six.

Despite a paucity of information in the literature concerning thwarted belonging and adolescent suicide, the literature that *is* available is reviewed in section seven, providing an ecological perspective of adolescent suicidal behavior as impacted by the thwarted sense of belonging. The theoretical undergirding of this study closes this chapter.

## **Human Development**

**Bias of life span theorists.** The Interpersonal Theory of Suicide (Van Orden, et al., 2010) is one of many theories that embrace a masculine perspective in viewing human behavior and development. Life span theories are primarily based upon the lives of males and have failed to account for the experiences of females. Tracing the extent to which psychological theories of human development have revered a masculine view of human life, Gilligan (1979) examined the assessment of gender differences by life cycle theorists. The differences between the genders are

being rediscovered in the social sciences, as theories considered to be sexually neutral are found instead to reveal bias.

**Intimacy and individuation.** The process of individuation assists the individual in becoming distinguished from others around him or her. Chodorow (1974) posited that feminine personality defines itself in relation and connection to other people, more than the masculine personality. For example, women were found as less individuated than men; their ego boundaries were more flexible than men's. Due to differences in the character of the early mother-child relationship, the earliest mode of individuation differed for males and females.

For males, separation and individuation were critically tied to gender identity because separation from the mother, culturally speaking, was essential for the development of masculinity. For females, issues of femininity were not found to be problematic in the same way, as females did not depend on the achievement of separation from the mother. Male gender identity was threatened by intimacy, as masculinity was defined through *separation*. Female gender identity was threatened by individuation as femininity was defined through *attachment* (Chodorow, 1978).

**Intimacy precedes identity.** Erikson (1968) however, posits a perspective that is counter to that of Gillian (1979) and Chodorow (1978). Erikson posited that females *delay* their identity formation as they prepare to attract a husband "by whom their identities will be known" (p. 437). For men, according to Erikson, *identity*, precedes intimacy and generativity in the cycle of human separation and attachment. For women, according to Erikson, *intimacy* and *generativity* appear to be combined.



**Adolescent males and females.** According to Stein (1983), “adolescence represents the first point in development when females receive intense social pressure to be feminine, socially successful, and attractive to boys” (p. 241-242). Simmons, Blyth, and McKinney (1983) reported that a central task of White adolescent females was to develop greater independence from parents. The White females studied were significantly more likely to take the bus alone, more likely to be left alone if parents were not at home, more likely to make their own decisions, and more likely to want independence.

Noting these differences in cultural expectations of males and females, it followed that adolescence could be experienced as a particularly difficult time in female development. At age eleven, White girls tended to experience a decrease in sense of self-esteem (Gilligan, 1991). Hispanic females experienced a steeper drop a few years later. African-American females tended to keep their feelings of self-worth, but perhaps at the expense of dissociating themselves from school and disagreeing publicly with their teachers. Because asymmetry between females’ and males’ development exists, Gilligan (1990) suggested at the time of adolescence, females faced a psychological crises in which females were more prone to developing psychological difficulties in adolescence, whereas males were more likely to suffer psychological wounding in early childhood (Gilligan, 1990).

***Shutting down.*** Stern (1991) introduced the concept of adolescent females “disavowing the self,” of devaluing perceptions and feelings (p. 105). The “disavowing self” phenomenon occurred in girls who functioned well in school as well as in those who had symptoms of depression. The literature described this process as normative. However, Stern described this shutting down or repression in terms of female passivity. Contemporary researchers of female development described adolescent girls as seeming to give up their own authority.

Psychological theories emphasize the critical role of relationships in enhancing or inhibiting one's ability to value one's self. The interplay between self and other has particular significance in adolescence. Adolescent females enter a developmental crossroads where maturity's path requires separation but womanhood's path requires connection. The prospect of disavowing the self may be an attempted solution (Stern, 1991, p.113).

***Emotional connections.*** In an approach similar to that of Stern (1991), Miller (1991) posited that the notion of a "self" does not fit women's experience. Miller challenged Erikson's (1963) argument that, in the first stage of life, the prominent goal was the development of trust. Miller posited that for *all* infants, but encouraged more in females, the child began to be like and act like the main caretaker, not to *identify* with that person as a figure described solely by gender, but with what that person was *actually doing*. The infant began to develop an internal representation of itself as a "being in relationship" (p. 12). This being in relationship reflected what was occurring *between* people. The child experiences a sense of comfort only as "they are both engaged in an emotional relationship" (p. 13).

***Relational process.*** Building upon the theme of the relational self in human development, Kaplan, Klein, and Gleason (1991) proposed a model of *late* adolescent female relationships wherein the core self-structure of the female emerged from the experience of a relational process. Relational sense of self developed from female's involvement in progressively complex relationships, characterized by, among other things, caring about the process of relationship. A relational sense of self model suggested a fluid and interconnected process in which "early modes of being become the base for a continuation...of the relational self" (p. 124).

Kaplan et al.'s (1991) model opposes that of Stern (1991). Kaplan et al. suggested that one's ability to engage in conflict, while maintaining the more basic affirming features of the

connections, was an integral part of healthy development. This opposes Stern's (1991) model of disavowing the self.

According to Kaplan et al. (1991), conflict must be understood by the adolescent as an aspect of personality which gains its meaning to the adolescent girl in terms of her relation to her inner self. Therefore, conflict was viewed as one mode of intensive engagement, not as the leading edge of separation and disengagement. Conflict was necessary and important for each person to change and grow.

Traditional life cycle theories oppose one another. They have failed to account for the experiences of females, and the theories have failed to account for the developmental experiences that occur outside of the dominant culture. For example, the developmental experiences of the African-American or the Hispanic adolescents do not parallel those of the dominant culture. The differences in the developmental trajectory of African-Americans and Hispanics are discussed below.

### **Human Development and Ethnicity**

**Development in minority youth.** According to Garcia-Coll, Lamberty, Jenkins, McAdoo, Crni, and Garcia (1996), the interaction of social class, ethnicity, culture, and race has not been a part of mainstream theoretical formulations in the discipline of human development. Most of the prevalent conceptual frameworks do not emphasize the social stratification that comprises the scaffolding of the ecological system (for example, social class, ethnicity, and race). This lack of awareness of social stratification exists even in organizational, transactional, and ecological theoretical frameworks that are recognized in the developmental literature (Garcia-Coll, et al., 1996).

Reviews of published research revealed a pattern of omission and neglect. Such omissions included: (1) the absence of longitudinal investigations regarding the normative development of minority youth; (2) an emphasis on outcomes instead of process; (3) an emphasis on between group comparisons while intragroup variability is ignored; and (5) a minimization of the effects of racism, prejudice, discrimination, and segregation on the development of minority youth (Garcia-Coll et al.,1996). These exclusions undermined a comprehensive understanding of the minority child and raised questions about the validity of empirical knowledge about youth in general (Garcia-Coll et al.).

**Afrocentrism.** According to Oliver (1989) a major source of psychological, social, political, and economic dysfunction among African-Americans was found to be the failure of African- Americans to develop an Afrocentric cultural ideology. Afrocentrism is a cultural ideology and worldview, mostly limited to the United States, and is dedicated to the history of African Americans. Oliver argued that African-Americans have not developed an Afrocentric cultural ideology. Therefore, they have been prevented from developing the sort of collective philosophy, definitions, cultural traditions, and institutions that other American groups have established to facilitate their survival and progress in American society.

The Afrocentric ideology is based on the values of classical African civilizations. Afrocentrists argued that the social problems among African-Americans resulted from the imposition of a Eurocentric world view on African-Americans. For instance, because African-Americans are a racial group that has been denied equal access to political, economic, educational and employment opportunities, a substantial number of African-American males lack the skills and resources that are necessary to successfully enact the traditional male role (Oliver, 1989).

**African-American adolescent males.** Even within the Afrocentric framework, researchers disagree regarding the psychological, social, political, and economic difficulties which exist among African-Americans. Roberts-Douglass and Curtis-Boles (2013) disagree with Oliver's argument that the difficulties mentioned above stem from the lack of a fully developed Afrocentric cultural ideology.

Consistent with the Afrocentric perspective, Roberts-Douglas and Curtis-Bowles (2013) found *family* to be the most significant environment from which individuals derived a sense of their masculine identities. Depending upon one's resources or exposure to other images, perceptions of African-American masculinity varied. Serving as role models, the impact of men, especially the father and grandfather, was particularly salient. Roberts-Douglas and Curtis-Bowles found the family environment of African-American male adolescents to be the primary, and most effective predictor of positive development overall.

**African-American adolescent females.**

***Model of resistance.*** Similar to African-American adolescent males, African-American adolescent females experience difficulty in meeting traditional gender role standards. For example, Robinson and Ward (1991) found that African-American females must identify and transcend systemic barriers. Transcending such barriers would necessitate their drawing upon the strengths of their culture and history, requiring "*resistance*" to excessive individualism and negative images of the self (p. 97).

This "resistance model" proposed by Robinson and Ward (1991, p. 97) integrated the socialization of African-American female adolescents, and helped them to build upon their indigenous source of strength by learning to trust their own voices. According to Robinson and Ward, these females must oppose those ways of being that are disempowering to the self.

African-American adolescent females could be empowered through their association with the long history of black women who were freedom fighters and social activists.

Along with the African-American adolescent, Hispanic adolescents struggle with experiences of discrimination and devaluation as well. During this crucial time of identity development, the Hispanic adolescent grapples with cultural expectations as well as demands from the dominant society. Therefore, an examination of the experience of the Hispanic adolescent is also necessary.

**Hispanic Culture.** In the context of the United States, Hispanics are classified as a monolithic ethnic group. Recent attention has been given to Hispanics regarding their experiences of discrimination. Those experiences include mistreatment based on differences in language and immigration status (Zeiders, Umana-Taylor, & Derlan, 2013).

Zeiders, et al. (2013) reported that Hispanic adolescents were frequently living within environmental situations in which they were an ethnic minority and which were often described as stressful environments for development. However, Zeiders et al.s' study also provided evidence that despite these environmental difficulties, Hispanic youths were progressing through high school, exhibiting increases in self-esteem and relatively low levels of depressive symptomatology. The authors' findings suggest that the *typical* developmental pattern for Hispanic youths was not characterized by maladjustment. Rather, the authors' findings described a resilient group, able to adapt to the many difficulties experienced during adolescence.

**Hispanic gender socialization.** Along with environmental cultural challenges, Hispanic youth in the United States struggle with family cultural dynamics. According to Raffaelli and Ontai (2004), research suggested that considerable variation existed among Hispanic families in how children were socialized regarding gender and sexuality. Some researchers posited that

aspects of family life related to gender and sexuality continued because attitudes linked to gender and sexuality were deeply engrained and contained powerful emotions. Hispanic adolescents have been found to experience differential gender socialization while growing up (Raffaelli & Ontai, 2004) .

*Hispanic Females.* Zimmerman (1991) studied a group of culturally traditional Hispanic adolescent females seen in a clinic devoted to crises intervention. The group experienced their mothers as expecting “traditional care” to be provided by their daughters (p.227). “Traditional care” referred to the responsibility to the family, connectedness, and providing for the needs of others, regardless of the cost to the self (p. 227). Presenting the traditional image of female selflessness was expected for the daughters. To connect with their mothers, the girls felt that they must become what they were told to become, but at a cost of the loss of self. Their perceived “failure” included the message that their own voice was less important than the demands of their mother and the cultural expectations (p. 233). Zimmerman posits that the girls’ suicide attempts were desperate efforts to resolve the clash between their own voice and the confining voice of their culture, personified as their mothers. The girls felt that they could not risk individuation, which would mean separation from their mothers, and from their culture. Their perceived loss of belonging to their mothers, and to their culture, felt like too great a risk for these girls to take. Their inner conflicts resulted in suicide attempts. The White female adolescent’s developmental trajectory clearly deviates from the expectations held for the Hispanic adolescent females that Zimmerman studied.

The findings of Cupito, Stein, and Gonzalez (2015) differed from those of Zimmerman (1991). Cupito et al. contended that although Hispanic adolescent females had more pressure to embody family cultural values, Hispanic females were more connected to family and endorsed

higher familial cultural values. Accordingly, these values could have been more protective for females against a number of psychological outcomes. Similarly, Zeiders et al., (2013) found a *decline* in reported symptoms over the developmental course of female Hispanic adolescence. The findings of Garber, Keiley, and Martin (2002), counter those of Zeiders et al. Garber et al. found increases in Hispanic female adolescents' depressive symptoms during the high school years.

***Hispanic Males.*** Zeiders et al. (2013) found perceived ethnic discrimination emerged as a strong predictor of initial levels of self-esteem among Hispanic male adolescents. Compared to Hispanic females, self-esteem in Hispanic male adolescents was found to be more vulnerable to perceptions of ethnic discrimination during early adolescence.

However, Zeiders et al. (2013) found that Hispanic male adolescents reported significantly higher self-esteem than did female adolescents at *each* developmental period. These differences were theorized to be partially due to influences on adolescents' gender role development and societal influences. Hispanic male adolescents were socialized to adhere to more traditional, assertive, masculine behaviors and such behaviors were more tied to self-esteem than were feminine traits for the females.

**Summary.** The discipline of human development, within mainstream theoretical formulations, has excluded the interaction of social class, ethnicity, culture, and race. The social stratification that comprises the scaffolding of the ecological system (i.e. social class, ethnicity, and race) is not emphasized by the prevalent conceptual frameworks. This deficit exists, even in ecological theoretical frameworks that are recognized in the developmental literature (Garcia-Coll et al., 1996).



Development in ethnic youth, and youth of the dominant culture, must be considered within the context of specific ecological circumstances. Developmental differentiation is largely a function of the dynamic *interaction* between the person and his or her ecological system. Within this dynamic interaction a sense of belonging develops.

## **Belonging**

*Need for Belonging.* The term “belonging” found prominence within the hierarchy of needs described by Maslow (1970). Maslow argued that individuals have a psychological and basic human need to feel that they belong. Maslow described the need for belonging as the “hunger for contact, for intimacy, for belongingness, and said that “maladjustment and more severe pathology” would occur when belonging needs are unmet (p. 44).

*Universal need.* Baumeister and Leary (1995) described the need for attachment as a fundamental motivation, and developed a model of belonging upon which Van Orden et al. (2010) developed their construct of thwarted belonging, in their Interpersonal Theory of Suicide (ITS). Beyond a basic human need, feeling a sense of belonging to a wider social group is considered a universal need (Baumeister & Leary). An inverse relationship between belonging and anxiety is posited by Hagerty, Lynch-Sauer, Patusky, Bousema, and Collier (1996), who suggested that the two defining attributes of *sense of belonging* are: (1) “the sense of being valued, needed, or important with respect to other people...” and (2) “the experience of fitting in...with other people, groups, or environments through shared...characteristics” (p. 236). The sense of belonging and the sense of acceptance share the attribute of valuable involvement in which the person feels loved, needed, and valued by others. As individuals share similar characteristics that allow the individual to feel part of a group, the sense of fit is implied (Hagerty et al., 1996).

In addition to describing “sense of belonging” as a universal need, Baumeister and Leary (1995) proposed that the need to belong is innately constructed. They argued that humans are naturally driven toward establishing and sustaining “belongingness” (p. 499). Baumeister and Leary expected that although there would be individual differences in cultural and individual variations regarding how people experience the need to belong, this need should be found to some degree in all humans.

**Adolescent belonging.** Although the need to belong is present in all humans in all developmental stages, Wallace and Chhuon (2012) reported that *adolescent* sense of belonging “emerges as a key phenomenon to understand” (p. 123). Issues of inclusion predominate throughout *all* of adolescence, according to the researchers. However, Goodenow (1993) counters Wallace and Chhuon, positing that the need to belong and have valued membership in a setting may take precedence over all other concerns during *early-and mid-adolescence*.

**Adolescent belongingness/connectedness.** Baumeister and Leary (1995) suggested the “sense of connectedness,” described as “caring and frequent activity,” follows from the need to belong (Karcher, 2001, p. 2). Karcher, describing the development of “The Hemingway: Measure of Adolescent Connectedness” referred to Baumeister and Leary’s belonging model as informing the measure’s development. Karcher, and Baumeister and Leary, used *belonging* and *connectedness* interchangeably. Therefore, throughout this literature review, the terms belonging and connectedness will be used interchangeably.

Hagerty et al. (1996) described this sense of belonging as “the experience of personal involvement in a system or environment so that persons feel themselves to be an integral part of that system or environment” (p. 236). Belonging to family, parents, school, and peers comprise

the four systems of belonging examined in this review. Rationale for the four systems chosen is presented below.

### **Adolescent Developmental Stages and Belonging.**

Adolescents evolve, somewhat along a continuum, from their childhood relationships with parents, into intimate relationships with peers, and from the desire for belongingness in the family, into desire for belongingness in a peer group (Chen, 1998). In addition, a keen sense of self-consciousness of one's social value and self-presentation emerges during early adolescence. Following is a description of sense of belonging, presented according to adolescent development. Sense of belonging as experienced by younger adolescents, approximate ages of 11-14, will be presented in the first section. The second section will describe sense of belonging as experienced by older adolescents, ages 15-18.

**Online communication.** Bonetti, Campbell, and Gilmore (2010) studied adolescence, online communication, loneliness, and sense of belonging, regarding pre-adolescence (ages 10-13) and early adolescence (ages 14-16). The researchers discovered a significant difference between pre-adolescents and early adolescents' rankings regarding the amount of online communication in which they engaged. Pre-adolescents indicated that they communicated online more frequently than did early adolescents about (among other things) video games, online games, social inclusion, or chatting with friends and family. Early adolescents reported communicating online more frequently than did older children about plans for social events, relationships, things that bothered them and serious problems.

The researchers reported that the early adolescents typically confide in their friends about their daily problems more frequently than do pre-adolescents. Pre-adolescents visited chat rooms to discuss entertainment topics, whereas younger adolescents most frequently communicated

about lifestyles and relationships. It seemed that pre-adolescents and early adolescents used the Internet as a communicative “protected” environment, providing a forum for self-expression (Bonetti et al., 2010).

***Social networking systems.*** Quinn and Oldmeadow (2013) also studied the use of on-line communication and specifically, social networking sites (SNS). SNSs are “web based services that allow individuals to (1) construct a public or semi-public profile within a bounded system; (2) articulate a list of other users with whom they share a connection, and; (3) view and traverse their list of connections and those made by others within the system (Boyd & Ellison, 2008, p. 211).

The transition from pre-adolescence to early adolescence produces an increase in the use of social networking sites. Little is known, however, about the social networking of youth ages 9-13 years old. Quinn and Oldmeadow (2013) examined the relationship between the use of SNS and the feelings of belonging for 9-13 year olds.

Belonging to friendship groups becomes progressively more important in the move from pre-adolescence to early adolescence. Early adolescent friendships are a key source of social support, and play an important role in identity development. During early adolescence, the youth also begin to prefer spending time with friends instead of adults. The move from primary to secondary school and belonging to a group of friends can help to ease the transition from parent and family as a primary source of belonging, to friendships (Quinn and Oldmeadow, 2013).

For males and females, communication online has been found to be related to closeness to friends regarding pre-adolescents and early adolescents. However, evidence exists that males may benefit from communication online more so than females. Males as young as 10 years old, it

appeared, valued online communication for self-disclosure more so than females, and, for males, online self-disclosure increased friendship quality (Quinn and Oldmeadow, 2013).

In their research, Quinn and Oldmeadow (2013) discovered no significant differences in *gender* in the usage, or frequency of usage, of SNS. However, regarding *age*, SNS users were found to be significantly older than non-users, and age was significantly related to usage intensity. In this aspect, their research results are similar to those of Bonetti et al. (2010).

Among 12-13 year old males, those who used SNS reported higher feelings of belonging to their friendship group than those who did not use SNSs. Furthermore, among all SNS-using males, SNS intensity was positively associated with feelings of belonging. This suggests that perhaps SNSs may be important for males' feelings of belonging to their friendship group (Quinn and Oldmeadow, 2013).

Among 9-13 year olds, males' friendship groups featured *lower* levels of acceptance, closeness, and self-disclosure than females' friendship groups. In the world *offline*, the self-disclosure of males increases at around age 13/14 years, which is later than that of females. Nonetheless, research suggests that perhaps the SNSs might be valued more by males as a space to practice self-disclosure skills. As frequent interaction, caring, and intimacy can assist in achieving a sense of belonging, interactions on SNSs might possibly play a key role in feelings of belonging among males ages 9-13 (Quinn & Oldmeadow, 2013).

**Gender and ethnicity.** Differing in research focus from Bonetti et al. (2010) and Quinn and Oldmeadow (2013), Karcher and Sass (2010) assessed measurement invariance across gender and ethnic groups of middle schoolers, ages 11-13. In developing their measure of adolescent connectedness, the researchers found statistically significant gender differences in observed means, regarding connectedness to friends, siblings, school, and peers (p. 284). Gender

differences were *not* found regarding connectedness to parents. Regarding feeling connectedness to the school environment, the researchers found *no* ethnic group differences on school connectedness.

**Relationships that foster growth.** An instrument that studied growth fostering relationships among early and mid-adolescents (sixth-ninth graders, ages 11-14) was developed by Liang, Allison, Kenny, Brogan, and Gatha (2010). *Social belonging* was operationalized as school engagement and a general sense of social support. The researchers found that, to facilitate a sense of belonging, friendships were important for sixth graders, and even more important for ninth graders. Support from community was more important to the younger adolescents than the older group.

Liang et al. (2010) found that males tend to rate their associations with a mentor or close friend *lower* regarding relational health than do females. However, relationships with community groups, such as church or Scouts, were similar across gender. *Younger* (11-12 year old) students rated their relationships and their friendships with a community *lower* than the *older* (13-14 year old) students. Relationships with a mentor were similarly rated by sixth and ninth graders.

The study's finding that 11-12 year olds rated their close friendships and relationships with community groups lower than do 13-14 year old adolescents is congruent with the *increasing* value placed on group relationships and friendships during adolescence. The growing ability across adolescence to contribute to meaningful and intimate relationships is reflected in Liang et al.'s (2010) study.

**Mental health and group belonging.** Newman, Lohman, and Newman (2007) posited that “Given recent evidence that half of all lifetime cases of mental illness begin by age 14, ... the role of a sense of group belonging for adolescent adjustment has to be given greater attention” ( p. 257). Accordingly, in their study of peer group belonging, Newman et al. examined male and female youth with a mean age of 14.67. The researchers found a significant relationship of group membership to fewer internalizing problems. Those who said they were in a group had lower scores of internalizing problems, and gender was significantly related to both internalizing problems and externalizing problems. Males scored higher on externalizing problems, and females scored higher on internalizing problems.

This study provided further understanding regarding the importance of group belonging, group affiliation, and the salience of group membership. The results shed light on the strong relationship between mental health and a sense of group belonging. The results revealed that both boys and girls report fewer internalizing and externalizing problems when they feel a sense of group belonging (Newman et al., 2007).

**Three stages of adolescence compared.** Chen (1998) studied the “quantity” and “quality” of relationships that influence adolescent belongingness to family, friends, and romantic partners (p. 17). Items on the Network of Relationships Inventory (NRI, Furman & Burmester, 1985) were utilized to describe *relationship quantity* (amount of time invested in the relationship) and *relationship quality* (items on the scale that describe the quality of the relationship). In addition, Chen investigated how such relationships influence feelings of loneliness. Middle school (“early” stage adolescence,) high school (“middle” stage adolescence,) and college students (“late” stage adolescence) were studied (p.22).

*Early stage.* The interaction between relationship *quantity* with the participant's *mother* and *father* and its relation to belongingness was most significant in the *early* adolescent group. For early adolescence, greater belongingness to both friends and family were related to less loneliness. Interaction between relationship quantity *and* quality with friends was related to belongingness to friends; relationship quantity *and* quality with participants' *fathers* and *siblings* were related to belongingness to family (Chen, 1998).

For *middle* adolescents, greater family belongingness and belongingness to friends were related to less loneliness. Interaction between relationship quantity *and* quality with parents *and* *siblings* were related to family belongingness, while the interaction between quantity *and* quality with friends was related to belongingness with friends (Chen, 1998).

For *late* adolescence, belongingness to a friend was related to less loneliness, while family belongingness was not significantly related to less loneliness. The relationship quality *and* quantity with father *and* *siblings* were related to belongingness to family. The relationship quality *and* quantity with friends were related to belongingness to friends. Contrary to prediction, the expected interaction for relationship quantity and quality with participants' *mothers* to family belongingness was not significant. Not surprisingly, the importance of belongingness to a romantic partner, and relationship quantity, was found to be higher in the late adolescent groups than in the younger groups (Chen, 1998).

For *all three adolescent stages*, the study results support the importance of the quality *and* quantity of *father* and *sibling* relationships with family belongingness. However, for early *and* late adolescents, the quality and quantity of *mother* relationships in respect to feelings of



belongingness to family was not salient. These findings appear to indicate that *father relationships* are the most influential factor in adolescents' feelings of belongingness to family (Chen, 1998).

The relationship between loneliness and friendship belonging is very clear and consistent for all three stages. For *early* and *middle* adolescents, family belongingness significantly affects loneliness, but not for late adolescents. Perhaps late adolescents are more prepared to move away from family relationships, with the goal of individuating and forming other significant relationships (Chen, 1998).

*Importance of inclusion.* For late adolescents, social inclusion is frequently defined in terms of education and, later on, employment. Rose, Daiches, and Potier, (2012) contend that a hyper focus on inclusion can result in programs that attempt to place young people into particular areas of activity, such as education and employment, while ignoring the value of care giving, volunteer work, friendships, leisure activities, or similar areas of inclusion. The researchers studied what belonging, and being included meant to older adolescents and individuals ages 16-24. Specifically, young people not in education, employment, or training were examined in the qualitative study.

From the analysis, the following themes were identified: (1) "acceptance," which is described as the building block of inclusion; (2) "learning why I don't matter," which occurs when power and discourse determine inclusion, and (3) "keeping up or falling behind" which occurs when the discourse of inclusion becomes internalized (Rose et al., 2012, p. 261).

Feeling "*included*" was described as a sense of informal, interpersonal acceptance. Young people perceived acceptance by focusing on others' interpersonal interactions. For

example, when others spent time with them, listened, were respectful, helpful, friendly, and warm, the older adolescents and young adults felt accepted (Rose et al., 2012, p. 261).

“*Recognition*,” such as acceptance and acknowledgement from peers or teaching staff, was described as important to their sense of belonging and feelings of acceptance. For example, the social structure of recognition, such as knowing that someone trusted or believed in the study participant, influenced their sense of inclusion and belonging. When socially valued structures of recognition were not received, a sense of exclusion and not belonging was experienced (Rose et al., p. 265).

Sense of inclusion also appeared to be influenced by a process of “*acknowledgement*.” Participants mentioned the significance of others making note of their strengths, which produced a feeling of self-acceptance for participants. A difference between acceptance by family and peers, and by those in power, was discussed by participants. For example, professionals such as youth workers and teachers acknowledged qualities such as skills and achievements; peers and family members acknowledged more personal qualities such as humor and personality. The findings revealed that positive attention from those in a position of power could shape the experience of inclusion and belonging for older adolescents and young adults (Rose et al., 2012, p. 262).

### **Systems of Belonging**

**Rationale for systems.** Baskin, Wampold, Quinana, and Enright, (2010) argued that for adolescents, a strengths-based moderator between peer acceptance and loneliness is the sense of belonging. Belonging may be established in peer groups at school but youth may also find belongingness through *other* social channels such as teachers, parents, extended family, or community groups. Therefore, Baskin et al. conceptualized belonging as having factors for

connection which included, among other factors: peers, mother, father, teachers, and non-teacher adults at school.

Findings of other researchers counter those of Baskin et al. (2010). For example, feeling more secure and connected to one's family *facilitates* connecting with others who are *outside* of the family (Malaquias, Crespo, & Francisco, 2014; Chubb & Fertman, 1992). The sense of connectedness with the family reinforces the adolescent's sense of connectedness to their social world. Consistent with the ecological approaches described above, Crosnoe and Elder (2004) reported that areas of comfort for adolescents include relationships from four primary settings of adolescent life: (1) the family, with its (2) parental relationships; (3) school, and (4) peer group. Malaquias et al.'s study, along with that of Crosnoe and Elder (2004) and Baskin et al., (2010), provided further support for a separate search in the literature investigating each domain of belonging. Those domains of belonging are examined below, as the systems of family, parent relationships, school, and peers are reviewed.

### **Belonging to Family**

***Family belonging defined.*** Family belonging is "...the degree to which the adolescent feels as though he or she is a member on an *equal basis* with the other members of the family" (Chubb & Fertman, 1992, p. 387). It is a "holistic construct that refers to the entire family, not to any specific relationship" within the family (King, Boyd, & Thorsen, 2015, p. 763). Various configurations of family belonging are reviewed in a separate section below.

***Family belonging, cohesion, and connectedness: synthesis.*** As family belonging is considered in this study, *family cohesiveness* and *family connectedness* will be used interchangeably as components of family belonging (King et al., 2015; Leake, 2007). Variables of family cohesiveness and connectedness will add to and inform the components of family

belonging which appear on the Sense of Belonging Measure. These family belonging components are presented throughout this literature review.

***Relevance of family belonging.*** The very first experience of belonging occurs in the family. The family is the main setting for human experience “from the cradle to the grave” (Mikesell, Lusteran, & McDaniel, 1995, p. vii). Family systems theory suggested that an adolescent’s perception of family belonging will be influenced by the quality of the relationships that exist between family members (King et al., 2015).

Adolescents with strong nuclear family belonging have low levels of loneliness, even if low levels of peer acceptance occur. Consequently, adolescents with strong nuclear family belonging do not appear to struggle with high levels of loneliness (Baskin et al., 2010). The researchers refer to the belongingness construct of the ITS (Van Orden et al., 2010), contending that their (Baskin et al.’, 2010) assessment of family belonging lends support to the construct of belonging.

In addition to low levels of loneliness, adolescents who experience a sense of belonging to their families are at low risk for psychological distress. Baskin, Stephen, and Slaten, (2014) found a significant relationship between family belonging and gang membership. Indeed, Baskin et al. (2010) posited that youth who do not experience a sense of belonging to their families frequently will find another group with whom to identify, such as gangs.

***Family belonging variables.*** Opinions vary greatly regarding family belonging variables. Some researchers have found that adolescents assess family cohesion by the perceived degree of closeness between family members (Lac, Unger, Basanez, Ritt-Olsen, Soto, & Baez-Garbanati, 2011). However, others have found that family cohesion is perceived as the extent that adolescents feel people in their families understand them, have fun together, and pay attention to

them (Crosnoe & Elder, 2004; King, 2015). Still others, such as McCubbin and McCubbin (1988, p. 249) found that “The family’s emphasis on acceptance, loyalty, pride, faith, trust, respect, caring, and shared values” are family coherence variables.

Duncan, Duncan, & Hops (1994) found that beliefs regarding the extent to which family members support, help, and are involved with one another describes family belonging variables. Nevertheless, “...the degree of individual autonomy experienced in the family system” is described by Olsen, Sprenkle, & Russel (1979, p. 5) as family belonging variables. Additional aspects of family coherence are trust, loyalty, respect, caring, turning to each other in times of crises, accepting individuals unconditionally, discussing fears and concerns, and expressing feelings (Allison, Stacey, Dadds, Roeger, Wood, & Martin, 2003).

It is important to address these aspects of family belonging. The same factors of family connectedness and family belonging mentioned above are also used as variables that comprise the Family Belonging domain. This domain is part of the Sense of Belonging Measure.

***Family configurations.*** As the importance of family belonging is discussed, it is helpful to provide clarification regarding diverse family compositions. The questions pertaining to families, found on the NCS-A (2001-2004), are the same questions that will be used on the Family Belonging domain of the “Sense of Belonging Measure.” Those questions refer to “family” and do not specify whether the family includes biological parents, step-families, foster families, or other family compositions. Following is a description of various configurations that can comprise a family. To further inform the Family Belonging domain found on the Sense of Belonging Measure, literature describing adolescent belonging within several family configurations is examined below.

## **Belonging and Family Structures**

**Stepfamilies.** Leake (2007) found that for adolescents living in stepfamilies, the most significant predictors of family belonging were the relationship quality between the adolescent and their biological parent. No significant difference in level of family belonging between adolescents who were in *stepfather* families and those in *stepmother* families were found. The sum of the individual relationships in the family appeared to contribute heavily to the whole sense of belonging.

However, the findings of King et al. (2015) differed from those of Leake (2007). King et al. suggested that family belonging might be especially difficult to attain in stepfamilies. The authors found that children living in stepfamilies reported lower levels of family belonging than children living in two-biological-parent families.

*Cohabiting Stepfamilies.* A cohabiting stepfamily is one in which the parents are not married and in which the children in the household are from previous relationships on the part of either parent. As asserted by Brown and Manning (2009), cohabiting stepfamilies “are even less institutionalized” than married stepfamilies, which are legally bound (p. 88). A core family process, predictive of wellbeing in cohabiting stepfamilies, was found to be *family belonging*. Adolescents in cohabiting stepfamilies rated their *family connectedness* as significantly weaker than those in either married stepfamilies or single-mother families. Compared with all of the existing marriage configurations, cohabiting stepfamilies were found to be associated with the lowest average levels of *family connectedness*.

**Foster Families.** Placement into a foster family is an option for children who do not have the opportunity to live with either biological or stepparents. A traditional foster family is a previously unknown family, recruited through social services, into which a child is received

(Hedin, Hojer, & Brunnberg, 2011). Hedin (2014) contended that, for a foster child, a sense of belonging resulted when the child felt at home, living with people the child felt close to, whom the child could trust, and from whom the child felt support.

For foster adolescents, important aspects of belonging reported by Hedin (2014) were family solidarity, practical and emotional support, family rituals, and family culture, which are shared norms, values, and aspirations. Taking part in mutual activities (e.g. laughing, having fun together, sharing meals together) provided family members with emotional energy and joy and were experienced as symbols of caring, “influencing the adolescent’s sense of belonging” (p. 166). Hedin’s study supports previous findings that solidarity and successful rituals in the foster family influence the sense of belonging.

**Kinship and network foster families.** A kinship foster family is a family which is biologically related to the foster child (Hedin, Hojer, & Brunnberg, 2011). A network foster family is a non-related, previously known family chosen by not only the adolescent, but also by his/her birth parent. Consistent with Hedin’s (2014) characteristics of belonging in *foster* families, the development of belonging in *kinship* and *network* foster families, resulted from family rituals and fellowship. As in the foster families mentioned above, participating in daily life with mutual activities were appreciated in kinship and network families, contributing to the fostered child’s sense of belonging (Hedin et al., 2011).

Although family-adolescent belonging is critical to the wellbeing of the adolescent, another important source of belonging for adolescents is the actual parental relationship, as the parent can provide a stable, caring relationship that is a central component of belonging (Timmons, Selby, Lewinsohn, & Joiner, 2011).

## **Belonging to Parents**

**Parent belonging defined.** Parent belonging is defined as the “adolescent’s perception of closeness and engagement with each parent in activities and engagement” (King et al., 2015, p. 762-763). It is “indicated by measures of parental involvement and/or children’s feelings of closeness to parents” (763).

**Parent belonging and connectedness: synthesis.** Parent cohesiveness and parent connectedness will be used interchangeably as components of family belonging in this study (Timmons, et al., 2011; King et al., 2015; Leake, 2007). Variables of parent cohesiveness and connectedness will inform the components of parent belonging which appear on the Sense of Belonging Measure. These parent belonging components are presented throughout this literature review.

**Relevance of parent belonging.** Parent-child belonging was measured by King et al. (2015) as a relationship distinct from family belonging. In Resnick’s (1997) study, *family context* variables explained 15% of the variability in emotional distress in adolescents, and *parent-family connectedness* was the *key* aspect of family context that accounted for this variability. Similarly, Hall-Lande, Eisenber, Christenson, and Neumark-Sztainer (2007) reported that the protective elements of family *connectedness* derived from the *connection* to at least one nurturing adult.

**Parent belonging variables.** Since parents may be particularly important in providing the “stable, caring relationships that are a central component of belonging,” the parental relationship represents an important source of belonging for adolescents (Timmons, Selby, Lewinsohn, & Joiner, 2011, p. 809). Adolescents feeling connected with their parents were found to be associated with lower levels of suicidal behavior, and also served as a protective factor in the year subsequent to the initial findings. In their study, Timmons et al. measured sense of



parental belonging by such aspects as feeling loved, cared for, supported, accepted, and the perception that the adolescent could rely on their parents and family.

Healthy adolescents need to sense the presence of not only love and support, but also boundaries and limits. In his theory of optimum levels, Bronfenbrenner (1994) contends that healthy offspring require a *balance* of control and support from their parents. A *moderate* level of boundaries and limit setting is described as ideal.

Parents CARE (P-CARE), described by Hooven (2013), is an adolescent suicide prevention program which educates parents about suicide risk. The absence of parental belonging and support, and the presence of parent-teen conflict, was a recurring theme presented in the P-CARE education. Hooven described P-CARE, responding to research about risk processes and family belonging.

**Relevance of the parental relationship.** Of all social relationships, the parent relationship was considered to be the most consistent protective factor regarding adolescent suicide. The parental relationship was found to be more consistently protective than even peer or school relationships. Descriptors of parental support included parental involvement, connection, support, and warmth (Hooven, 2013).

In their study of adolescents and social anxiety, Van Zalk and Van Zalk (2015) contended that care and connectedness with parents and friends collectively predicted a decrease in social anxiety. The study participants answered five statements regarding their feelings of connectedness to their mothers and fathers, respectively. Examples of such items included (1) “When I am angry, sad or worried, my mother can make me feel better;” (2) “I know my mother is there for me when I need her;” and (3) “My mother encourages me to pursue my dreams” (p. 350). The father’s items were reworded to match the above. The researchers found that

adolescents who felt more connected with their parents were less likely to increase in social anxiety over time.

Risk and protective factors for adolescents were studied by Taliaferro and Muehlenkamp (2014). An important protective factor that emerged to differentiate all three groups, for both genders, was parent connectedness. For example, two items that measured parent connectedness was “the amount that (the adolescent) can talk to the father/mother about problems,” and “how much the adolescent perceives that their parent cares about them” (p. 11).

The researchers identified parent connectedness as a very strong protective factor. Suicidal adolescents rated their parents as having less warmth and empathy, suggesting that the adolescents did not feel supported or listened to by their parents. Taliaferro and Muehlenkamp (2014) suggest that suicide risk assessments should address parent connectedness.

**Parent configurations.** Diverse parent compositions exist, and it is important that they be addressed in this study. Following is a description of parent configurations that can comprise a parent relationship. To further inform the Parent Belonging domain found on the Sense of Belonging Measure, literature describing adolescent belonging within various parental configurations is examined below.

The same questions that will be used on the Parent Belonging domain of the “Sense of Belonging Measure” are the same questions pertaining to parents, found on the NCS-A (2001-2004) survey. The NCS-A (2001-2004) survey questions refer to a male parent figure as “man who raised you” and a female parent figure as “woman who raised you.” The parenting questions do not specify whether the parent includes biological parents, step-parents, foster parents, or other parent compositions. Following is a description of parent configurations that can comprise a parent relationship.

## **Belonging and Parent Configurations**

**Step-parenting.** The vast majority of children living in stepfamily households reside with a stepfather rather than a stepmother. The perceived quality of the relationship between adolescents and their mothers and between adolescents and their stepfathers was found to be significantly associated with adolescents' feelings of family belonging (King et al., 2015). The individual relationships that adolescents have with their resident parents, both biological and stepparents, produced the greatest sense of belonging within their stepfamilies (Leake, 2007).

The findings of King et al. (2015) differ from those of Leake (2007). Sharing a variety of activities, and adolescent perceptions of closeness, were found to be measures of positive mother-child relationships and stepfather-stepchild relationships for Leake's study. For within-family relationships, the *mother-child* relationship was found to be the key. However, King et al. (2015) found that the mother-child *and* stepfather-child relationships were found to directly influence the extent to which adolescents felt that they belonged to their stepfamilies. Although the relationship most strongly related to family belonging was the mother-child relationship, King et al. found that close stepfather-stepchild relationships can have the potential to enhance children's feeling of belonging, but at a lesser magnitude.

**Foster parents.** According to Riggs, Augoustinos, & Delfabbro (2009), studies of foster families contend that successful foster families can be an important avenue by which foster children develop a sense of belonging. Describing the Schofield (2002) model, Riggs et al., posit that family solidarity between foster parents and children can take the form of kinship relations, and can be very similar to relationships between biologically related family members, equipping foster children with the ability to belong.

Regardless of their structure, Riggs et al. (2009) reports that rituals of belonging are a common element of many families. Rituals give family members a sense of belonging through shared traditions, and relay a story about the family to its members. Several of the foster parents which were studied identified rituals that they used to develop a connection with their foster children.

Developing a sense of family identity can give family members a sense of pride in their identity with their family. This sense of pride may result in foster children wanting to identify foster parents as their own parents. For foster children who seek to establish meaningful relationships through parental figures, this sense of belonging symbolized by the yearning to identify with their foster parents illustrates the powerful healing work that can be accomplished in foster families (Riggs et al., 2009).

Distinct components of “connected” foster families, including structure, boundaries, and a sense of belonging, were discussed by Storer, Barkan, Stenhouse, Eichenlaub, Mallillin, and Haggerty (2014). Genuine relationships between the youth and their foster parents were found to be a crucial factor in the adolescent’s overall sense of well being. Foster parents providing support in preparing for the future, and the foster parents genuine interest in the lives of the foster youth were found to be examples of activities that encouraged a sense of belonging. Taking part in activities such as family night, or preparing meals together, were activities that also fostered a sense of belonging.

Similarly, foster youth and foster parents were studied by Dedham (2014). The researcher described the characteristics of “connected” foster parents and foster families. A sense of belonging, structure, guidance for the future, and foster parents taking a genuine interest in the

lives of the youth were mentioned as characteristics which provided a sense of belonging for the fostered youth.

Although *family* and *parent* relationships, described above in the literature, are key factors to adolescent belonging, Baumeister and Leary (1995) posited that as “a fundamental motivation, the need to belong, should stimulate goal-directed activity designed to satisfy it” (p. 500). People should be inclined to seek out interpersonal contacts and develop possible relationships, at least until they have achieved a minimum level of relatedness. People wanting belongingness “*should* (emphasis added) also show an increase in goal-directed activity aimed at developing relationships” (p. 500). The literature below suggests ways that such goal-directed activities can be discovered in school activities and relationships.

### **School Belonging**

**School belonging defined.** Cupito et al. (2015) reported that “(*school*) *belonging* is positively associated with grades, academic motivation, intrinsic value, student’s expectation for success, and academic effort” (p. 1640). However, Goodenow, (1993b) expanded upon Cupito et al.’s report and defined school belonging as the extent to which students feel accepted, included, respected, and supported by others in the school environment. Goodenow posited that *sense of belonging* within the school community is operationalized as reciprocal relationships between the student and others within the school. Therefore, the variables mentioned below are included in the School Belonging domain of the Sense of Belonging Measure.

**School connectedness/school belonging.** According to Chuon and Wallace (2014), school is an important part of a student’s lived experience and students who identify as being a part of the school community “have internalized perceptions of belonging” (p. 382). A sense of school belonging “describes the student’s perception of the relational quality of a school

environment” (Wallace, Ye, & Chhuon, 2012, p. 123). Using the *sense of belonging* and the *sense of connectedness* interchangeably, Chhuon and Wallace report that, especially during the high school years, the *sense of belonging* and *connectedness* can serve as a protective buffer regarding at risk behavior. Consistent with the assertion by Chhuon and Wallace, variables regarding *school belonging* and *school connecting* are used interchangeably to inform the School Belonging domain in the Sense of Belonging Measure.

**Teachers and belonging.** Participation in school activities and connecting with school friends promote a sense of support and belonging in school for adolescents. However, a positive youth-*adult* relationship may become a significant catalyst for feelings of *connectedness* at school. Goodenow and Grady (1993) assert that one dimension of school belonging, “perceptions of teacher support,” was found to predict several measures of school engagement. The negative influence of a student’s friendship group was found, in some ways, to be overridden by a student’s sense of belonging and support in school.

Chhuon and Wallace (2014) refer to Baumeister and Leary’s (1995) view that the fundamental human need to belong is fulfilled through interpersonal structures characterized by frequent interaction plus persistent caring. Such structures provide a lens through which to consider adolescent descriptions of teacher-student relationships, within the school ecology . Teaching and learning encourages reciprocity between student and teacher, is enacted through the purposeful care quality of the *belonging* concept proposed by Baumeister and Leary (1995), and is supportive of adolescent students’ *sense of connectedness* through feelings of being known (Wallace & Chhuon, 2014).

Whereas attendance at school is a major part of the adolescents’ world, the complicated social environment of the adolescent extends beyond school and is populated by friends, cliques,

and, very importantly, peers. Research of the adolescent population supported the relevance of peer belonging for positive adjustment (Newman et al., 2007). In any study involving adolescent belonging, the relevance of peer belonging must be addressed.

### **Belonging to Peers**

The need for belonging, social support, and acceptance is especially important during early adolescence when young people begin to think seriously about their identity, with whom they belong, and where they intend to invest their energies. Because they are exploring ideas of personal identities separate from their parents and families, adolescents rely more heavily upon friendships and other non-kin relationships for support and direction. (Goodenow, 1993). In their study of adolescent peer group belonging, Newman et al. (2007) reported that "...a growing body of evidence suggests that people are healthier and happier when they experience social belonging" (p. 241).

In like manner, Hall-Lande et al., (2007) submit that traditionally, adolescence represents a movement toward peer relationships, away from the family unit. Older adolescents tended to be more oriented to non-parental relationships (Crosnoe & Elder, 2004). Older adolescents may favor non-parental relationships for support, suggesting that they have more varied sources of emotional support, which increases the protection of non-parental relationships (Crosnoe, 2000).

Counter to Crosnoe's (2000) claim, however, is Baskin et al.'s (2010) assertion that "loneliness occurs more often in adolescence than in any other age group" (p. 627). Baskin et al. found that loneliness will be better endured (at school) if youth have belongingness connections beyond their school peers. A sense of belonging to a social group (e.g., family, church groups, or sports teams) was found to shield the adolescent from the deleterious effects of peer rejection. Similarly, Chubb and Fertman (1992) argued that the need for peer acceptance does not replace

the role of family for an adolescent. Therefore, belongingness to auxiliary systems, including family, seems to be a protective factor.

Thus far, several facets of belonging have been discussed. However, Baskin, et al., (2010) reminded the research community that “from a multicultural perspective, European Americans have been overrepresented in the research literature compared with other ethnic groups” (p. 631). At the same time, “... in the United States, there has been higher and higher racial and ethnic diversity” (p.631). Therefore, it is important to view matters of belonging through an ethnic lens, not commonly addressed in the literature. Accordingly, facets of ethnic belonging are discussed below.

### **Ethnicity and Belonging**

**Ethnic identity and socialization.** *Ethnic identity* “refers to the degree to which individuals have *explored* (emphasis added) their ethnicity...and identify with their ethnic group” (Umaña-Taylor, Banat, & Shin, 2006, p. 390). Derlan and Umaña-Taylor (2015) define *cultural socialization* as “the process by which youth are *taught* (emphasis added) about their ethnic-racial heritage” (p. 2). Following is a review of adolescent ethnic identity formation and socialization as these concepts are incorporated into ethnic family, parent, school, and peer belonging.

Umaña-Taylor, Bhanot, and Shin (2006) examined an ecological model of ethnic identity among Asian Indian, Chinese, Filipino, Viet Nameese, and Salvadoran adolescents. Their findings indicated that “familial ethnic socialization (FES) played a significant role in the process of ethnic identity formulation for all adolescents, regardless of ethnic background” (p. 390). Adolescents reports of FES “were significantly and positively associated with their reports of ...*belonging* toward their ethnic background” (p. 190). Umaña-Taylor et al. found these results to



be consistent with empirical work, finding familial socialization to be a central element of ethnic identity formation among children. The authors' findings "suggest that one commonality in the process of ethnic identity formation is the strong influence of families..." (p. 407).

**Ethnic family characteristics.** Garcia Coll, et al., 1996, studied minority families across the U.S. Although the authors reported primarily upon findings in the African American and Puerto Rican communities, the authors reported that the issues raised are generalizable to other ethnic minority groups in the U.S. For minority families, reliance on the social support of extended kin was preserved in order to facilitate the adaptive culture. Minority families tended to integrate use of persons other than the birth family to perform some parenting tasks through extended family members' support. Minority families often have certain characteristics that differentiate themselves from mainstream families, and that impact family processes in significant ways. Characteristics such as "...structure, roles, values, goals, beliefs of the family, racial socialization, and socioeconomic status and resources" can lend themselves to adolescent family belonging (Garcia Coll, 1996, p.1996).

**Ethnicity and family belonging.** In their study of African-American adolescents, Derlan and Umana-Taylor (2015) found adolescents who reported higher levels of familial cultural values also reported greater feelings of *connectedness*. The researchers found a statistically significant association between *familial cultural socialization* and affirmation-belonging for adolescents. However, Hispanic adolescents reported that *greater communication* with their family, such as having discussions with their family more frequently, facilitated a sense of belonging (Cupito et al., 2015). Baskin et al. (2010), reported that weak family relationships significantly predicted high levels of loneliness and depression for multi-culturally diverse youth.

**Ethnicity and gender belonging.** Lac, Unger, Basanez, Ritt-Olson, Soto, and Baezconde-Garbanati (2011) found no significant *gender* difference in perception of Hispanic family cohesion. For instance, although Hispanic adolescent males may be raised in a more laissez-faire, less restrictive manner than female adolescents, the males did not perceive weaker family cohesiveness than did the females.

However, Cupito et al., (2015) found that Hispanic females more strongly *internalized* familial cultural values compared to males. Similar to the findings of Lac et al., 2011, (above) Cupito et al. found that *gender roles* were associated with higher *family cohesion* in Hispanic females. Along with Lac et al., Cupito et al. found that females had similar levels of family affiliation as males. Female and male adolescents *both* valued familial affiliation, and obeying their parents to a similar degree. Reporting findings counter to those of Lac et.al and Cupito et al., Lorenzo-Blanco, Unger, Baezconde-Garbanati, Ritt-Olson, and Soto (2012) reported that, in Hispanic families, although familism and respeto (respect) were associated with higher *family cohesion* and lower family conflict for both genders, these relationships were stronger for females.

Adolescents' associations with their own ethnic groups, their families, and their friends, are fundamental aspects of their social lives. Their sense of belonging to their families can be, as mentioned above, influenced by their gender. Not only does the family culture of the minority adolescents impact the adolescent's sense of belonging. The relationship that the minority adolescent has with her or his school also has bearing on her or his sense of belonging.

**Ethnicity and school belonging.** Urban schools are located in large central cities and may have a surrounding community frequently characterized by high rates of poverty, unemployment, and crime. Many inner city neighborhoods, in which urban schools are located,

experience inadequate informal connections between people to facilitate monitoring of its children, and provision of support. According to data drawn from the Schools and Staffing Survey of 2003-2004, roughly 64% of students in urban schools are minority students (Jacob, 2007). In their study of school belonging, Goodenow and Grady (1993) report that urban adolescents:

...expressed far lower levels of social and personal connection, a lower belief that others in the school were for them, and less confidence that their friends valued school success than did suburban students. These urban students expressed relatively weak beliefs that they *belonged* in their schools (p. 67).

Some situations, such as having a very different background from other school students, are likely to result in a lowered sense of school belonging for most individuals (Goodenow & Grady, 1993). This lowered sense of belonging could be intensified in urban schools in which informal connections between people are weak.

***African-American students.*** For African-American youth in large urban areas, dropout rates surpass 50% and, in some urban districts, the dropout rate is higher than 70%. Davis, (2006) argued African-American adolescents are commonly punished, misunderstood, and seen as defiant by teachers. In order to slow the rate of high-school drop-outs, Davis, argued that society must seek to understand African American males' experiences on their own terms and from their own perspective

However, Roberts et al., 2013 disputes Davis's (2006) claim, stating that participants of their study "felt extremely supported, appreciated, and valued" (p.13). Participants were exposed to the successful male adults in their educational environment with whom they could identify and receive guidance. Consisting of teachers, coaches, and counselors, these adults, as described by participants, were "monumental" in their personal development and conceptualization of masculinity, inspiring the students to finish school (p. 13).

***Hispanic students.*** Sanchez, Colon, and Esparza (2005) examined the roles of sense of school belonging and gender for Hispanic adolescents. Previous research had demonstrated that adolescent females tend to report a greater sense of school belonging than adolescent males (Goodenow, 1993a). Female's greater sense of belonging was found to be consistent with the notion that relatedness is important among girls and women (Gilligan, 1982).

Despite the previous research, however, conducted in other studies, Sanchez et al. (2005) did not find a significant gender difference between Hispanic males and females on sense of school belonging. Perhaps they did not find significant differences because their sample included an upper aged adolescent sample set. Past research has mostly been conducted on middle school samples. Possibly the gender difference weakens in later adolescence. Perhaps the twelfth graders were less interested in being part of the school environment, causing males and females to be more alike in their perceptions of school belonging. A younger sample set might have been more focused on their relationships at school because school is their main context (Sanchez et al., 2005).

An additional reason explaining the absence of a significant gender difference regarding Hispanic adolescence sense of belonging might have been because of Hispanic cultural values. A sense of interdependence tends to characterize Hispanic cultures. Due to their value for collectivism, conformity, and a willingness to make sacrifices for the welfare of other in-group members, this cultural value perhaps weakened gender differences (Sanchez et al., 2005).

***Majority ethnic group and school belonging.*** In the urban middle school studied by Goodenow and Grady (1993), in which Hispanics comprised the clear ethnic majority, status as an ethnic majority student was associated with significantly higher levels of belonging. In the

second school studied, in which there was no clear ethnic majority, there were no significant differences in ethnic groups in terms of school belonging (Goodenow & Grady, 1993).

Goodenow and Grady (1993) found the level of association with school belonging and with *friends values* to be stronger for Hispanic students than for African American students. The researchers contended that school belonging was more highly associated with expectancy for success for Hispanic students, than for African-American students. Perhaps, due to their sense of interdependence, the values of the Hispanic students' friendship network favored expectancy for success. Interestingly, the Hispanic adolescents reported stronger feelings of school belonging than white adolescents (Goodenow & Grady, 1993).

### **Ethnicity and Peer Belonging**

*African-American.* Adolescents spend the majority of their time in the school context with peers. For African-American adolescents, Derlan and Umana Taylor (2015) found that family connectedness *and* having more African-American friends was associated with a sense of affirmation and belonging. African-American teens reported more positive feelings about their ethnicity when their families socialized them about their culture *and* when they reported having a larger number of African-American friends. Their findings suggest that "...across multiple stages of development...family and friends promote individuals' *sense of belonging* and positive affect toward being African-American, which is associated with positive adjustment" (Derlan & Umana-Taylor, 2015, p. 5). Similarly, Baskin et al. (2010) found that cultural practices that emphasized the value of nuclear family belonging are part of this strengths-based mindset that promoted belonging, buffering youth against threats of poor mental health.

*Hispanic.* Hispanic adolescents usually described stronger friendship bonds than other age groups studied within the Hispanic culture (Winterowd, Canetto, & Chavez, 2011; Way, Cowal, Gingold, Pahl, & Bissessar, 2001). This was especially true for females, older adolescents, and those who are less acculturated. Similarly, Way et al. (2001) found that friendships among Hispanic girls were most likely to be described as “ideal” (based on high scores of affection, intimacy, and satisfaction) and that friendships among Hispanic boys were most likely to be described as “engaged” (based on lower scores of affection, intimacy, and satisfaction) (p. 37).

Reasons for these gender and ethnic differences could perhaps be explained by cultural values and expectations. Ideal close relationships maybe prevail among Hispanic females because of “high levels of affection and intimacy, or ‘simpatica,’ often encouraged and modeled between females in many (if their ethnic) communities” (Way et al.,2001, p. 46). “Simpatica” is a cultural script among Hispanics that is defined as “the need for behaviors that promote smooth and pleasant social relationships” ( p. 46). Perhaps Hispanics in the United States, in particular, value ‘simpatica’ because of the close relationship between the concept of ‘simpatica’ and femininity in America’s culture. High levels of ‘simpatia’ among Hispanics may begin to explain the prevalence of ‘ideal’ friendships among Hispanics in the study.

It is clear that construct of belonging must be viewed through the lens of ethnicity. Different ethnicities attach various meanings to what it means to belong. Evidence also exists that belonging differs across gender as well. What follows is a review of how belonging might be viewed through the lens of gender.

## **Gender and Belonging**

**Gender and family belonging.** Hall-Lande et al. (2007) found that one of the strongest protective influences for adolescents was a feeling of connection with family, *regardless* of gender. This finding is interesting because in spite of the negative influences of loneliness, the protective factors of family connectedness, for males *and* for females, might provide a buffer.

However, for males, Hall-Lande et al. (2007) found that family connectedness *did* represent a protective factor. Yet, academic achievement and school connectedness were found to be uniquely protective. For females, family connectedness was found to be the *only* protective factor that mediated the relationship between social isolation and suicide attempts. Strong connections to family, for females, may compensate for risks associated with social isolation; “Family relationships may fulfill a need for intimacy that is important to adolescent girls” (p. 278).

Hall-Lande et al. (2007) also noted that females frequently place more value on the quality of family relationships than do boys. “Thus, strong relationships with family members may be a significant protective factor for socially isolated girls. Such a bond *may* protect a female adolescent from suicide attempt” (p. 279).

**Gender and school belonging.** Consistent with the findings of Hall-Lande et al. (2007) mentioned above, Karcher and Sass (2010) found statistically significant gender differences on several subscales of the Measure of Adolescent Connectedness (Karcher, 2001), including Connectedness to School, and Connectedness to Teachers. Hall-Lande et al. also found that female adolescents were found to value *close* relationships. The findings of Hall-Lande et al. and Karcher and Sass perhaps could explain why Goodenow and Grady (1993) found that for females, school belonging was highly correlated with friends’ values and that females were

more likely than males to express a high sense of school belonging. In early adolescence, when gender role expectancies are strong, females may feel pressure to adopt feminine and passive behaviors and the support and encouragement of others in the school, especially teachers, may be especially important.

**Gender and Peer Belonging.** Within the Measure of Adolescent Connectedness, Karcher found statistically significant *gender differences* on the Connectedness to Friends subscale (Karcher, 2001; Karcher & Sass, 2010). However, counter to the findings of Karcher (2001) and Karcher and Sass (2010), Newman et al. (2007) found a strong relationship between a sense of group belonging and mental health, for *both* adolescent males *and* females.

Newman et al. reported that adolescent females reported a stronger sense of group belonging than adolescent males and were more highly identified with their peer group than boys. The authors reported a theme in the literature that suggests that it may be more important for females to feel connected and for males to feel autonomous. The researchers contend that males may not benefit as much as females from the feelings of belonging that result from close, enduring friendships (Newman, et al., 2007).

As facets of adolescent belonging are discussed and viewed through an ethnic and gendered lens, clarity is provided regarding the prominence of the need to belong in the lives of adolescent females and males. Van Orden et al. (2010) argued that when the need to belong is thwarted, increased vulnerability to suicide can result. Unfortunately, a paucity of information exists in the literature concerning thwarted belonging and *adolescent* suicide. However, in reviewing the literature that *is* available, an ecological perspective of adolescent suicidal behavior as impacted by the thwarted sense of belonging is reviewed below.



## **Adolescent Suicide and Belonging**

**Survival need.** The need to belong can overcome basic survival needs, as indicated by people who commit suicide because they are lonely (Chubb & Fertman, 1992). Agreeing with Maslow (1954/1970) by describing the “need to belong” as a basic human need, Chubb and Fertman, (1992) suggest that in some instances, a person is at higher risk for suicide if he or she does not feel a sense of belonging. One possibly important strengths-based moderator for adolescents is the sense of belonging (Baskin et al. 2010).

**Family belonging and suicidality.** The majority of adolescent suicide studies that utilized an effective intervention, reviewed by Brent, McMakin, Kennared, Goldstein, Mayes, and Douaihy (2013) had some focus on family interactions. The interventions with the strongest effect on suicidal behavior each had a family component (Brent et al., 2013). As suicidal adolescents are treated, a significant factor contributing to the success of several outcomes was found to be family involvement, or mobilization of familial support (Brent et al., 2013).

King, Boyd, and Thorsen (2010) described a growing literature that suggested that family belonging was protective against suicidal thoughts and behaviors. Hall-Lande, Eisenber, Christenson, and Neumark-Sztainer (2007) found that adolescents from families with high levels of family connectedness reported fewer suicide attempts. Families with lower connectedness had an increased number of reported attempts.

“A consistent literature linking family *discord* with youth suicide and suicide attempt” was reported by Bridge, Goldstein, and Brent (2006, p. 379). Family conflict was found as one of the most salient predictors of suicidal events in adolescents (Brent et al., 2013). However, regarding protective follow up to initial suicidal behavior, Brent, Greenhill, Compton, Emslie, Wells, and Turner (2009) asserted that family cohesion was found to be a protective against

future adolescent suicide attempts. Similarly, Brent et al., (2013), claimed that family cohesion was found to be a protective factor against subsequent recurrent suicidal behavior.

**Parent belonging and suicide.** Along with a cohesive family, additional protective factors concerning adolescent suicide included positive *parent-child connection*. This connection included active parental supervision, high behavioral and academic expectations, and cultural beliefs against suicide (Bridge et al., 2006). Consistent with this assertion is some evidence that “positive relationships between parents and adolescents are a protective factor that reduces risk of suicidal behavior in adolescents” (Timmons, Selby, Lewinsohn, & Joiner, 2011, p.809).

Reporting that parental displacement (resulting from death, divorce, and separation) may be associated with the construct of failed belonging from the Interpersonal Theory of Suicide (Van Orden et al., 2010), Brent et al. (2011) found the association with *failed belonging* “could account for the observed increase in suicide risk that has been found in displaced adolescents in prior studies” (p. 809). Brent et al.’s results suggest that “parental displacement events may disrupt the adolescent’s personal environment, leading to decreased feelings of belonging and an increased desire for death as proposed by the Interpersonal Theory of Suicide” (p. 811). Brent et al. concluded that parental displacement was associated with adolescent suicidality in conjunction with its relationship to failed belonging.

Timmons et al. (2011) also suggested that parental displacement may be associated with failed belonging and could account for the observed increase in suicide risk that was found in displaced adolescents in prior studies. The results of their study suggested that parental displacement may disrupt the adolescent’s personal environment, leading to decreased feelings of belonging and an increased desire for death, as proposed in the Interpersonal Theory of Suicide.

Contrasting with Timmons et al., (2011) findings, however, are those of King, Boyd, and Thorsen (2015). As mentioned earlier, (see “Step-parenting, in the Parent Belonging section page 56) the latter group of researchers found that the mother-child and stepfather-child relationships were *significantly* associated with adolescent belonging to their stepfamilies, and that the mother-child relationship was most strongly related to family belonging. King et al.’s findings appear to contradict parental displacement results put forth by Timmons et al. Specifically concerning parental displacement by divorce or death, King et al.’s findings assert that a strong relationship with the resident parent/parents could override the effects of parental displacement.

**School belonging and suicide.** Aside from their presence within the family and presence with their parents, adolescents spend the majority of their time in school. *School connectedness* was defined as the experience of caring about school, and a feeling of connection to the school environment and school staff (Hall-Lande, Eisenber, Christenson, & Neumark-Sztainer, 2007). Students with higher levels of school connectedness reported significantly lower levels of at risk behavior, including suicidal ideation and attempts.

Resnick (1997) found that positive relationships with students *and* teachers were positively associated with feelings of belonging. Connection to school was found to be a protective factor against a variety of adolescent risk behaviors. School connectedness was associated with lower levels of suicidal involvement for older and younger adolescents.

Given the positive relationships among suicide ideation, attempts and completions, parents and school teachers should pay close attention to adolescent suicide ideation. Schools were found to be, for adolescents, perhaps the best place to centralize programmatic resources intended to increase connectedness (Winfrey & Jiang, 2010).

**Peer belonging and suicide.** Adolescent suicidal behavior was found by Hall-Lande (2007) to be associated with low levels of close friendship support. Adolescents who reported a lack of social support and feelings of isolation may behave in self-harming ways such as suicidal ideation and suicide attempts. Alternatively, adolescents who reported strong social support demonstrated increased levels of resilience and decreased levels of suicide risk (Hall-Lande, 2007). Social support theory proponents contended that once adolescents experienced emotional connection with others, they would be more likely to love others and themselves and in turn, be less likely to think about suicide, and perhaps less likely to attempt suicide (Winfrey & Jiang, 2010).

**Ethnic belonging and suicide.** Canetto (2015) asserted that, in spite of their disadvantaged social and economic status, the vigorous disapproval of suicide put forth by African American women may be a component in their low suicide rates. African American women have reported more disapproval of suicide than European American women. This disapproval exists regardless of the adversities that the suicidal person may have faced. Perhaps the African American women's perception is that despite life's difficulties, which would include a lack of belonging, suicide is not justified.

In their study of sense of belonging for multicultural students, Baskin et al. (2010) found that weak family relationships significantly predicted high levels of depression and loneliness. In concert with Canetto's (2015) assertion concerning the scarcity of research regarding suicide causes and attitudes by ethnicity, Baskin et al. (2010) contended that "insufficient empirical research has been done in this area" (p. 626). Indeed, due to the lack of at least adequate research in the area of belonging for multicultural adolescents and its possible connection with suicidality, a significant need for additional research exists.

**Gender belonging and suicide.** Concerning the benefits of family connectedness, Hall-Lande et al. (2007) found that the relationship between suicide attempts and social isolation was not significant for either gender. This is an interesting finding because it suggests that despite some of the negative ramifications of social isolation, such as decreased self-esteem and increased symptoms of depression, the protective factors of family connectedness provide protection against suicide attempts. For both genders, although socially isolated adolescents may be at increased risk for feelings of depression and low self-esteem, if there is a connection to family, these feelings may not escalate into suicidal behavior.

Hall-Lande et al. (2007) found that “for girls, family connectedness was the only protective factor that influenced the relationship between social isolation and suicide attempt” (p. 278). For boys, family connectedness was a protective factor for suicide attempt. However, other factors, such as school connectedness and academic achievement were protective. Possibly, for adolescent girls without close peer relationships, family relationships may fulfill a need for intimacy that is important to adolescent girls. Perhaps the amount of emotional intimacy necessary to influence psychological health in socially isolated girls may not be accomplished in relationships with school staff or by a sense of achievement in school (Hall-Lande et al., 2007).

By way of contrast, school connectedness and academic achievement were found to be uniquely protective for boys (Hall-Lande et al., 2007). Possibly, adolescent boys can derive protective benefits from a wider range of factors in their environment. It could be that this finding represents a gender difference, in that females are socialized to find protective elements in close relationships, whereas achievement may be more emphasized for boys and therefore more protective.

## **Theoretical Foundations**

**Systems Theory.** For the past 40 years, systems theory, or rather the ecological perspective, has dominated social work. These approaches argue that individuals are complex living systems and therefore human behavior needs to be understood in its broader systemic context. Systems theorists have begun to use the language of human ecology to more specifically conceptualize dynamic exchanges between people and their social and physical environments (Finn & Jacobson, 2003).

Bronfenbrenner's (1984) ecological theory contends that an individual's development is influenced by a series of "nested contexts" (Derlan & Umana-Taylor, 2015, p. 2). The ecosystems approach points to the importance of context and draws attention to the person-environment relationship. This ecological perspective describes individuals as complex living systems and human behavior therefore needs to be understood within its broader systemic context.

Conceptualizing Bronfenbrenner's (1984) nested contexts as they apply to this study, and utilizing ecological terms, the microsystem (the closest context) would be family, the school, and peers. The mesosystem (the point at which the microsystems merge) would be the point at which the family, school, and peers merge with events, situations, and relationships crossing back and forth between the microsystem environments. The exosystem (the environment which is external to the adolescent's environment but nonetheless affects him), in this study, would include the child's extended family members, the school district, and the city/town in which the adolescent and her/his peers live. The macrosystem describes the culture in which the person lives and, in this case, would include the adolescent's culture/ethnicity, belief systems, customs, and lifestyle.

All of these systems interact, influencing not only the development of the adolescent but also her/his sense of belonging.

**Developmental Theory.** The understanding of the adolescent and her/his sense of belonging is embedded within developmental theory. According to Ericson, individuals move through a series of stages as they grow and progress through life, referred to as the stages of psychosocial development. Identity vs. role confusion is the fifth stage of Erikson's theory and occurs during adolescence between the ages of approximately 12-18. Teens develop a sense of self and explore their identity during this time (Cherry, 2015).

Making the transition from childhood to adulthood, teens may begin to feel confused about themselves and how they fit into society. When a teen is successfully progressing during this stage, they achieve a sense of "fidelity," what Erikson describes as a virtue characterized by the ability to relate to others and form genuine relationships (Cherry, 2015, p. 1). For the adolescent, relating to others and forming relationships lead to a sense of belonging. Failure to transition successfully can result in identity confusion and insecurity about how they fit into their world. Without a solid sense of identity, a sense of belonging is difficult, if not impossible to achieve.

**Social Identity Theory.** A study investigating adolescent ethnic and gender belonging must be undergirded by a theory which addresses the identity formation of the adolescent. Social identity theory is a social psychological theory which addresses the social nature of self as formed by society. The self is separated into several identities with various roles and norms. Group processes and *intergroup* relations are the focus of this theory. A multi-faceted self mediates the relationship between social structure and individual behavior (Hogg, Terry, & White, 1995).

According to social identity theory, a social category (e.g., nationality, political affiliation, sports team) into which one belongs provides a definition of whom one is in terms of the characteristics of the category—a definition of the self that is a part of the self-concept. People have a collection of such discrete category memberships that change in relative importance in the self-concept. Each of these memberships is represented in the individual member's mind “as a *social identity* (emphasis added) that both describes and prescribes one's attributes as a member of that group” (Hogg et al. 1995, p. 259). The membership guides how one would think, feel, and behave in a given situation.

When a certain social identity becomes the foundation for self-regulation in a particular context, self-perception and conduct become stereotypical and normative for the in-group. Therefore, beliefs about social identity guide adolescent behavior in the context of their membership in their family, school, peer group, and within their culture. Social identities describe, prescribe, and evaluate behavior in any given situation.

Social identity theory proposes that during adolescence, individuals experience changes in identity that relate directly to self-concept. “Identities are based on social categories (e.g. ethnicity, nationality) in which individuals have a sense of *belonging*” (emphasis added) (Zeiders et al., 2013, p. 954). These social categories often include their identification with their own ethnic group, for ethnic minority adolescents

**Theory of Belonging.** In their theory of belonging, Baumeister and Leary (1995) posit that the need to belong is a fundamental human motivation. Their theory of belonging argues that human beings have an inescapable drive to develop and maintain lasting, positive, and significant interpersonal relationships. Two criteria are involved:



First, there is a need for frequent, affectively pleasant interactions with a few other people, and, second, these interactions must take place in the context of a temporally stable and enduring framework of affective concern for each other's welfare... Furthermore, a great deal of human behavior, emotion, and thought is caused by this fundamental interpersonal motive (p. 497).

Baumeister and Leary's (1995) theory of belonging is critical to this study, because it is this model of belonging *from which* Van Orden et al. (2010) developed their construct of thwarted sense of belonging. Van Orden et al. propose that variables of social connectedness are associated with suicide because, when unsatisfied, they are indicators that a fundamental human psychological need is unmet. This need is described by Baumeister and Leary as the 'need to belong' (p. 581). According to Van Orden et al., when this need is unmet—a state that they refer to as “thwarted belongingness,” a desire for death develops...” (p. 581).

Understanding the need to belong can provide a spring board for understanding human behavior. This need is present in all humans in all developmental stages. Wallace and Chhuon (2012) report that the *adolescent's* need for belonging is especially cogent as issues of inclusion reign in adolescence. For early and mid-adolescence, the need to belong and have valued membership in a setting may take precedence over all other concerns (Goodenow, 1993).

## **Summary**

A bias exists in the major life cycle theories that have taken as their model the lives of males and have failed to consider the experiences of females (Gilligan, 1979). The interaction of social class, ethnicity, culture, and race has not been a part of mainstream theoretical formulations in the discipline of human development. As developmental theory is discussed, it is important to consider the needs of females *and* males for dynamic relationship, viewed through an ethnic and gendered lens. Specifically, more literature regarding *adolescent* females and males, that is informed by an ethnic perspective, is necessary.

As life cycle theories and the need for dynamic relationship are discussed, it becomes evident that the need to belong cannot be ignored. Theorists who developed the Interpersonal Theory of Suicide (Van Orden et al., 2010) argue when the need to belong becomes thwarted, an individual may become more vulnerable to suicide. Accordingly, while disagreement exists regarding the etiology of suicide, it is important to understand the role of sense of belonging. However, research regarding the adolescent's need to belong is scarce. And, importantly, research regarding the adolescent's need to belong, with an ethnic and gendered perspective, is almost non-existent.

## **Chapter 3: Methodology**

### **Introduction**

A theory of suicide should have utility for various age groups, ethnicities and genders. However, the Interpersonal Theory of Suicide (ITS, Van Orden et al., 2010), and those who have tested this theory, have concentrated their research primarily upon the population of white adult males. While this concentration holds merit in attempting to understand suicide, researchers, mental health professionals, and social workers of all types need to know if this theory can be generalized to a broader population. An approach for assessment that is informed by research based upon White, European males is a limited approach; regarding assessment, costly missteps can and do occur. It is especially important for social workers who work with the adolescent population to do so with a theoretical undergirding that includes ethnic, gender, and age group considerations.

In explaining the etiology of suicide, the ITS (Van Orden et al. 2010) focuses upon three constructs, which are: (1) perceived sense of burdensomeness; (2) thwarted sense of belonging; and (3) acquired capability. Van Orden et al. argues that when these constructs occur in tandem, the desire for suicide can develop. This proposed study will address the construct of thwarted sense of belonging.

### **Purpose**

The purpose of this study was to develop a Sense of Belonging Measure, which was created specifically for this study. The measure was used to examine whether and how the construct, thwarted sense of belonging, applied to adolescents, specifically by gender, age, and ethnicity. The measure was also used to examine whether or not there was a difference between

males and females, regarding the estimated mean levels of sense of belonging. In addition, the Sense of Belonging Measure was used to examine whether or not there was a difference between ethnicities regarding the estimated mean levels of sense of belonging. Finally, the Sense of Belonging Measure was used to examine whether or not there was a difference between adolescent age groups, in the estimated mean levels of sense of belonging.

### **Research Questions**

The research investigated if and how the construct of thwarted belonging applies to the adolescent population, with specific focus on gender, ethnicity, and age.

1. Are theoretically proposed factor groupings for the Sense of Belonging Measure (Parent Belonging, Family Belonging, Peer Belonging, and Ethnic Belonging) replicated in empirical factor analyses of national survey data?
2. Do the variables on the Sense of Belonging Measure actually measure the concepts that the literature identifies as being related to adolescent belonging?
3. Utilizing the Sense of Belonging Measure to measure belonging for adolescents, does the construct, “thwarted sense of belonging,” apply to adolescents, specifically by gender, ethnicity, and age?
  - a. 3.1 Is there a Main Effect of gender on sense of belonging?
  - b. 3.2 Is there a main effect of ethnicity on sense of belonging?
  - c. 3.3 Is there a main effect of age on sense of belonging?

## Research Design

This proposed study will utilize secondary data found in the National Comorbidity Survey-Adolescent Supplement (NCS-A, 2001-2004). The NCS-A is comprised of a nationally representative data set, and provides opportunities to make inferences about a characteristic of the population, allowing generalizations to be made from a sample to the adolescent population in the coterminous U.S. (Kessler, 2009b).

**Sense of belonging measure.** To determine if there are associations between the independent variables of gender, ethnicity, and age regarding sense of belonging, it was deemed necessary to develop a Sense of Belonging Measure. Once a comprehensive review of the literature pertaining to adolescents' sense of belonging was completed, questions from the NCS-A were reviewed. Each question on the NCS-A was analyzed for its relevance to sense of belonging, based upon the "sense of belonging" variables found in the literature review. Also, each question chosen from the NCS-A already contained within it an *embedded variable of its own*. For the Sense of Belonging Measure, NCS-A questions were chosen from the NCS-A survey, whose embedded variables were relevant to sense of belonging. The relevance was ascertained based upon the literature review chosen for this study. Following is an example of a NCS-A question with the question's embedded variable.

### **1. How often did your family members feel close to one another?**

**1. How often family members felt close to each other. (embedded variable)** The survey questions utilized for the Sense of Belonging Measure, with the corresponding embedded variables and literature support, can be found in Appendix C. Secondary data was retrieved from the NCS-A. Utilizing the Sense of Belonging Measure, the data that was associated with each utilized survey question was used to examine adolescent sense of belonging.

## **Development of the National Comorbidity Survey-Adolescent Supplement**

Because the survey questionnaire and the data from the NCS-A will be used for this study, a description of the development of the NCS-A was necessary. The survey's origin starts with the development of the Epidemiological Catchment Area Survey (ECA). Information from the ECA survey informed the development of the National Comorbidity Survey, which then informed the development of the National Comorbidity Survey-Replication, which informed the development of the National Comorbidity Survey-Adolescent Supplement.

### **Epidemiological Catchment Area Surveys**

In order to meet the need to ascertain a descriptive epidemiology of mental disorders of adults in the U.S., the landmark Epidemiological Catchment Area (ECA) survey was developed and implemented between 1980-1985. Using multi-stage probability sampling, 20,000 respondents selected from mental health catchment areas in five U.S. communities were interviewed (N=20,000). The interviews utilized the first fully structured research diagnostic interview that could be administered by trained lay interviewers. The Diagnostic Interview Schedule (DIS) assessed disorders using the criteria of the American Psychiatric Association's (APA) Diagnostic and Statistical Manual of Mental Disorders, Third Edition (DSM III, American Psychiatric Association, 1980). However, as the study was conducted in five local sites, rather than at a national level, the generalizability of the ECA results was limited (Kessler & Merikangas, 2004).

### **National Comorbidity Survey (NCS, 1990-1992)**

Due to the lack of generalizability of the ECA, the U.S. Congress mandated the development and implementation of what would be called the National Comorbidity Survey (NCS). The NCS was administered to a nationally representative sample of adults in the U.S. and

was designed to study the comorbidity of substance use disorders and non-substance psychiatric disorders in the U.S. The NCS was the first survey to administer a structured psychiatric interview to a national probability sample (Kessler et al., 1994).

For this survey, a structured research diagnostic interview capable of generating reliable psychiatric diagnosis in the general population was necessary. The Diagnostic Interview Schedule (DIS, Robins, Helzer, Croughan, and Ratcliff, 1981) which had been used for the ECA surveys, was further refined resulting in a “state of the art” structured diagnostic interview, based on the DIS (Kessler et al., 1994, p. 9). This new interview was referred to as the Composite International Diagnostic Interview (CIDI). World Health Organization field trials of the CIDI have documented good inter-rater reliability, test retest reliability and validity of almost all diagnoses (Kessler et al., 1994).

### **National Comorbidity Survey-Replication (NCS-R, 2001-2003)**

The National Comorbidity Survey Replication (NCS-R) was carried out a decade after the NCS was implemented. The NCS-R expanded the questions on the NCS to include assessments based on the more recently developed DSM-IV diagnostic system (American Psychiatric Association, 1994). A major goal of the NCS-R was to investigate time trends (change in mental health treatment) and their correlates over the decade of the 1990s. An understanding of time trends during the 1990s had the potential to provide insights that could help direct treatment advancements into the next decade. The researchers designed the NCS-R to collect time trend data in comparison to the baseline NCS on prevalence of DSM disorders, patterns of service use (treatment) for the disorders, quality of treatment, and several policy relevant determinants of service use (Kessler & Merikangas, 2004).

## **National Comorbidity Survey-Adolescent Supplement, (NCS-A, 2001-2004)**

The U.S. Congress requested that the National Institute of Mental Health (NIMH) provide national data regarding the prevalence and correlates of mental disorders of *youth* in the U.S. Therefore, the NIMH decided that the age range of the NCS-R (*adult*) would be lowered, allowing 13-17 year old *adolescents* to be interviewed. By collecting nationally representative data on *adolescent* mental health, the National Comorbidity Supplement-Adolescent Supplement (NCS-A) was created.

The NCS-A was developed to identify risk and protective factors for the onset and persistence of DSM IV disorders, to describe patterns and correlates of service use for the disorders, and to lay the groundwork for subsequent studies that could be used to identify early expressions of mental disorders in adolescents (Merikangas et al., 2009). The decision was made to limit the sample to adolescents aged 13-18 years old, as pilot studies revealed that the interview schedule used in the NCS-R had limited validity among youths younger than thirteen years old. The NCS-R Adolescent Supplement (NCS-A) was therefore administered to a nationally representative sample of youths in the age range of 13-18 years (Merikangas et al., 2009). “The Human Subjects Committees of both Harvard Medical School and the University of Michigan approved the recruitment, consent, and field procedures” conducted for the NCS-A (Kessler et al., 2009b, p. 71).

### **Participants of this Study**

**Sample.** As mentioned above, the NCS-A (*adolescents*) household survey was implemented as a supplement to the NCS-R (*adults*). Adolescents living in the households that were surveyed by the NCS-R were included in the NCS-A (Kessler et al., 2009b). However, although the NCS-A was originally designed to obtain a sample of adolescents from those



residing in the NCS-R households, the number of such youths was too small to generate the target sample of 10,000 respondents. Consequently, the households sample was supplemented by adding a school based sample, leading to a dual frame design. The first sample of adolescents was recruited from the NCS-R households, and the second sample of adolescents was recruited from a representative sample of schools in the same communities as the NCS-R households (Health and Medical Care Archive, 2016). For this study, the combined data from the households and the school study will be used.

***Sampling Procedure.*** As mentioned earlier, The NCS-A (*adolescent*) survey of households was conducted supplemental to the NCS-R (*adults*). The NCS-R households that had adolescents residing within were included in the NCS-A. The school sample for the NCS-A (*adolescent*) was taken from the identical sample of counties as the NCS-R (*adult*). A wide-ranging government list of schools was utilized for selection. Included in the household sample were adolescents who were not currently enrolled in school. The households chosen “were based on a three stage clustered area probability sampling design that was representative of households in the continental U.S.” (Kessler et al., 2009b, p. 71). A full description of the sampling procedure is found in Appendix D.

**NCS-A Survey Instrument.** As mentioned above, the NCS-A used a modification of the Composite International Diagnostic Interview which had been administered to adults in the NCS-R. The modified version included assessments of four broad classes of DSM IV disorders: anxiety, mood, behavior, and substance use disorders. Sections addressing other indicators of emotional functioning were included and the instrument included assessments of several important risk and protective factors (Merikangas, 2009).

Additional modifications were made to adapt the instrument to the reality of youth. Certain assessments, such as dementia and pathological gambling, were eliminated due to their low prevalence among youth. The finalized revision of each module was reviewed by the Harvard collaborators for meaning, logic, and comparability to the adult version. In addition, some language changes made for the adolescents were incorporated into the adult version to increase comparability. It appears that every effort was made to make sure that the instrument was relevant to the unique experiences and language of youth (Merikangas, 2009). A multi-construct, multi-method, and multi-informant battery was included within the interview to assess risk and protective factors. The survey was then prepared for computer administration for the adolescents using laptop computer-assisted personal interview (CAPI) methods. The following summarizes the participant demographics of the NCS-A.

**NCS-A Participant Demographics.** With a total of 10, 148 completed interviews, the adolescent response rate for the NCS-A was 75%. This includes response rates of 85.9% ( $n=904$ ) in the household sample, 81.8% ( $n=8912$ ) in the unblinded school sample, and 22.3 ( $n=332$ ) in the blinded school sample (Kessler 2009b). See the explanation of the blinded and unblinded school sampling procedure in Appendix D.

### **Data Collection**

The NCS-A household interview, for the household and school participants, was administered face-to-face with adolescents in their homes. Laptop computer-assisted personal interviews were conducted by professional survey interviewers. The interviewers were employed by the Survey Research Center of the Institute for Social Research at the University of Michigan (Kessler et al., 2004).

## **Variables**

### **Independent Variables**

**Gender.** The term gender refers to “phenomena and issues related to social and cultural influences. Gender is whatever a culture defines as masculine and feminine” (Canetto, 1997, p. 340). The categories of femininity and masculinity are specific to culture and are transient. They are only understood in context (Canetto, 1997).

The NCS-A respondents were asked to identify themselves as “male” or “female” in a category designated as “Sex.” As mentioned in Chapter 1, no choice was offered on the survey form for the respondent to identify themselves in any other way that the respondent may have preferred. Therefore, the data will be categorized according to “male” and “female.” In the data analyses of this study, the variables of male and female will be used to represent the term “sex” which, in this study, is a crude measure of gender.

**Female.** Characteristic of girls or women; a woman or a girl; a female person (Merriam-Webster, 2016, p. 1).

**Male.** Characteristic of boys or men; a man or a boy; a male person (Merriam-Webster, 2016, p. 1).

**Ethnicity.** This term “convey(s) cultural distinctness derived mostly from national origin, language, religion, or a combination thereof...ethnic identification...includes valuation and attribution of inferior/superior social status, and it changes as a function of historical processes” (Garcia-Coll et al., 1996, p. 1898).

To represent ethnicity, the data produced by the NCS-A was labeled “race,” and organized according to Non-Hispanic White, Non- Hispanic Black, and Hispanic. Therefore, in the data analyses of this study, the variables of Non-Hispanic White, Non- Hispanic Black, and

Hispanic was used to represent the term “race.” Accordingly, in this study, “race” was a crude measure of ethnicity.

***Non-Hispanic Black.*** Refers to a person having origins in any of the Black racial groups of Africa, Sub-Saharan Africa, Afro-Caribbean, Haiti, and Jamaica (Rastogi, Johnson, Hoeffel, & Drewery, 2011).

***Non-Hispanic White.*** Refers to a person having origins in any of the original peoples of Europe, the Middle East, or North Africa (Hixson, Hepler, & Kim, 2011).

***Hispanic.*** “Refers to a person of Cuban, Mexican, Puerto Rican, South or Central America, or other Spanish culture or origin...” (Humes, Jones, & Ramirez, 2011, p.2).

***Adolescent.*** A person who has reached “...the period between childhood and adulthood (i.e., ages 10-19 years in the United States).” This period is “marked by changes that occur in physical, cognitive, and social-emotional capacities” (Dixon, Scheidegger, & McWhirter, 2009, p. 302). For this study, adolescents will be divided into two groups: ages 13-15, and ages 16-18.

### **Dependent Variable**

***Sense of belonging.*** The sense of belonging incorporates the awareness that one has formed and maintained stable interpersonal relationships characterized by positive interactions which occur in the context of concern for each other’s welfare (Baumeister & Leary, 1995).

### **Data Analysis**

**Factor Analysis.** Supported by the literature, 58 variables determined to measure sense of belonging were chosen from the NCS-A. In order to determine which of the 58 variables actually conformed to the Sense of Belonging Measure, a factor analysis was utilized. The variables that conformed to the Sense of Belonging Measure were combined into one measure of Sense of Belonging.

## **Types of Factor Analysis**

***Exploratory factor analysis.*** In order to determine which items, of a fairly large set of items, “hang together as groups” exploratory factor analysis (EFA) is used (Leech et al.,2015, p. 68). In a data set intended to measure certain constructs, EFA can also help determine the level of construct (factorial) validity. EFA focuses on “understanding the relations among variables by understanding the constructs that underlie them” (Leech, et al., 2015, p.68). EFA explores data, and information is provided about the numbers of factors that are needed to represent the data. With EFA, “all measured variables are related to every latent variable” (Statistics Solutions, 2013).

EFA helps investigators represent a large number of relationships among normally distributed variables in a straightforward way. With exploratory factor analysis, one hypothesizes that a smaller set of constructs underlie the variables that were observed or measured (Gliner, 2009, p.220). EFA also explains the maximum amount of the variance (Suhr, 2016).

***Confirmatory factor analysis.*** A related approach is confirmatory factor analysis (CFA), which tests how well the measured variables represent the number of constructs. Exploratory and confirmatory factor analysis are similar. However, with factor analysis that is confirmatory , researchers can identify the number of factors necessary in the data and which measured variable relates to which latent variable (Statistics Solutions, 2013).

CFA requires a specification of model that is supported by previous research, or existing theory. The number of factors must be specified, including a specification of which items are to be loaded onto each factor (Suhr, 2016). Utilizing CFA, the researcher is allowed to test the hypothesis that a relationship exists between observed variables and their underlying latent construct. Either knowledge of the theory, empirical research, or both, are used by the researcher.

A theoretically based relationship is posited, and then the hypothesis is statistically tested (Statistics Solutions, 2013).

**Type of Factor Analysis Utilized.** This study sought to determine if the items that were written to index each of the sense of belonging constructs actually did “hang together” (Leech et al., 2015, p. 68). If the data did fit into the four constructs that were hypothesized to exist, then support would be given for the construct validity of the sense of belonging measure. The study therefore utilized EFA, because the hypotheses regarding the model were not very specific; specific predictions about the size of the relation of each observed variable to each latent variable were not predicted. Also, this researcher predicted that factors might be produced that would deviate from the original predictions. Accordingly, since EFA finds factors that best fit the data, even if the factors deviate from what was originally predicted, EFA was utilized for this study.

**Varimax Rotation.** Varimax rotation created an extraction in which the factors were uncorrelated with one another. Such a rotation made the results easier to interpret. Also, using Varimax Rotation will make replication easier with future samples (Leech et al., 2015, p. 71).

**Cronbach’s Alpha.** Cronbach’s coefficient alpha is “the most commonly used type of internal consistency reliability” (Leech et al., 2015, p. 53), signifying the consistency of a multiple-item scale. “If each item on the test has multiple choices, such as a Likert scale, then Cronbach’s alpha is the method of choice to determine interitem reliability” (Gliner, Morgan and Leech, 2009, p. 159). Therefore, a Cronbach’s alpha was chosen to test, for reliability, those factors identified through EFA.

**Three way ANOVA.** The Sense of Belonging Measure was developed with the dependent variable, sense of belonging. The supported factors that resulted from the EFA formed the Sense of Belonging Measure. Once the factor analysis was completed, a statistical test was

necessary to determine if there existed a main effect, and an interaction effect between the three independent variables upon the dependent variable, sense of belonging. A three way ANOVA was used to test the variables. The three independent variables were gender, ethnicity, and age (the adolescents were divided into two categories-13-15 year old adolescents, and 16-18 year old adolescents.)

***Main effect and interaction effect.*** When three independent variables are in a single study, it is possible to examine how each independent variable works alone, and how the three independent variables work upon the dependent variable. The way that one independent variable effects the dependent variable, is referred to as a main effect. The way that two or more independent variables interact upon the dependent variable is referred to as an interaction effect (Gliner et al., 2009). In this study, with three independent variables (gender, ethnicity, and age groups), two main effects and one interaction effect was noted.

**Games-Howell Post Hoc Test.** If the interaction  $F$  of the variables of a 3 way ANOVA are significant, more information is needed regarding the interaction (Leech et al, 2015). To test the interaction effect of the independent variables, a post hoc test was utilized, as the interaction  $F$  of the variables was significant. Games-Howell post hoc testing was conducted to determine which pairs of the gender and ethnicity means scores differed significantly.

## **Validity**

**Content Validity.** According to Gliner et al. (2009), establishing content validity of a measure starts with a definition of the concept that is being measured. Next, a literature search is conducted to determine how the concept is represented in the literature. Then, items are generated that might measure this concept. Gradually, this list of items is reduced to form the test or measure.

In this study, content validity meant that the language used in the Sense of Belonging Measure represented the variables that the proposed study sought to measure (Gliner & Morgan, 2000). Validity of the Sense of Belonging Measure concerned whether this instrument accurately measured the sense of belonging experienced by Non-Hispanic White, Non-Hispanic Black, and Hispanic adolescents in the U.S.

This researcher determined that, based upon a thorough review of the literature (Gliner et al., 2009), the sense of belonging was defined. The literature review determined how the concept was represented in the literature. Items were generated that measured the concept of sense of belonging. Content validity was to be shown by the results of the factor analysis and Cronbach's alphas which would test the measure. See Appendix B, which lists the variables used for the Sense of Belonging Measure and the Corresponding support found in the literature.

#### **External Validity of the Sample.**

“External validity refers to the question of whether results are generalizable to persons other than the population in the original study” (Dekkers, Elm, Algrra, Romijn, & Vandenbrouke, 2009, p. 83). To evaluate whether the sample of NCS-A participants was actually representative of the theoretical population, it was necessary to identify the: (1) apparent theoretical population; (2) accessible population; (3) selected sample; and (4) the actual sample of participants that completed participation in the study (Gliner et al., 2009).

The primary sampling units (PSUs) of the NCS (1990-1992) (*original survey*) were utilized for the NCS-R (2001-2003) (*adults*) and the NCS-A (2001-2004) (*adolescents*). Accordingly, although the data from the NCS-A were used for this study, the external validity of not only the NCS-A but also of the NCS and the NCS-R (2001-2003), were examined. As the



two latter studies were derived from and built upon the sample of the original NCS, the three studies were evaluated below for external validity according to the four steps mentioned above.

**Evaluation of the External Validity of the NCS, the NCS-R, and the NCS-A.** A probability sample of 62 primary sampling units (PSUs) was selected for the NCS-R (2001-2003) which were linked to the original PSUs used in the baseline NCS (Kessler et al., 2004). The goal in linking the original PSUs to the NCS-R was to maximize the efficiency of cross time comparisons with the NCS. As mentioned above, the NCS (1990-1992) provided the PSUs for the NCS-R (2001-2003) and the NCS-A (2001-2004) was derived from the NCS-R.

*NCS (1990-1992).* The adult population of all U.S. citizens, age 18 and older, in all 50 states, comprised the *theoretical population* of the NCS. A stratified, multistage area probability sample of individuals 15-54 years in the civilian population, in the coterminous U.S., formed the *accessible population*.

Respondents as young as 15 years old, included to minimize recall bias of early onset disorders, constituted the *selected sample*. Respondents older than 54 were excluded due to evidence from the ECA study that comorbidity between active substance use disorders and non-substance psychiatric disorders were significantly lower among persons aged older than 54 years than among those aged 54 years and younger (Kessler et al., 1994b). Regarding the *actual sample*, 8098 respondents participated in the survey, with a response rate of 82.6%. A supplemental survey was conducted, utilizing a random sample of initial non-respondents. Compensating for the systematic nonresponse, a nonresponse adjustment rate was constructed for the main survey.

**NCS-R (2001-2004).** The English speaking adult population of all U.S. citizens, aged 18 and older, in the entire U.S., comprised the *theoretical population*. English-speaking adults ages 18 and older living in the non-institutionalized civilian household population of the 48 adjoining states of the U.S. formed the *accessible population* (Kessler et al., 1994). For the *selected sample* respondents were chosen from a probability sample of non-institutionalized private citizens, using data collected by the U.S. Bureau of the Census from the year 2000. A probability sample of 62 primary sampling units (PSUs) linked to the original PSUs used in the baseline NCS was chosen to maximize the efficiency of cross time comparison. A sample was created in which the probability of any individual HU being selected to participate in the survey was equal for every HU in the coterminous U.S. (Kessler et al, 2004).

The NCS-R was divided into two parts for the *actual sample*. Part 1 utilized a long form version of survey questions. Part 2 utilized a short form version, used for initial nonrespondents who were unwilling to complete the long form, but willing to complete the short form. The long and short form interviews combined totaled 9,836 completed interviews. The response rate of Part 1 was 74.6%, and the response rate of Part 2 was 83.8% (Kessler et al., 2004).

**NCS-A (2001-2004).** All adolescents ages 13-17 in the U.S. comprised the *theoretical sample* (Kessler et al., 2009). The NCS-R (*adult*) households that included adolescents were selected for the NCS-A (adolescent) sample. The school population was chosen from the same sample of counties as the NCS-R (Merikangas et al., 2009). Together, the households and schools comprised the *accessible sample*.

As a supplement to the NCS-R, *households* that included adolescents were incorporated into the NCS-A. The households chosen were based on a probability sampling design that was representative of households in the continental U.S. This household sample also included

adolescents who were not currently enrolled in school (Kessler et al., 2009). This comprised the selected sample of households.

*Schools* were recruited from the same sample of counties as the NCS-R. A representative sample of middle, junior high, and high schools was chosen with probabilities proportional to the size of the student body in the classes relevant to the target sample, (i.e., ages 13-17) in each of the counties or county clusters that made up the primary sampling units (PSUs) of the nationally representative NCS-R sample. Within each school, a random sample of 40-50 eligible students was selected for sampling using a systematic selection procedure (Kessler et al., 2009). This comprised the selected sample of schools. The two selected samples, household and school, combined to form the complete the *actual sample*.

The sample of NCS-A participants was representative of the theoretical population. For each survey discussed, the theoretical population was presented, and the accessible population was described. The selected sample was chosen, and the actual sample interviews were completed. The external validity of this study was therefore established, as the results were generalizable to the general population.

### **Determination of the Strength of the External Validity.**

In determining the strength of external validity, research perspectives vary. According to Dekkers et al. (2009) the preferred way of establishing the strength of external validity is to repeat the study for that specific target population. As external validity addresses generalizability, a good study should be rated highly on external validity.

Dekkers et al. propose that the study should address “whether the study population differs from the intended source population with respect to characteristics that influence outcome” (p. 83). In determining the strength of the external validity, Dekkers et al. also posits that,

concerning geographical, temporal, and ethnic conditions, the target population will differ from the study population. The researcher must determine whether those differences of the target population will influence study results. The researcher must decide if the study's conclusions are generalizable to various target populations which do not meet all of the eligibility criteria.

Gliner et al. (2009) posits that, in determining the *strength* of external validity, three aspects must be considered: *population external validity*, *ecological external validity*, and *testing of participant subgroups*. A discussion of each of the three aspects, as they apply to this study, follows.

### **Population External Validity**

The first aspect of external validity that was examined for this study was the population external validity. Gliner et al. (2009) posits that *population external validity* is based upon (1) representativeness of the accessible population regarding the theoretical population; (2) adequacy of the sampling method from accessible population; and (3) adequacy of the response rate. The three surveys are discussed below. The *representativeness of the accessible population to the theoretical population* is discussed first.

### **Representativeness of the Accessible Population**

NCS. Individuals age 15-54 years of age living in the non-institutionalized civilian population in the 48 coterminous states of the U.S. comprised the theoretical population of the NCS. With a total of 8098 respondents, the response rate of those surveyed was 82.6%. The data was weighted to approximate the national population distribution of the cross-classification of race/ethnicity, sex, age, education, marital status, region, living arrangements, and urbanicity as determined by the 1989 US National Health Interview Survey (Kessler et al., 1994).

**NCS-R.** English-speaking adults ages 18 or older living in the non-institutionalized civilian household population of the coterminous U.S. (excluding Alaska and Hawaii) comprised the theoretical population. “Respondents were chosen from a four-stage area probability sample of the population of civilians using small area data collected by the 2000 U.S. Bureau of the Census” (Kessler 2004, p. 74).

**NCS-A.** At the request of the U.S. Congress, the NCS-A (*adolescents*) was added on to the NCS-R (*adults*). Accordingly, the theoretical population of the NCS-R, mentioned above, remained the same for the NCS-A. However, the age range of the NCS-R (*adults*) was lowered, allowing 13-17 year old English speaking adolescents living in the coterminous states of the U.S. to be interviewed. The theoretical population of the NCS-A was thereby created. Due to the small number of adolescents residing in NCS-R (*adults*) households, it was not possible to generate the target sample of 10,000 respondents. A school-based sample was consequently added to supplement the households sample. “The school sample was recruited from the same sample of counties of the NCS-R” (Kessler, 2009b, p. 84).

Consequently, the final NCS-A sample was based on a dual frame design. The first sample was recruited from the NCS-R households, and the second sample from a representative sample of schools in the same community as the NCS-R households. “All schools were included in their true population proportions” (Kessler et al., 2009b, p. 70). From each school, a stratified probability sample of students was chosen to participate in the survey (Kessler et al).

### **The Adequacy of the Sampling Method**

To assess the strength of population external validity, it is necessary to determine the *adequacy of the sampling method from the accessible population*; a second criterion mentioned by Gliner et al., (2009). The goal of sampling is having a sample that represents the target or

theoretical population. All of the key variables of the sample should have the same proportions as the proportion in the whole population. “A representative sample is most likely obtained using the techniques described as types of probability sampling” (Gliner, et al., 2009, p. 118).

The NCS utilized a stratified , multistage area probability sample of individuals 15-54 years of age, in the non-institutionalized civilian population, in the 48 adjoining states of the U.S. The NCS also utilized a random sample of initial non-respondents (Kessler et al., 1994).

NCS-R respondents were chosen from a probability sample of non-institutionalized private citizens, using data collected by the U.S. Bureau of the Census from the year 2000. The NCS-R (adults) used probability and systematic random sampling (Kessler et al., 2004).

The NCS-A (*adolescents*) household survey was conducted as a supplement to the NCS-R (*adults*). The *households* chosen were based on a probability sampling design that was representative of households in the continental U.S. The school sample was recruited from the same sample of counties as the NCS-R (Kessler et al., 2009b). The sampling method was therefore determined to be adequate.

### **Response Rate**

Gliner et al. (2009) mentions *response rate* as a third criterion upon which the strength of population external validity is rated. The ratio of the size of the actual sample to the selected sample provides the response rate. Response rate indicates how much bias that might exist in the final sample of respondents. Non-respondents may differ from respondents in many ways, including, age, ethnicity, and gender.

Opinions vary regarding the determination of an adequate response rate. Nulty (2008) reported that “face-to-face” surveys result in higher response rates. Gliner et al., 2009, argues that “...a low response rate (perhaps less than 50%) will usually lower the quality of the sample”

(p. 117). Dommeyer, Baum, Hanna, & Chapman (2004) reported that ‘on paper surveys’ achieved an average of a 75% response rate. Other researchers report that an 80-85% response rate for a face to face survey reflects “good” external validity (University of Texas, 2016). The NCS response rate was 82.6, the NCS-R response rate was 70.9, and the NCS-A rate was 75.6.

### **Strength of the Population External Validity**

The *theoretical* population was adequately represented by the *accessible* population. The sample of the accessible population was *representative* and *adequate*. The *response rates* of the NCS, the NCS-R, and the NCS-A was 82.6, 70.9, and 75.6 respectively. Therefore, the strength of the population external validity was determined to be high.

### **Ecological External Validity.**

Ecological external validity was the second aspect of external validity that was examined for this study. Ecological external validity “has to do with whether the conditions, settings, times, testers, or procedures are representative of natural conditions...and thus, can be generalized to real life outcomes” (Gliner et al., p. 129). A description of the criterion for ecological external validity, as the criterion pertains to this study, follows.

### **Naturalness of the Setting**

According to Gliner et al., 2009, the *naturalness of the setting*, or the study condition, is an important aspect of ecological external validity. Studies conducted in field settings, such as a home or school, rate more highly on this aspect of ecological external validity than a study conducted in a laboratory setting. The respondents of the NCS, NCS-R, and NCS-A were all interviewed in their own homes, so a natural setting was provided for the interviews to take place.

## Quality of the Relationship

The *rapport* between tester and the study participants and the *quality of the relationship*, is another important aspect of ecological external validity (Gliner et al., 2009). Disparity between the researcher and respondent in personal style, ethnicity, gender, or age could inhibit rapport. During the implementation of each of the three surveys, interviewers were intensively trained to provide competent and satisfactory rapport between the interviewers and the respondents (Kessler et al., 2009).

The NCS was carried out by the field staff of the Survey Research Center (SRC) at the University of Michigan. The interviewers averaged 5 years of prior interviewing experience with the SRC. A 7 day training program in the use of the survey instrument was conducted for the interviewers (Kessler et al., 1994).

For the NCS-R (*adult*), interviewers were certified with an NCS-R certification test that involved administering a series of practice interviews with scripted responses before beginning work. The NCS-R was implemented using a laptop computer-assisted personal interview (CAPI) process, conducted by professional survey interviewers employed by the Survey Research Center (SRC) of the Institute for Social Research at the University of Michigan. One advantage of the face-to-face method was related to the issue of length and complexity of the interview, which can result in high respondent burden. The face to face survey method provided the possibility for interviewers to measure respondent fatigue and to offer short breaks if respondents needed time to regain their focus. For respondents who had complicated histories of psychopathology, interviews were often broken up into several sessions that could spread out over a period of days or even weeks (Kessler et al., 2004).



The NCS-R interviewers were asked to persevere during long interviews, because respondents with long interviews are usually those with complicated histories of psychopathology. Interviewers were encouraged to arrange appointments for subsequent interview sessions to complete long interviews. As the interviewers were paid by the hour, it was relatively easy to facilitate such procedures (Kessler et al., 2004).

As the NCS-A (*adolescent*) was administered as an adjunct to the NCS-R, The NCS-A interview was also administered using laptop computer assisted personal interviews (CAPI) by the Survey Research Center of the Institute for Social Research at the University of Michigan. Audio computer-assisted self-administered interviewing (A-CASI) might have been used instead of CAPI, as the NCS-A asked several embarrassing questions (Kessler et al., 2009 b).

With A-CASI, respondents use digital audio recordings and headsets connected to the laptop to administer the survey questions. Respondents enter answers into a laptop without the interviewer's knowledge of their answers. Substantial evidence reveals that A-CASI can result in significantly higher reports of some embarrassing illegal and behavior. The researchers decision to use CAPI instead of A-CASI was due to the fact that the NCS-R used CAPI. The decision not to use the A-CAPI in the NCS-R (*adult*), in turn, was due to a concern about non-comparability of responses of trending with the baseline NCS (Kessler et al., 2009b).

### **Natural Aspect of the Procedure**

A third criterion in determining the ecological external validity is the natural aspect of the procedure. Surveys were utilized to gather data, for the NCS, NCS-R, and NCS-A. Surveys are a method of self-report, in which the respondent is asked about subjects such as their feelings, attitudes and behaviors. According to Gliner et al., 2009, most of the methods that use self-report measures, such as questionnaires and surveys, are at least somewhat manufactured because they

do not directly measure the participant's actual behavior. As mentioned above, the national surveys were administered using laptop computer-assisted personal interview (CAPI) methods by professional survey interviewers (Kessler et al., 2009b).

Spijkerman, Knibbe, Van De Mheen, & Van Den Eijnden, (2009) argue that the presence of an interviewer may increase a person's inclination to give socially desirable answers. For instance, in research regarding substance abuse, Spijkerman et al. report that the response of socially desirable answers can be particularly high, as use of substances is generally regarded as a sensitive topic.

Accordingly, regarding the three national surveys, if the national survey respondents were contrasted with respondents of an online panel survey, CAPI respondents who were interviewed in the presence of an interviewer may have been more likely to under-report their substance use. Other behaviors that the respondent may have deemed as being viewed as socially undesirable may have been under reported. The use of a self-report measure, as well as the presence of an interviewer, may have impacted the responses of the survey participants.

### **Appropriateness of Timing**

The *length of treatment* and the *appropriateness of the timing* is another aspect of ecological external validity. The above criterion primarily regards experiments and studies which incorporate an intervention. In experiments, sometimes the intervention or treatment is too short to be representative of how the intervention would actually take place if widely implemented. (Gliner et al., 2009). This rating for ecological validity is not applicable because this study is not an experiment.

### **Extent to Which Results Are Time Restricted**

A final criterion of ecological external validity is *the extent to which results are restricted to a specific time in history*. This criterion queries whether the study results apply to more than the specific time in history that the study was done. A study's usefulness may be restricted to approximately the time in history that it was conducted. Study results may become outdated. Some topics are more enduring, and study results may remain relevant for years or decades (Gliner et al., 2009).

The NCS-A was conducted to determine the prevalence of psychiatric disorders in the adolescent population of the continental United States. The presence of psychiatric disorders is not limited to a specific time in history. Therefore, the results of the NCS-A were not time restricted.

### **Strength of the Ecological External Validity**

The study took place in a *natural setting*, as interviews were conducted in the homes of the participants. Regarding *adequacy of the rapport with the testers*, interviewers were intensively trained to provide competent and satisfactory rapport between the interviewers and the respondents. Accordingly, the *naturalness of the setting* and the *adequacy of rapport with the testers* contributed to the strength of the ecological external validity.

Surveys were utilized to gather data for the NCS, the NCS-R, and the NCS-A. As mentioned above, self report measures, such as surveys, are to some extent manufactured, because they do not directly measure the participant's actual behavior. The presence of an interviewer may increase the participant's tendency to give socially desirable answers (Spijkerman et al., 2009). Therefore, the *naturalness of the procedure* was not a strength of the ecological external validity.

The *appropriateness of the timing and length of treatment* was not applicable to this study, as a treatment was not provided. Regarding the *extent to which the results are restricted to a specific time in history*, the presence of psychiatric disorders is not time specific. This final aspect neither added to, nor detracted from, the strength of the ecological external validity of the study. The strength of the ecological external validity was determined to be high.

### **Testing of Participant Subgroups**

As mentioned above, the third aspect of the evaluation of external validity, according to Gliner et al., (2009) is the “testing of participant subgroups” (Gliner et al., 2009, p. 359). The extent to which important subgroups were *tested* or *compared* is the essence of this aspect of external validity.

Testing of participant subgroups includes an evaluation of the extent to which gender differences were analyzed or compared. The comparison or analysis of two or more ethnic groups is considered. The analysis or comparison of two or more age groups is examined. Subgroups, such as cultures or geographic regions are compared.

### **Strength of the Testing of Participant Subgroups**

The NCS-A was a survey, and therefore no testing, or comparisons occurred. No evaluation of any of the respondents took place. Therefore, the testing of participant subgroups, as an aspect of external validity for this study, does not apply.

### **Overall Strength of the External Validity of the Sample**

Because the theoretical population was adequately represented by the accessible population, the sample of the accessible population was representative, and the response rates of the three surveys were adequate, the strength of the *population* external validity is rated as “high.”

The natural aspect of the procedure was *not* a strength of the ecological external validity, as surveys were utilized to gather the data for the three national studies. However, the *natural aspect of the setting* and the *adequacy of rapport with the testers* contributed to the strength of the ecological external validity *testing of participant subgroups*. The strength of the **ecological** external validity is therefore rated as “high.”

The final aspect of determining the strength of the ecological validity is the **strength of the testing of participant subgroups**. As mentioned above, this last aspect does not apply to the NCS-A sample. The overall strength of the external validity of the sample is rated as “high.”

### **Internal Validity of Associational Studies**

This study incorporates an associational approach, as it seeks to examine the effect of gender on sense of belonging, and the effect of ethnicity on sense of belonging, and the effect of age groups on sense of belonging. In addressing internal validity between groups in associational studies, Gliner et al. (2009) emphasize that the associational approach does not provide evidence of causation.

“...internal validity is the approximate validity with which we can infer that a relationship is causal” (Gliner et al., 2009, p. 103). The associational approach is limited in what can be concluded about causation, but it can lead to strong conclusions about the differences between groups, and about associations between variables.

If a study is nonexperimental, information about cause and effect is seldom provided, but it may offer suggestions about related variables, effective clinical practice, and *possible* causes. This approach does not try to identify causal relationships, but rather focuses on describing and summarizing variables (Gliner et al., 2009). Accordingly, the internal validity of this

associational study will not provide evidence of causation, but rather the variables will be characterized and examined.

### **Reliability**

“Cronbach’s alpha is the most commonly used index of reliability in... psychological research” (Gliner et al., 2009, p.158). When each item on a test has multiple choices, such as a Likert scale, then Cronbach’s alpha is used to determine inter-item reliability. The Sense of Belonging Measure utilized a Likert scale. Therefore, Cronbach’s Alpha was used to determine the internal consistency reliability.

### **Summary**

This proposed study utilized secondary data found in the National Comorbidity Survey-Adolescent Supplement (NCS-A, 2001-2004). The NCS-A comprised a comprehensive data set and provided opportunities to make inferences about characteristics of the adolescent population, allowing generalizations to be made from a sample to a specific population.

From the NCS-A, 58 questions, each with an embedded variable, were chosen to measure sense of belonging. The variables embedded within each question were *each* a measure of sense of belonging and were supported by a comprehensive search of the literature. Those questions, with their embedded variables, formed the initial Sense of Belonging Measure.

Exploratory factor analysis was utilized to determine which of the variables determined to measure sense of belonging actually conformed to the Sense of Belonging Measure. The results of testing using Cronbach’s alphas showed that the final factors produced were reliable.

A three way ANOVA was conducted, to determine if any main effects upon sense of belonging would be produced. A three way ANOVA was conducted to explore the possibility of

an interaction effect occurring. A Games-Howell post-hoc test was conducted to determine which means of the independent variables were significant.

Appendix A provides the initial Sense of Belonging Measure. The final Sense of Belonging Measure is found in Appendix B. Appendix C provides the Initial Sense of Belonging Measure with the embedded variables, and literature support. Appendix D describes the Sampling Procedure utilized for the NCS-A.

## **Chapter 4: Results**

### **Introduction**

The purpose of this study was to develop a Sense of Belonging Measure, which was created specifically for this study. The measure was used to examine whether and how the construct, thwarted sense of belonging, applied to adolescents, specifically by gender, age, and ethnicity. The measure was also used to examine whether or not there was a difference between males and females, in the estimated mean scores of sense of belonging. In addition, the Sense of Belonging Measure was used to examine whether or not there was a difference between ethnicities in the estimated mean scores of sense of belonging. Finally, the Sense of Belonging Measure was used to examine whether or not there was a difference between adolescent age groups, in the estimated mean scores of sense of belonging.

This chapter begins with a review of the research questions, followed by a table illustrating the demographics of the population studied. Next, a review of the data collection instrument is presented. The remainder of the chapter is organized according to the order of the research questions.

### **Demographics of the Survey Respondents**

The National Comorbidity Survey-Adolescent Supplement (NCS-A), from which the data for this study was utilized, was administered to a nationally representative sample of adolescents. The ages ranged from 13-18 years (Merikangas et al., 2009). The demographics of the study are provided in Table 1 below.



Table 1  
*Demographics of the NCS-A*

Demographic	n	%
Sex		
Female	5,183	51
Male	4,965	49
Age		
13 - 15	5,761	57
16 - 18	4,387	43
Race / Ethnicity		
Hispanic	1,922	19
Non-Hispanic Black	1,955	19
Non-Hispanic White	5,648	56
Other	623	06
Total	10,148	100

### Research Questions

The research investigated if and how the construct of thwarted belonging applies to the adolescent population, with specific focus on gender, ethnicity, and age.

1. Are the theoretically proposed factor groupings for the Sense of Belonging Measure, (Parent Belonging, Family Belonging, Peer Belonging, and Ethnic Belonging) replicated in empirical factor analyses of national survey data?
2. Do the variables on the Sense of Belonging Measure actually measure the concepts that the literature identifies as being related to adolescent belonging?

3. Utilizing the Sense of Belonging Measure to measure belonging for adolescents, does the construct, “thwarted sense of belonging,” apply to adolescents, specifically by gender, ethnicity, and age?
  - a. 3.1 Is there a main effect of gender on sense of belonging?
  - b. 3.2 Is there a main effect of ethnicity on sense of belonging?
  - c. 3.3 Is there a main effect of age on sense of belonging?

### **Data Collection Instrument**

To determine if there are associations between the attribute independent variables of gender, ethnicity, and age regarding adolescent sense of belonging, it was necessary to develop a Sense of Belonging Measure. A comprehensive review of the literature pertaining to adolescents’ sense of belonging was conducted, and questions from the NCS-A were reviewed. Each question on the NCS-A was analyzed for its relevance to sense of belonging, based upon the “sense of belonging” variables found in the literature review. Also, each question chosen from the NCS-A already contained within it an *embedded variable of its own*. For the Sense of Belonging Measure, NCS-A questions were chosen, which contained *embedded* variables relevant to sense of belonging.

### **Missing Data**

Not all respondents answered all of the survey questions. Missing data from survey respondents was addressed, by the survey developers, with listwise deletion. Listwise deletion omits an entire record from analysis if any single value is missing.

## Research Questions

1. Were the proposed factor groupings for the Sense of Belonging Measure (Parent Belonging, Family Belonging, School Belonging, Peer Belonging, and Ethnic Belonging) replicated in empirical factor analyses of national survey data?

No national studies measuring overall sense of adolescent belonging were found. Instead, each national survey that was found to measure belonging studied one or sometimes two aspects of belonging, such as school belonging, or school and family belonging. Those national surveys typically were conducted to study some aspect of belonging as a protective factor against at risk behavior.

The literature search conducted for this study informed the *proposed* factor groupings. Five factor groupings were proposed. Parent Belonging, Family Belonging, Peer Belonging, School Belonging and Ethnic Belonging formed the proposed factor groupings.

However, the *actual* factor groupings that were produced as a result of the factor analyses differed from the proposed groupings. The proposed Parent Belonging actually emerged as two separate factors: Mother Belonging and Father Belonging. The factor groupings that were produced from the final factor analysis were Family Belonging, Mother Belonging, Father Belonging, School Belonging, and Religious Belonging.

2. Did the variables in the Sense of Belonging Measure actually measure the concepts that the literature identifies as being related to adolescent belonging?

In order to determine if the variables in the Sense of Belonging Measure actually measured the concepts that the literature identified as being related to adolescent belonging, factor analyses were conducted. Cronbach's alphas were also computed in order to determine the measurement reliability. The process is described below.

### **Initial Factor Analysis**

A *preliminary* factor analysis had been tried *prior* to the *initial* factor analysis. Although the total number of respondents for the NCS-A was  $N = 10,148$ , due to list-wise deletion used for the NCS-A survey analyses, analysis  $N$  of the preliminary factor analysis was 315. This researcher consulted with Alon Axelrod, archivist for the University of Michigan's Intercollegiate Consortium for Political and Social Research (Conversation with Alon Axelrod, October 21, 2016) and it was determined that listwise deletion, specifically with the School Belonging items, was the cause of the small analysis  $N$ . Therefore, the decision was made to omit the School Belonging variables from the subsequent *initial* factor analysis.

The initial factor analysis examined 58 items which were hypothesized to relate to a sense of belonging for adolescents. Four factors were extracted: Parent, Family, Peer, and Ethnic Belonging.

To ensure the quality of the factor analysis, various tests were conducted as recommended by Leech et al. (2015). The Kaiser-Meyer-Olkin (KMO) Measure of Sampling Adequacy informs the researcher of “whether or not enough items are predicted by each factor” (p. 73). The KMO Measure of Sampling Adequacy was .906, which was above the minimum recommended value of .70.

The Bartlett's Test of Sphericity informs the researcher of whether or not the variables “are correlated highly enough to provide a reasonable basis for a factor analysis” (Leech et al., 2015, p. 73). The test should have a significance value of  $< .05$ . The Bartlett's test result of .000 was significant at the  $\alpha = .05$  level of significance.. The results of the KMO test and Bartlett's Test of Sphericity are presented below in Table 3.

Table 2  
*Initial KMO and Bartlett's Test*

Kaiser-Meyer-Olkin Measure of Sampling Adequacy	.906
Bartlett's Test of Sphericity Approximate Chi-Square	93904.37
<i>df</i>	1035
Significance	.000

**Varimax Rotation.** Following Varimax rotations, factor loadings that fall below  $|.30|$  are considered to be low. Accordingly, the SPSS statistical tool was programmed to omit any items that loaded  $<|.30|$ . Loadings of  $>|.40|$  are typically considered to be high (Leech et al., 2015). Accordingly, a Varimax rotation was conducted to determine the factor loadings for the initial factor analysis, specifying that the SPSS program omit factor loadings of  $<|.30|$ .

**Initial Factor Analysis: Factors Produced.** As a result of Varimax rotation, four factors were produced from the initial analysis. The first two factors, reflecting Mother Belonging and Father Belonging, appeared to relate to overall Parent Belonging. The third factor reflected Family Belonging, and the fourth factor appeared to reflect belonging as a product of parental supervision.

**Cronbach's Alpha.** What was proposed as a Parent Belonging factor actually produced two separate factors—a Mother Belonging and a Father Belonging Factor. A Cronbach's Alpha was therefore conducted to provide a measure of reliability for each factor. According to Morgan et al. (2013) "...alpha should be above .70..." (p. 129). The alpha score for Mother Belonging factor was  $\alpha = .851$ . The alpha for Father Belonging factors was  $\alpha = .898$ . Accordingly the proposed Parent Belonging factor was separated into two separate factors for the final analyses—Father Belonging and Mother Belonging. The decision was made because the factor loadings for

apparent Father Belonging and Mother belonging were adequate, and the decision conceptually made sense.

### **Items Omitted from the Initial Analysis**

**Family Belonging Items Omitted.** Nine Family Belonging items were originally loaded into the *initial* factor analysis. One item, “*How difficult was it to get the whole family to agree*” was omitted from the *final* factor analysis for the following reason: A Cronbach’s Alpha was conducted after the first factor analysis. Deletion of that item from that first Cronbach’s alpha testing raised the alpha from .793 to .891. Therefore, the item was deleted.

Following the *initial* factor analysis, three additional Family Belonging items were omitted from the final factor analysis, due to their low factor loadings. The following table presents the Family Belonging items that were omitted after the initial factor analysis.

Table 3  
*Family Belonging Items Omitted*

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Family Belonging Items Omitted
How often family members compromised.
How often children had a say in their discipline.
How often was it difficult to get the whole family to agree.
How often parents knew how to find you.

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**Parent (Supervision) Belonging Items Omitted.** Following the *initial* factor analysis, five Parent (Supervision) Belonging items were omitted from the *final* factor analysis, due to their low factor loadings. The following table presents the Parent Belonging items that were omitted after the *initial* factor analysis.

Table 4  
*Parent (Supervision) Belonging Items Omitted (1)*

---

Parent Belonging Items Omitted (1)

---

How often parents make you tell them before going out.

How often parents knew how to find you.

How often had a set time to be home.

How much tension in relationship.

---

**Parent (Mother/Father) Belonging Items Omitted.** The items below pertained to questions that were asked in two separate sections of the NCS-A questionnaire, and were also conceptualized as Parent Belonging items in the *initial* factor analysis. One section in the NCS-A applied to the “Woman who raised you.” The second section in the NCS-A applied to the “Man who raised you.” Both sections were conceptualized by this researcher as Parent Belonging items. Both sections were omitted from the final analysis, due to factor loadings factor loading of  $< |.30|$ . The “Woman who raised you” and the “Man who raised you” Parent Belonging items are combined, and presented below in Table 5.

Table 5  
*Parent (Mother/Father) Belonging Items Omitted*

---

Parent (Mother/Father) Belonging Items Omitted

---

How much tension was there in your relationship?

How strict was she about the rules?

How much did she really care about you?

Extent that she expected you to do your best.

How much (mother/father) cared.

(Who was) the woman/man who raised you?

How emotionally close (you were with the woman/man who raised you) when growing up.

Communication when you were growing up.

How often you talked about school friends and feelings.

How much tension in relationship.

How much (mother/father) cared.

How strict about rules.

Extent expected you to do your best.

---

Although proposed, a factor reflecting possible Peer Belonging was not produced in the *initial* analysis. A Cronbach's Alpha was conducted, adding additional peer related items to further test the viability of a potential peer factor. The alpha, with the newly added peer related items was .340. Accordingly, the decision was made to divide the potential Peer Belonging items into the following indexes: Peer, Ethnic, and Religious Belonging. A subsequent Cronbach's alpha resulted in Peer Belonging = .568, Ethnic Belonging = .524, and Religious Belonging = .680.

As mentioned above, according to Morgan et al. (2013) "...alpha should be above .70..." (p. 129). However, Morgan et al. continues; "... it is common to see journal articles where one or more scales have somewhat lower alphas (.60-.69 range), especially if there is only a handful



of items in the scale” (p. 129). Religious Belonging contained only 4 items, so the decision was made to include Religious Belonging as a factor for the final analysis. Peer and Ethnic Belonging items were omitted from the final factor analysis.

One additional peer related item was omitted from the *initial* factor analysis, as the item asked the respondent a question which required the respondent to reply by writing a number. Computing that item would have required a different type of analysis for this researcher to conduct, so the item was omitted. Due to a Chronbach’s alpha score  $< .60$ , the following Peer Belonging items were omitted from the final factor analysis:

Table 6  
*Peer Belonging Items Omitted*

---

Peer Belonging Items Omitted
How popular with people your own age
How easy to become emotionally close to others.
How often talk on the phone, hang out, or get together socially.
How much you can rely on friends when you have a serious problem.
How much you can open up to friends if you need to talk about worries.

---

Due to a Chronbach’s alpha score  $< .60$ , the following Ethnic Belonging items were omitted from the final factor analysis:

Table 7  
*Ethnic Belonging Items Omitted*

---

Ethnic Belonging Items Omitted
How closely you identify with other people who are of the same racial and ethnic descent as yourself?
How close you feel in your ideas and feelings about things to other people of the same racial and ethnic descent?
How many of your friends are of your same racial and ethnic group?

---

**Results of the Final Factor Analysis.** A final factor analysis was conducted, utilizing 31 items, extracting 5 factors. The items that were utilized were chosen due to their loadings on the initial factor analysis, and to their Cronbach's alpha scores. Although School Belonging items were omitted from the *initial* factor analysis, following a conversation with Dr. Victoria Buchan, a different configuration of School Belonging items was included in the final factor analysis (Conversation with Victoria Buchan, October 31, 2016). The decision was made to include the items related to Mother, Father, Family, School, and Religious Belonging, to potentially develop a measure of "overall belonging" The items that were chosen for the final analysis are presented below. Due to list-wise deletion, analysis  $N$  of this final factor analysis was  $N = 6, 239$ .

As mentioned above, Leech et al. (2015) recommended that various tests be conducted to ensure the quality of the factor analysis. The KMO Measure of Sampling Adequacy was .915, informing this researcher that enough items were predicted by each factor. Leech et al. states that an adequate KMO test result should be above .70

The Bartlett's Test of Sphericity test should have a significance value of  $< .05$ . The Bartlett's test result of .000 was significant at the  $\alpha = .05$  level of significance. This result informed this researcher that the variables were correlated highly enough to provide a basis for a factor analysis to be conducted. The results of the KMO test and Bartlett's Test of Sphericity are presented below in Table 9.

Table 8

*Final KMO and Bartlett's Test*

Kaiser-Meyer-Olkin Measure of Sampling Adequacy	.915
Bartlett's Test of Sphericity Approximate Chi Square	71330.1
<i>df</i>	435
Significance	.000

*Note:* The initial KMO measure of sampling adequacy was slightly lower (.906) than the final KMO, but the initial Bartlett's Test of Sphericity was significant at .000 in both the initial and final Bartlett's Test of Sphericity.

***Religious belonging items.*** Religious Belonging had not originally been hypothesized to become its own factor, as the significance of religious belonging had not been found in the literature. However, as mentioned above, a Cronbach's alpha was conducted to further examine Peer Belonging, and religiously related items were included in the Peer Belonging Cronbach's alpha testing. The alpha for Peer Belonging was lowered if the religiously related items were omitted. Therefore, the Religious Belonging items were included in the final factor analysis.

The original Religious Belonging items that were analyzed in the final factor analysis appear in the table below. No other Religious Belonging items were tested, as the ones below were the only ones in the NCS-A that seemed to be pertinent to the Sense of Belonging Measure. Following Varimax rotation, Religious Belonging was produced as its own factor, with no cross loading from other factors. The following table presents the Factor Loadings from the Religious Belonging items that were produced from the final factor analysis:

Table 9  
*Religious Belonging Items*

Religious Belonging Items	Factor Loading
Frequency of attendance at religious services.	.453
Importance of religious beliefs in daily life.	.597
During difficult times, seek comfort in religion.	.731
During decision making, guided by religious belief.	.745

***School belonging items.*** As mentioned above, in the preliminary factor analysis, certain School Belonging items lowered the analysis *N*. However, prior to the final factor analysis, a different configuration of items chosen for School Belonging were tested. The analysis *N* increased substantially, to *N* = 6,239. Therefore, School Belonging Items mentioned below were included in the final factor analysis. The following table presents School Belonging items that were produced in the final factor analyses:

Table 10  
*School Belonging Items*

School Belonging Items	Factor Loading
I like my teachers.	.603
I care a lot about what my teachers think about me.	.599
I like school.	.594
Getting good grades is important to me.	.423

**Family belonging items.** The following table presents the Family Belonging items that were produced in the final factor analysis.

Table 11  
*Family Belonging Items*

Family Belonging Items	Factor Loading
How often family members easily expressed opinions.	.644
How often family members talked about their feelings.	.627
How often family members shared interests and hobbies.	.590
How often family members talked when sad/worried.	.585
How often family members each had input on major decisions.	.555
How often family members willingly did what family decided.	.508
How often family members felt close to each other.	.504
How often family members did things together.	.496

**Mother/Father belonging items.** In the final factor analysis, Mother Belonging items loaded completely separately from the Father Belonging items, with no cross loading for either factor. As mentioned above, the SPSS statistical tool was programmed to omit any items that loaded lower than  $|.30|$ . Loadings of  $|.40|$  or greater are typically considered to be high (Leech et al., 2015).

The following table presents the factor loadings from Mother Belonging items that were produced in the final factor analysis.

Table 12  
*Mother Belonging Items*

Mother Belonging Items	Factor Loading
Extent you could discuss things that bothered you.	.735
Rate your communication with her during childhood.	.662
Extent that she understood your problems and worries.	.639
Amount that she knew what you did/felt.	.627
Extent that you could talk with her about school/friends/feelings.	.590
How much love/affection did you receive?	.476
Extent expected you to do your best.	.652

The following table presents the factor loadings from Father Belonging items that were produced in the final factor analysis.

Table 13  
*Father Belonging Items*

Father Belonging Items	Factor Loading
Extent you could discuss things that bothered you.	.765
Rate your communication with him during childhood.	.753
How emotionally close were you?	.737
Extent that he understood your problems and worries.	.730
Amount that he knew what you did/felt.	.720
How often did you talk with him about school/friends/feelings?	.673
How much love/affection did you receive?	.582

**Total variance explained.** The first factor (Father Belonging) accounted for 13.2 % of the variance. The second factor, Mother Belonging, accounted for 10.883% of the variance. The third factor, Family Belonging, accounted for 10.286% of the variance. The fourth factor, Religious Belonging, accounted for 5.753% of the variance. The fifth factor, School Belonging, accounted for 4.833% of the variance. Total cumulative variance was 44.914 %.

According to Peterson (2000), mentioned above, “the average percentage of variance accounted for in substantive factor analysis of behavioral data is 56%...” Peterson’s study further explains that “...the average percentage of variance accounted for...(varies) systematically” according to certain research design characteristics. “...the larger the number of variables analyzed, the smaller the percentage of variance accounted for” (p. 273). In Peterson’s meta-analysis of nearly 19,000 articles, the median number of variables analyzed was 18. Based upon Peterson’s findings, the cumulative variance of 45.914%, for 30 variables analyzed in this study was determined to be adequate. Table 15, provided below, provides an explanation of the variance divided among the five factors. The first five factors account for 44.9 % of the variance.

Table 14  
*Cumulative Total Variance Explained*

Factor	% Variance	Cumulative %
Factor 1. Father Belonging	13.160	13.2 %
Factor 2. Mother Belonging	10.883	24.0 %
Factor 3. Family Belonging	10.286	34.3
Factor 4. Religious Belonging	5.753	40.1
Factor 5. School Belonging	4.833	45.0

*Note:* Factor 1. *Father belonging*; Factor 2. *Mother belonging*; Factor 3. *Family belonging*; Factor 4. *Religious belonging*; Factor 5. *School belonging*.

**Cronbach’s Alpha.** In order to assess whether the data from the variables that were summed to create the overall Sense of Belonging Measure formed a reliable measure, Cronbach’s alphas were computed for each factor. The Alpha scores ranged from .680-.898. According to Morgan et al. (2013) “...alpha should be above .70...” (p. 129).

As indicated below in Table 18, the Religious and School Belonging scores are .680 and .691 respectively. However, Morgan et al. continues; “... it is common to see journal articles where one or more scales have somewhat lower alphas (.60 - .69 range), especially if there is only a handful of items in the scale” (p. 129). Religious and School Belonging had four items each. Accordingly, the decision was made to include the Religious and School Belonging items, as conceptually it made sense to include the two factors (Chuuon and Wallace, 2014; Resnick et al., 2004), despite the lower Cronbach’s alpha scores. The Cronbach’s alpha scores for the final factors are provided below.

Table 15  
*Chronbach’s Alpha*

Factor	Chronbach’s Alpha Score
Father belonging	.898
Mother Belonging	.851
Family Belonging	.841
Religious Belonging	.680
School Belonging	.691
Overall belonging (factors combined)	.890

The final factor analysis provided a measure consisting of five subscales for an overall measure of adolescent sense of belonging. The subscales are as follows: Family Belonging,



Mother Belonging, Father Belonging, School Belonging, and Religious Belonging. Summing the scores of the five factors resulted in a Cronbach's alpha score of .890.

As a result of the scores of the final Cronbach's alphas, the variables in the Sense of Belonging Measure were found to measure the concepts that the literature identified as being related to adolescent belonging. The results of the final Cronbach's alpha, which summed all of the subscales, indicated that the items formed a measure of overall sense of belonging that had internal consistency reliability.

The proposed Sense of Belonging Measure is provided in Appendix A. The final Sense of Belonging Measure is provided in Appendix B. The final measure is informed by the final factor analysis and the associated Cronbach's alpha scores.

3. Utilizing the Sense of Belonging Measure to measure belonging for adolescents, does the construct, "thwarted sense of belonging" apply to adolescents, specifically by gender, ethnicity, and age?

**Three-way ANOVA.** A three way analysis of variance (ANOVA) was conducted to explore the influence of three independent variables; gender, ethnicity, and age upon sense of belonging mean scores. The ANOVA was conducted to investigate the *main effects* of gender on sense of belonging, ethnicity on sense of belonging, and age on sense of belonging. Gender included two levels (male and female), ethnicity included three levels (Non-Hispanic Black, Non-Hispanic White, and Hispanic), and age included two levels (13-15 year olds, and 16-18 year olds). An *interaction effect* of ethnicity and age on sense of belonging was an unexpected finding, and is also reported below.

Along with the three-way ANOVA, a Levene's test of *equality of error variances* was conducted, which tested the hypothesis stating that the error variance of the dependent variable

was equal across groups. Levene's test showed that the variances were significantly different at the  $\alpha < .05$  level of significance. This meant that the assumption of the homogeneity of variances was violated. The result of the Levene's test indicated that a post hoc test needed to be conducted. Provided in Table 17 below are the results of the Levene's test.

Table 16  
*Levene's Test of Equality of Error Variances*

<i>F</i>	<i>df</i> 1	<i>df</i> 2	Significance
6.3	15	10132	.000

### 3.1. Is there a main effect of gender on sense of belonging?

The three way ANOVA that was conducted showed a difference in the estimated mean scores of sense of belonging between adolescent males and adolescent females. The females' estimated mean level of sense of belonging was  $M = 55.4$ . The range of values was  $M = 54.5$  for Non-Hispanic White females, to  $M = 57.7$  for Hispanic females. The males estimated mean level of sense of belonging was  $M = 56.0$ . The range of values was  $M = 54.2$  for Non-Hispanic White males, to  $M = 55.2$  for Hispanic males. The testing yielded an  $F$  ratio of  $F(1, 10132) = .037$ ,  $p$  (.848). Therefore a statistically significant main effect was *not* noted regarding the main effect of gender on sense of belonging at the  $\alpha = .05$  level of significance. Although females experienced a stronger sense of belonging than males, the difference was not substantive or statistically significant. Table 18 provides the means, standard deviation, and number of subjects regarding the main effect of gender on sense of belonging.

Table 17  
*Mean Differences by Gender on Sense of Belonging*

Gender	<i>M</i>	<i>SD</i>	<i>N</i>
Male	55.1	12.3	4965
Female	55.4	14.0	5183
Cumulative average	55.3	12.7	
Total Respondents			10,148

### 3.2. Is there a main effect of ethnicity on sense of belonging?

The three way ANOVA that was conducted revealed differences in the estimated mean scores of belonging between the three ethnic groups. The estimated mean score of sense of belonging for Non-Hispanic Blacks was  $M = 52.6$ . For Non-Hispanic Whites, the estimated mean score of sense of belonging was  $M = 55.3$ . For Hispanics, the estimated mean score of sense of belonging was  $M = 57.2$ . Hispanics had the highest estimated mean score of sense of belonging followed by Non-Hispanic Whites. Non-Hispanic Blacks had the lowest estimated mean score of sense of belonging. The differences in estimated mean scores were found to be statistically significant. The main effect for ethnicity and sense of belonging yielded an  $F$  ratio of  $F(3,10132) = 48.1, p (.000)$ . Therefore a statistically significant main effect was noted regarding the main effect of gender on sense of belonging at the  $\alpha = .05$  level of significance.

Table 20 provides the means, standard deviation, and number of subjects regarding ethnicity and sense of belonging. Included in the table below are the results regarding “Other,” that was computed from the survey data. However, the data for “Other” is not discussed in this study. It is included in the table to explain the three degrees of freedom, mentioned below.

Table 18  
*Mean Differences by Ethnicity on Sense of Belonging*

Ethnicity	<i>M</i>	<i>SD</i>	<i>N</i>
Hispanic	57.2	13.1	1922
Non-Hispanic/White	55.3	12.3	1955
Non-Hispanic/Black	52.6	12.7	5648
Other	57.5	13.8	623

### 3.3. Is there a main effect of age on sense of belonging?

Utilizing the three-way ANOVA a difference was found in the estimated mean score of sense of belonging between the two age groups. The estimated mean score of sense of belonging for 13-15 year old male adolescents was  $M = 54.0$ . The estimated mean score of sense of belonging for 13-15 year old female adolescents was  $M = 54.8$ . The estimated mean score of sense of belonging for 16-18 year old male adolescents was  $M = 57.1$ . The estimated mean score of sense of belonging for 16-18 year old female adolescents was  $M = 56.2$ . The estimated mean *total* score for sense of belonging for 13-15 year old adolescents was  $M = 54.3458$ . The estimated mean *total* score for sense of belonging for 16-18 year old adolescents was  $M = 56.4812$ .

The 16-18 year old adolescents had a higher total estimated mean score of sense of belonging than the younger age group. Of the older age group, the males had a higher total estimated mean score of sense of belonging than did the females. Of the younger age group, the females had a higher total estimated mean score of sense of belonging than did the males. The main effect of the older and younger age groups on sense of belonging yielded an  $F$  ratio of  $F(1, 10132) = 38.355, p (.000)$ . Therefore, the difference in estimated mean score of sense of belonging between age groups was statistically significant at the  $\alpha = .05$  level. The mean score totals between the age groups are provided below in Table 20.

Table 19

*Estimated Mean Scores of Age Groups*

13-15 Years Old	<i>M</i>	16-18 Years Old	<i>M</i>
13-15 Year Old Respondents	54.3	16-18 Year Old Respondents	56.5

**Additional Findings**

**Interaction Effect: Gender and Ethnicity.** The way that the independent variables interact upon the dependent variable is referred to as an interaction effect (Gliner et al. 2009). The ANOVA produced an interaction effect of gender and ethnicity on sense of belonging, which yielded an *F* ratio of  $F(3,10132) = 5.24, p (.001)$ . The test was significant at the  $\alpha = .05$  level of significance. Table 21 provides the ANOVA results regarding the effects of the independent variables gender, ethnicity, and age, on sense of belonging.

Table 20

*Tests of Between Subject Effects*

Source	Type III SS	<i>df</i>	<i>MS</i>	<i>F</i>	$\alpha$	Partial Eta Squared
Corrected Model	39211.2 <sup>a</sup>	15	2614.08	16.5	.000	.024
Intercept	17245987.1	1	17245987.1	108606.0	.000	.915
Age	6090.6	1	6090.6	38.4	.000	.004
Gender	5.8	1	5.8	.037	.848	.000
Race	23301.3	3	7767.1	49.0	.000	.014
Age/Gender	280.4	1	280.4	1.8	.184	.000
Age/Race	225.7	3	75.2	.474	.700	.000
Gender/Race	2502.7	3	834.2	5.3	.001	.002
Age/Gender/Race	267.5	3	89.2	.562	.640	.000
Error	1608901.9	10132	158.8			
Total		10148				
Corrected Total		10147				

a. *R* Squared = .024 (Adjusted *R* Squared = 0.22)

b. Computed using  $\alpha = .05$

**Eta.** Eta is an indicator of the proportion of variance that is due to between groups differences, such as between female and male on sense of belonging. Partial eta squared is a measure of the variance in sense of belonging that is associated with a particular between groups

effect. The three way ANOVA produced the following information regarding partial eta squared:

Age groups partial eta squared = .004.

Ethnicity partial eta squared = .014.

Ethnicity/gender partial eta squared = .002

The recommendation for eta, according to Cohen (1988) is as follows: small = .10, medium = .24, and large = .37. Accordingly, the partial eta squared for the main effects and for the interaction effect was very small. This means that the proportion of the variance that was due to the ‘between groups differences’ of age groupings, ethnicity, and ethnicity gender was very small.

**R Squared.** *R* squared indicates how much variance in the dependent variable can be predicted from the independent variable. Adjusted *R* squared “refers to the multiple correlation coefficient, squared and adjusted for the number of independent variables” (Leech et al, 2015, p. 193). Adjusted *R* square is used when there are several independent variable.

For this study, *R* squared = .02. Adjusted *R* squared = .02. According to Leech et al. (2015), an *R* squared of .02 is considered to be small. This means that .02 % of the variance in the belonging variable can be predicted from the independent variables.

**Games-Howell Post Test.** The interaction effect of ethnicity and gender upon belonging was statistically significant. 10 pairs of estimated mean scores were statistically significantly different. Therefore a post hoc test was necessary to provide information about *which* mean scores, within the independent variables, ethnicity, and gender, were significant. Post hoc comparisons, using the Games-Howell post hoc procedure, were conducted to determine which pairs of the gender and ethnicity mean scores differed significantly. The Games-Howell post hoc

testing produced 10 pairs of mean scores that were statistically significantly different. Those significantly different pairs of means are shown in Tables 22-26 below.

Table 21

*Interactive Effect of Gender and Ethnicity on Sense of Belonging: Hispanic Males*

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Interactive Effect of Gender and Ethnicity on Sense of Belonging: Hispanic Males

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Hispanic males ( $M = 56.3$ ) had a significantly higher estimated mean level of sense of belonging than Non-Hispanic Black males ( $M = 52.0$ ).

Hispanic males vs. Non-Hispanic Black males (mean difference = 4.4),  $p (.000)$   $a < .05$

Hispanic males ( $M = 56.3$ ) had a significantly higher estimated mean level of sense of belonging than African American females ( $M = 53.2$ ).

Hispanic males vs. Non-Hispanic Black females (mean difference = 4.0),  $p (.000)$   $a < .05$ .

---

Table 22

*Interactive Effect of Gender and Ethnicity on Sense of Belonging: Hispanic Females*

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Interactive Effect of Gender and Ethnicity on Sense of Belonging: Hispanic Females

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Hispanic females ( $M = 58.1$ ) had a significantly higher estimated mean level of sense of belonging than Non-Hispanic Black males ( $M = 52.0$ ).

Hispanic females vs. Non-Hispanic Black males (mean difference = 6.2),  $p (.000)$   $a < .05$ .

Hispanic females ( $M = 58.1$ ) had a significantly higher estimated mean level of sense of belonging than Non-Hispanic Black females ( $M = 53.2$ ).

Hispanic females vs. Non-Hispanic Black females (mean difference = 4.8),  $p (.000)$   $a < .05$ .

Hispanic females ( $M = 58.1$ ) had a significantly higher estimated mean level of sense of belonging than Non-Hispanic White males ( $M = 55.4$ ).

Hispanic females vs. Non-Hispanic White males (mean difference = 2.7),  $p (.000)$ ,  $a < .05$ .

Hispanic females ( $M = 58.0$ ) had a significantly higher average score on the belonging measure than Non-Hispanic White females ( $M = 56.0$ ).

Hispanic females vs. Non-Hispanic White females (mean difference = 2.9),  $p = .000$ ,  $a < .05$ .

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Table 23

*Interactive Effect of Gender and Ethnicity on Sense of Belonging: Non-Hispanic Black Females*

Interactive Effect of Gender and Ethnicity on Sense of Belonging: Non-Hispanic Black Females

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Non-Hispanic Black females ( $M = 53.2$ ) had a significantly higher average score on the belonging measure than Non-Hispanic White males ( $M = 55.4$ ).

Non-Hispanic Black females vs. Non-Hispanic White males (mean difference = 2.2),  $p = .000$ ,  $a < .05$ .

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Table 24

*Interactive Effect of Gender and Ethnicity on Sense of Belonging: Non-Hispanic White females*

Interactive Effect of Gender and Ethnicity on Sense of Belonging: Non-Hispanic White females

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Non-Hispanic White females ( $M = 55.2$ ) had a significantly higher average score on the belonging measure than Non-Hispanic Black females ( $M = 53.2$ ).

Non-Hispanic White females vs. Non-Hispanic Black females (mean difference = 2.0),  $p = .001$ ,  $a < .05$ .

Non-Hispanic White females ( $M = 55.2$ ) had a significantly higher average score on the belonging measure than Non-Hispanic Black Males ( $M = 52.0$ ).

Non-Hispanic White females vs. Non-Hispanic Black Males (mean difference = 3.3),  $p = .000$ ,  $a < .05$ .

---

Table 25

*Interactive Effect of Gender and Ethnicity on Sense of Belonging: Non-Hispanic White Males*

Interactive Effect of Gender and Ethnicity on Sense of Belonging: Non-Hispanic White Males

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Non-Hispanic White males ( $M = 55.4$ ) had a significantly higher average score on the belonging measure than Non-Hispanic Black males ( $M = 52.0$ ).

Non-Hispanic White males vs. Non-Hispanic Black males (mean difference = 3.5),  $p = .000$ ,  $a < .05$ .

---

The highest overall estimated mean score of sense of belonging was  $M = 58.1$  for Hispanic females. The lowest estimated mean score of sense of belonging was  $M = 52.0$  for Non-



Hispanic Black males; The estimated mean levels of sense of belonging, from the highest to the lowest means, are provided below in Table 27.

Table 26  
*Range of Means*

<i>Highest to Lowest Means</i>	<i>M</i>
Hispanic females	58.1
Hispanic males	56.3
Non-Hispanic White males	55.4
Non-Hispanic White females	55.2
Non-Hispanic Black females	53.2
Non-Hispanic Black males	52.0

From the perspective of ethnicity, Hispanic females and males had the highest estimated mean score of sense of belonging, respectively. Non-Hispanic White males and females had the second highest mean score of sense of belonging, respectively. African-American males and females had the third highest mean score of sense of belonging, respectively.

Of the *females* that were studied, Hispanic females had the highest estimated mean score of sense of belonging, followed by Non-Hispanic White females. Non-Hispanic Black females had the lowest estimated mean score of sense of belonging, of the females that were studied.

Of the *males* that were studied, Hispanic males had the highest estimated mean score of sense of belonging, followed by Non-Hispanic White males. Non-Hispanic Black males had the lowest estimated mean score of sense of belonging.

Table 28 provides the estimated mean levels of sense of belonging, according to gender, from the highest estimated mean level to the lowest estimated mean level:

Table 27  
*Estimated Mean Levels by Gender*

Males	<i>M</i>	Females	<i>M</i>
Hispanic Males	56.3	Hispanic Females	58.1
Non-Hispanic White Males	55.4	Non-Hispanic White Females	55.2
Non-Hispanic Black Males	52.0	Non-Hispanic Black Females	53.2

### Summary

A Sense of Belonging Measure was developed, which was created specifically for this study. Of the proposed factor groupings that were replicated in the empirical analyses of national survey data, two factors, Family Belonging, and School Belonging, were produced. The additional factors which comprised the Sense of Belonging Measure were Mother Belonging, Father Belonging, School Belonging, and Religious Belonging.

Following the final factor analysis, Cronbach’s alphas were computed for each of the five factors. Cronbach’s alphas were also computed for all of the factors combined. The Cronbach’s alpha scores showed that the variables in the Sense of Belonging Measure did measure the concepts that the literature identified as being associated with adolescent sense of belonging. Therefore, Sense of Belonging Measure was found to be reliable.

Main effects of age groups on sense of belonging, and of ethnicity on sense of belonging were produced, and the estimated mean scores of sense of belonging were statistically significant. A main effect of gender on sense of belonging was produced, but the estimated mean differences of sense of belonging were not significantly different. A statistically significant interaction effect of gender and ethnicity on the sense of belonging was produced.

Regarding the interaction effect, Hispanics had the highest estimated mean score of sense of belonging, followed by Non-Hispanic Whites. African-Americans had the lowest estimated

mean score of the sense of belonging. The differences in mean scores were statistically significant.

The differences in gender, regarding adolescent sense of belonging, varied by ethnic group. For females, Hispanics had the highest estimated mean score of sense of belonging, followed by Non-Hispanic White females. Non-Hispanic Black females had the lowest of the female estimated mean scores of sense of belonging. For males, Hispanics had the highest estimated mean scores of sense of belonging, followed by Non-Hispanic White males. Non-Hispanic Black males had the lowest estimated mean score of sense of belonging.

An extensive literature review informed the production of the Sense of Belonging Measure. Following is a discussion of the factors which comprised the five sub-scales. In addition, factors which were excluded from the final measure are discussed. The utility of the Sense of Belonging Measure is also examined.

## Chapter 5: Discussion

### Introduction

This chapter begins with a summary of the purpose of the study, important aspects of the literature review, methodology, and a summary of major findings. Following a discussion of the results, the theories that were tested are presented. Recommendations for social work practice, recommendations for future research, limitations, and finally the conclusion, closes the chapter.

### Summary

Van Orden et al. (2010) proposed the Interpersonal Theory of Suicide (ITS) to explain previously unexplained facts about suicide, and to increase understanding regarding the etiology of suicide. The authors contended that the most lethal form of suicidal *desire* “is caused by the simultaneous presence of two interpersonal constructs-*thwarted belongingness* and *perceived burdensomeness*” (p. 575).

The authors of the ITS proposed that “social connectedness variables are associated with suicide because they are observable indicators that a fundamental human psychological need is unmet” (Van Orden et al., 2010, p. 581). This need was described by Baumeister and Leary (1995) as the “need to belong” (p.497). Van Orden et al. (2010) argued that when the need to belong was thwarted, increased vulnerability to suicide could result.

Baskin et al. (2010) warned that because the studies that were conducted to examine ITS were conducted primarily with adults and undergraduates, caution was warranted in making inferences to youth. In addition, the subjects of studies examining the ITS were primarily White European adult males. However, in the United States, higher and higher ethnic diversity exists. Therefore, the need existed for research to be conducted on a diverse population.

Because studies incorporating ITS had not been developed and tested with diverse populations, a closer examination of ITS was in order, due to its potential for providing information regarding suicide risk. Unfortunately, to properly examine all three constructs of ITS was beyond the scope of this dissertation. Therefore, only one construct, thwarted belonging, as it applied to adolescents, was explored. An ethnic and gender perspective was provided.

### **Purpose**

The purpose of this study was to develop a Sense of Belonging Measure, which was created specifically for this study. The measure was used to examine whether and how the construct, thwarted sense of belonging, applied to adolescents, specifically by gender, age, and ethnicity. The measure was also used to examine whether or not there was a difference between males and females, in the estimated mean scores of sense of belonging. In addition, the Sense of Belonging Measure was used to examine whether or not there was a difference between ethnicities in the estimated mean scores of sense of belonging. Finally, the Sense of Belonging Measure was used to examine whether or not there was a difference between adolescent age groups, in the estimated mean scores of sense of belonging.

### **Methodology**

Secondary data found in the National Comorbidity Survey-Adolescent Supplement (NCS-A, 2001-2004) was utilized for this study. Comprised of a nationally representative data set, The NCS-A provided opportunities to make inferences about a characteristic of the population, allowing generalizations to be made from a sample to the adolescent population in the coterminous U.S. (Kessler, 2009b).

**Sense of Belonging Measure.** To determine if associations existed between the attribute independent variables of gender, ethnicity, and age, regarding sense of belonging, it was deemed necessary to develop a Sense of Belonging Measure. Following a literature review pertaining to adolescents' sense of belonging, questions from the NCS-A were reviewed. Based upon the "sense of belonging" variables found in the literature review, each question in the NCS-A was analyzed for its relevance to sense of belonging. Each question chosen from the NCS-A already contained within it an *embedded variable of its own*. For the Sense of Belonging Measure, NCS-A questions were chosen, whose embedded variables were relevant to sense of belonging. The relevance was ascertained based upon the literature review chosen for this study.

In order to determine which of the *original 58* questions, chosen from the NCS-A, had embedded variables that actually conformed to the sense of Belonging Measure, a factor analysis was conducted, using NCS-A data. The variables that conformed to the Sense of Belonging Measure were combined into one measure of Sense of Belonging. 31 items and five subscales formed the measure.

In order to assess whether the data from the variables that were summed to create the overall Sense of Belonging Measure formed a reliable measure, Cronbach's alphas were computed for each factor. The Alpha scores ranged from .680-.898. The alpha for the overall measure was .890. Scores from the Cronbach's Alpha determined the Sense of Belonging Measure to be reliable.

### **Findings and Interpretation**

The Sense of Belonging Measure, developed for this study, was used to measure belonging for adolescents. The 31 variables indexed into the Sense of Belonging Measure formed a measure of overall sense of belonging that had internal consistency reliability.

Therefore, the variables measured the concepts that the literature identified as being related to adolescent belonging. The proposed factors for the Sense of Belonging Measure are provided below.

Table 28  
*Proposed Factors for the Sense of Belonging Measure*

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<i>Proposed Factors</i>
Family Belonging
Parent Belonging
Peer Belonging
School Belonging

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The supported factors for the final Sense of Belonging Measure are provided below.

Table 29  
*Supported Factors for the Sense of Belonging Measure*

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<i>Supported Factors</i>
Family Belonging
Mother Belonging
Father Belonging
School Belonging
Religious Belonging

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A test of Cronbach's alpha was conducted for each of the supported factors, to determine factor reliability. Each of the Cronbach's alpha scores fell within the range of reliability. The factors were combined for a final Cronbach's alpha, resulting in a score of  $\alpha = .890$ . The resulting score showed the overall measure to be reliable.

Following analysis of variance testing, a statistically significant main effect of age group on the estimated mean score of sense of belonging, and of ethnicity on the estimated mean score of sense of belonging was shown. A statistically significant main effect of gender on the

estimated mean score of sense belonging was not found. An unexpected statistically significant interaction effect of gender and ethnicity on sense of belonging was produced by the ANOVA. The construct, “thwarted sense of belonging,” was found to apply to adolescents, specifically by gender and ethnicity.

A difference in the estimated mean scores was found between adolescent males, and adolescent females regarding their sense of belonging. Females had a higher estimated mean score on the belonging measure than males. However, as mentioned above, the difference was not statistically significant.

A difference was found to exist in the mean level of sense of belonging between the three ethnic groups. Hispanics had the highest mean score, followed by Non-Hispanic Whites, followed by African-Americans. The differences in mean scores were statistically significantly different.

The differences in gender varied by ethnic group. For females, Hispanics had the highest estimated mean score of sense of belonging, followed by Non-Hispanic White females. African-American females had the lowest mean score of sense of belonging of the female mean scores. For males, Hispanics had the highest mean score of sense of belonging, followed by Non-Hispanic White males. African-American males had the lowest of the male mean scores of sense of belonging.

A statistically significant difference was found in the mean scores of sense of belonging between the two age groups that were tested. 16-18 year old adolescents scored higher on the sense of belonging measure than did 13-15 year olds. Of the older age group, males scored higher than females. In the 13-15 year old age group, females scored higher than males.



## Discussion

### Proposed Factor Groupings

***Proposed factor: Family Belonging.*** Most of the national studies in which Family Belonging factors were replicated used secondary data from the National Longitudinal Study of Adolescent Health (1995), referred to as “Add Health” (Borowsky, Ireland, & Resnick, 2001, p. 485). Additional studies are mentioned by name in this study, as the particular factors which arose from their data are described.

The finding of Family Belonging as a factor of the Sense of Belonging Measure was expected. This finding agrees with the primary literature studied for this research. The primary literature included national studies, and studies that were smaller.

Utilizing data from Add Health, Resnick et al. (1997) reported their significant finding that, in their study, family connectedness referred to a sense of belonging and closeness to family, regardless of the family composition. In addition, the researchers combined family/parent connectedness as the same variable. The results of this study contradicts that of Resnick et al. (1993), which found a distinct factor for Family Belonging, and no distinct factor for Parent Belonging.

Studying risk factors for perpetration of violence by adolescents, and using data from Add Health, Resnick et al. (2004) found that protective associations were found for adolescent males *and* females who reported that “a sense of connectedness to family was high” (p. 424. e4). Resnick et al. found that family *relationships* explained more strongly the participation in high risk behaviors than did family *structure*.

Although their data source for their secondary analysis was not a national survey, Resnick, Harris, and Blum (1993) studied protective factors regarding the major social

morbidities of adolescence, utilizing a sample of 36, 254 adolescents throughout Minnesota. For males and females, family connectedness was a strong protective factor regarding “quietly disturbed behavior,” such as disordered eating, emotional stress, and suicide involvement (p. S5). “At the core of family connectedness was the adolescent’s experience of being connected to at least one caring, competent adult in a loving, nurturing relationship” (Resnick et al., 1993, p. S6).

***Proposed factor: Parent Belonging.*** The proposed factor, Parent Belonging, was studied as its own factor in the literature of Add Health (Borowski et al, 2001). A second national study using Add Health data referred to “Parent-family connectedness” conceptualizing the two entities as combined (Resnick et al., 1997). This researcher found no other national studies which examined Parent Belonging. However, numerous studies were found in other primary literature.

***Proposed factor: Ethnic Belonging.*** No national studies of ethnic belonging were found by this researcher. However, other studies were found in the primary literature which examined ethnic belonging. The majority of the research of ethnic belonging in the primary literature addressed Hispanic adolescent sense of belonging. A very small amount of the primary literature addressed African-American Sense of Belonging.

***Proposed factor: Peer Belonging.*** The need for belonging, social support, and acceptance is especially important during early adolescence when young people begin to think seriously about their identity, with whom they belong, and where they intend to invest their energies. Because they are exploring ideas of personal identities separate from their parents and families, adolescents rely more heavily upon friendships for support and direction. Other non-kin relationships were also found to be relevant for the developing adolescent (Goodenow, 1993). This researcher was surprised to find no national studies that examined adolescent peer belonging.

## **Supported Factors**

***Supported factor: Family Belonging.*** Family Belonging was the only factor that was proposed *and* supported. Family Belonging was discussed above. The remaining supported factors follow.

***Supported factors: Mother and Father Belonging.*** Several studies were found by this researcher which examined parent belonging. However, no studies were found which examined the belonging relationship with the biological mother and the biological father separately. Two studies were found which examined the belonging relationship with step-mothers and biological fathers separately. Those studies are discussed below.

The quality of the relationship between adolescents and their mothers and between adolescents and their stepfathers was found to be significantly associated with adolescents' feelings of family belonging (King, et al., 2015). The individual relationships that adolescents had with their *resident* parents, both biological and stepparents, produced the greatest sense of belonging within their stepfamilies (Leake, 2007). The studies by King et al. (2015) and Leake (2007) were the only studies found by this researcher that examined the relationship with each parent separately, regarding sense of belonging.

King et al.'s (2015) findings differ from those of Leake (2007). For Leake's study, the *biological mother-child* relationship was found to be key. However, King et al. (2015) found that the biological mother-child *and* stepfather-child relationships were found to directly influence the extent to which adolescents felt that they belonged to their stepfamilies. Although the relationship most strongly related to family belonging was the mother-child relationship, King et al. found that close stepfather –stepchild relationships can have the potential to enhance children's feeling of belonging, but at a lesser magnitude.

***Supported factor: School Belonging.*** Crosnoe and Elder (2004) reported one primary setting of adolescent life that provided comfort for adolescents included relationships from school. Utilizing data from Add Health, Resnick et al.'s (2004) study, mentioned above and also below, was the only national study found by this researcher that addressed school belonging. However, research other than national studies emphasize the salience of school belonging. A brief discussion of those three studies follow.

A positive association of school belonging with grades, academic motivation, and academic effort was found by Cupito et al. (2015). Goodenow (1993b) expanded upon Cupito et al.'s report and described school belonging as the extent to which students feel accepted, included, respected, and supported by others in the school environment. Goodenow posited that sense of belonging within the school community is conceptualized as reciprocal relationships between the student and others within the school.

According to Chhuon and Wallace (2014), school is an important part of a student's lived experience, and students who identify as being a part of the school community "have internalized perceptions of belonging" (p. 382). A sense of school belonging "describes the student's perception of the relational quality of a school environment" (Wallace, Ye, & Chhuon, 2012, p. 123). Using *sense of belonging* and the *sense of connectedness* interchangeably, Chhuon and Wallace report that, especially during the high school years, the *sense of belonging* and *connectedness* can serve as a protective factor.

***Teachers and school belonging.*** In this study's School Belonging factor, two of the four items addressed the students' relationship with teachers. Resnick et al. (2004) found that for both males and females, significantly less involvement in violence was reported when school connectedness, which included relationships with teachers, was high. The researchers reported

that further analysis of the national data revealed that school related factors, along with family and peer factors, explain in a potent manner the adolescents' participation in high risk behavior.

The supported factor groupings of Family Belonging *and* School Belonging were replicated in the study mentioned above by Resnick et al., (1993). Using data from the Minnesota Adolescent Health Database, 36, 254 adolescents were studied. The researchers concluded their study by announcing that “The most powerful protective factors across models (of externalizing and internalizing behavior) were family and school connectedness” (p. S6).

***Supported factor: Religious Belonging.*** As mentioned above, this researcher found no study, national or otherwise, which specifically investigated religiosity and adolescent belonging. However, Sinha, Cnaan, & Gelles (2007) *did* examine, in their national study, the extent to which religion plays an important role in adolescents' lives. The study revealed that decreased risk behaviors are associated with the perceived importance of religion and participation in religious activities. Gender differences in perceived importance of religion and sexualized behavior was reported.

The relationship between drug use and religion among adolescents was examined by Brownfield and Sorenson (1991), who used the terms “belonging” (p. 262), “attachment” (p. 273), and “social support”(p. 259) interchangeably. The association between the social support of religious norms and family belonging were examined. The authors concluded that church attendance was an activity that may promote a sense of attachment to others. No differences were reported

Resnick et al. (!993) studied sense of connectedness and caring as protective factors against high risk behaviors in adolescents. For Resnick et al.'s (1993) study, “spiritual” connectedness referred to those student who “defined themselves as spiritual or religious

individuals” (p. S5). For males *and* females, spiritual connectedness was the third most salient risk factor against acting out behavior, preceded by school and family connectedness.

In a separate study, Resnick et al. (2004) explored individual, family, and community level risk and protective factors for violence perpetration, using data from the National Longitudinal Study of Adolescent Health. Protective associations for males *and* females included religiosity. However, the protective effect was found to be more salient for females than for males.

Due to the importance of Resnick et al’s (1993) finding regarding the salience of School and Family Belonging, mentioned above, the following discussions will include the association of the independent variables with School Belonging, and with Family Belonging. An unexpected interaction effect will be discussed. The main effects will subsequently follow.

### **Main Effects**

Mentioned earlier, Family Belonging was the only *proposed* factor that was produced on the *final* factor analysis. And again, due to the importance of Resnick et al’s (1993) finding mentioned above, regarding School Belonging, the following discussions will include belonging with the perspectives of Family Belonging and School Belonging.

### **Gender and Belonging**

***Gender and family belonging.*** In this study, no main effect was found, regarding gender and overall sense of belonging. Females’ mean score ( $M = 56.5$ ) was higher than males’ ( $M = 55.3$ ). However, the difference was not significantly different. This finding is consistent with the contention of Hall Lande et al. (2007) who found that, *regardless of gender*, one of the strongest protective influences for adolescents was a feeling of connection with family.

For example, especially for males, Hall-Lande et al. (2007) found that family connectedness *did* represent a protective factor. Similarly, for females, family connectedness was found to be the *only* protective factor that mediated the relationship between social isolation and suicide attempts. This finding is interesting because in spite of the negative influences of loneliness, the protective factors of family connectedness, for males *and* for females, might provide a buffer.

This study's finding, that adolescent Hispanic females had the highest estimated mean score of sense of belonging, warrants further examination. According to Dr. Silvia Canetto, specialist regarding suicidal behavior at Colorado State University, Hispanic females have among the highest suicide rate in the nation (Conversation with Dr. Canetto, March 23, 2017). Perhaps the Sense of Belonging measure lent itself toward higher scores for the Hispanic females. Perhaps a different selection of questions from the NCS-A survey would have produced different results, or perhaps questions from a different survey altogether could have produced different results. Maybe other factors besides sense of belonging are responsible for the high suicide rate of Hispanic females. Further testing could be helpful, to understand the quandary regarding high scores of sense of belonging, yet high suicide rate for this population of adolescent females.

***Gender and school belonging.*** As mentioned above, this study did not find statistically significant gender differences regarding overall sense of belonging. Significant gender differences were found by Karcher and Sass (2010) on *several* subscales of the Measure of Adolescent Connectedness (Karcher, 2001), which measured connectedness for middle schoolers. The gender differences included Connectedness to School, and Connectedness to Teachers. Significantly, however, Hall-Lande et al. (2007) found that female adolescents were

found to value *close* relationships, more so than males. The findings of Hall-Lande et al. and Karcher and Sass perhaps could explain why Goodenow and Grady (1993) found that for girls, school belonging was highly correlated with friends' values and that females were more likely than males to express a high sense of school belonging.

Females' greater sense of belonging was found to be consistent with the idea that relatedness is important among females (Gilligan, 1982). In early adolescence, gender role expectancies are strong. Perhaps females may feel pressure to adopt feminine and passive behaviors, and the support and encouragement of others in the school, especially teachers, may be especially important.

However, Sanchez et al. (2005) did not find a significant gender difference between Latino males and females on sense of school belonging. Perhaps they did not find significant differences because their sample included an upper aged adolescent sample set. Past school research has mostly been conducted with middle school samples. Possibly the gender difference weakens in later adolescence. Conceivably the 12<sup>th</sup> graders were less interested in being part of the school environment, causing males and females to be more alike in their perceptions of school belonging. A younger sample set might have been more focused on their relationships at school because school is their main context (Sanchez et al., 2005).

An additional reason explaining the absence of a significant gender difference regarding Hispanic sense of school belonging might have been because of Hispanic cultural values. As mentioned above, a sense of interdependence tends to characterize Hispanic cultures. Due to their value for collectivism, conformity, and a willingness to make sacrifices for the welfare of other in-group members, this cultural value perhaps weakened gender differences (Sanchez et al., 2005).



***Ethnicity and Belonging.*** This study found a main effect between ethnicity and sense of belonging. The three way anova produced  $p = .000$ ,  $\alpha < .05$ . The main effect was statistically significant. This finding is consistent with that of Garcia-Coll, et al., (1996). The researchers reported that minority families often have certain characteristics that differentiate themselves from mainstream families, and that impact family processes in significant ways. Characteristics such as "...structure, roles, values, goals, (and) beliefs of the family, ..." can lend themselves to adolescent family belonging (Garcia-Coll et al., 1996, p.1996).

"Familial ethnic socialization (FES) played a significant role in the process of ethnic identity formulation for all adolescents, regardless of ethnic background (Umana-Taylor et al., 2006). Familial ethnic socialization was found to be "significantly and positively associated with (adolescent) reports of *belonging* toward their ethnic background" regardless of ethnicity (p. 390). The researchers contend the strong influence of families is central to the process of ethnic identity formation.

***African-American family belonging.*** This researcher found *no* studies that investigated African-American adolescent sense of belonging. However, examining the association of social connectedness and feelings of hopelessness with adolescent involvement in violence, African American adolescents comprised the majority of the adolescents studied by Stoddard, Henly, Sieving, & Bolland (2011). Starting at age 13, youth who described stronger connections to their mothers during early adolescence reported less hopelessness. The study reported that, among all participants, high levels of connectedness to their mothers was common. However, the average for the female participants was significantly higher than for the males. Father connectedness was not mentioned.

***Hispanic family belonging.*** Adolescents who reported higher levels of familial cultural values also reported greater feelings of *connectedness* (Derlan and Umana-Taylor, 2015). Similar to Umana-Taylor et al., (2006) the researchers found a statistically significant association between *familial cultural socialization* and affirmation-belonging for adolescents. Additionally, Latino adolescents reported that *greater communication* with their family, such as having discussions with their family more frequently, facilitated a sense of belonging (Cupito et al., 2015).

***African-American school belonging.*** Very little information exists regarding strictly African American students and school belonging (Booker, 2006). However, Uwah, McMahon, and Furlow (2008) investigated the relationship between the perception of belonging to ones' school, educational aspirations, and academic self-efficacy among African-American male high school students. The researchers found that the most important aspect of school belonging, for the populations studied, appeared to be whether the African-American males felt that they were specifically invited to participate in school programming, whether it be academic or extracurricular.

Booker (2004) studied the relationship between the perceptions of school belonging and academic achievement in African-American adolescents. The researcher found a statistically significant relationship between perceptions of school belonging and academic achievement among the adolescents. However, results from Booker's study showed that they majority of students felt that communication with the staff at school that encouraged them to get academic help after school strengthened their connection to the school.

As information regarding African-American School Belonging is scarce, sense of belonging among *urban* middle school students was examined in the literature by this researcher.

Goodenow and Grady (1993) found that in their study of urban adolescents, Hispanic students scored higher on sense of belonging than did the African-American students, although the majority of students were African-American. School belonging was significantly correlated with friends' values and perceived value of schoolwork.

The researchers reported that, compared to suburban students, the urban adolescent students expressed much lower levels of personal connection, and a lower belief that others in their school cared about them. "These urban students expressed relatively weak beliefs that they belonged in their schools" (Goodenow & Grady, 1993, p. 67).

***Hispanic school belonging.*** A very strong association between belonging and friends values and school motivation was found for Hispanic students (Goodenow & Grady, 1993). The strong association may reflect the importance that most Hispanic cultures attach to communal and affiliative values. Individualistic or competitive values were not reported to be associated with the Hispanic culture.

***Age group and belonging.*** This study found a main effect between age and sense of belonging. The three way anova produced  $p = .000$ ,  $\alpha < .05$ . The main effect was statistically significant. This finding is consistent with that of Liang et al., (2010). The researchers found that *younger* adolescents placed less value upon friendships. The value that adolescents placed upon group relationships and friendships increased as the young adolescents grew older.

To facilitate a sense of belonging, friendships were found to be important for 6<sup>th</sup> graders. Friendships were even more important for 9<sup>th</sup> graders. Younger (11-12 year old) students rated their relationships and their friendships with a community *lower* than the *older* (13-14 year old) students. The youth developed a growing ability across adolescence to develop meaningful and intimate relationships (Liang, et al., 2010).

***Adolescent belonging.*** Wallace and Chhuon (2012) reported that *adolescent* sense of belonging “emerges as a key phenomenon to understand” (p. 123). Issues of inclusion predominate throughout *all* of adolescence, according to the researchers. However, Goodenow (1993) counters Wallace and Chhuon, positing that the need to belong and have valued membership in a setting may take precedence over all other concerns during *early* and *mid-adolescence*.

Middle school (“early” stage adolescence,) high school (“middle” stage adolescence,) and college students (“late” stage adolescence) were studied by Chen (1988, p 22). The interaction between relationship *quantity* with the participant’s *mother* and *father*, and the interactions’ relation to belongingness was most significant in the middle school (“early” stage adolescence) group. For the high school (“middle” stage adolescence) group, interaction between relationship *quantity and quality* with parents *and* siblings was less significantly related to family belongingness. Not surprisingly, the importance of belongingness to a romantic partner, and relationship quantity, was found to be higher in the college students (“late” stage adolescence) than in the younger groups (Chen, 1998).

### **Interaction of Ethnicity and Gender with Belonging**

An interaction effect between ethnicity and gender, with sense of belonging, was not expected. However, this finding was substantiated by Karcher and Sass (2010). The researchers assessed measurement invariance across gender and racial/ethnic groups of middle schoolers, ages 11-13. Regarding connectedness to friends, siblings, school, and peers, the researchers found statistically significant gender differences in observed means.

***Hispanic Family Belonging and gender.*** Contrasting with this study, no significant *gender* differences in Hispanic adolescents' perceptions of family cohesion were found by Lac et al. (2011). For instance, the males did not perceive weaker family cohesiveness than did the females. Between genders, no difference was found in perception of family affiliation.

However, Cupito et al. (2015) found that Latina females associated gender roles with higher *family cohesion*. Similar to Lac et al. (2011), Cupito et al. found that females had similar levels of family affiliation as males. By contrast, other studies have reported that, in Hispanic families, although familism and respeto (respect) were associated with higher *family cohesion* and lower family conflict for both genders, these relationships were stronger for females (Lac et.al., Cupito et al., 2015, Lorenzo-Blanco, Unger, Baezconde-Garbanati, Ritt-Olson, & Soto, 2012).

***Hispanic School Belonging and gender.*** School belonging and the roles of gender for Hispanic adolescents were examined by Sanchez, Colon, and Esparza (2005). Their finding, that adolescent females tend to report a greater sense of school belonging than adolescent males, has been demonstrated by past research (Goodenow, 1993a). Females' greater sense of belonging was considered to be consistent with the notion that relatedness is important among females and women (Gilligan, 1982).

Despite the previous research, however, conducted in other studies, Sanchez et al. (2005) found no significant gender difference between Hispanic males and females on sense of school belonging. Perhaps their sample included an upper aged adolescent sample set, which could have influenced their finding. Past research has mostly been conducted on middle school samples. Possibly the gender difference weakens as adolescents age. The 12<sup>th</sup> graders could have been less interested in being part of the school environment, causing males and females to be more alike in

their perceptions of school belonging. Younger Hispanic adolescents might have been more invested in their school relationships because school is their main context (Sanchez et al., 2005).

Hispanic cultural values might also explain the absence of a significant gender differences found by Sanchez et al. (2005). Hispanic cultures tend to be characterized by a sense of interdependence. This cultural value perhaps weakened gender differences, due to their value for collectivism, conformity, and a willingness to make sacrifices for the welfare of other in-group members (Sanchez, et al.).

*African American belonging and gender.* African-American adolescent males and females scored the lowest means regarding sense of belonging. Unfortunately, nothing was found in the literature regarding African-American belonging and gender. Further, very little was found in the literature regarding African-American adolescents' sense of belonging. The studies that were found by this researcher primarily involved urban middle schools, in which African-Americans were part of the population, but not studied exclusively.

### **Theoretical Frameworks**

This study was built upon the underpinnings of four theories. The theory of social identity, theory of systems, theory of development, and theory of belonging form the study's foundation. The four theories are summarized below.

**Systems Theory.** This study was substantially supported by systems theory. The sense of belonging was facilitated only as the adolescent interacted with others in his environment, and as his/her environment interacted with him/her. The dynamic of belonging took place within the dynamic of the adolescent's gender, his/her family, his/her ethnicity, and his/her school.

**Developmental Theory.** Developmental Theory was applicable to this study, specifically regarding the age groupings of the adolescents. The younger adolescents studied scored lower on the Sense of Belonging measure, perhaps due to their confusion regarding their own identities and where they “fit in.” The older adolescents had a higher score on the Sense of Belonging Measure, perhaps due to the older adolescents feeling more confident about their own identities.

**Social Identity Theory.** The results of this study are consistent with social identity theory. The sense of belonging of the adolescents studied was associated with their ethnicity, their gender, and their age group. Additionally, the literature that was studied frequently referred to the behavior of the adolescent as it was impacted by the adolescent’s sense of belonging, and membership within their group.

**Theory of Belonging.** Baumeister and Leary’s (1995) theory of belonging provides the model of belonging from which Van Orden et al. (2010) developed their construct of thwarted sense of belonging. Van Orden et al. are in agreement with Baumeister and Leary (1995), that the need to belong is a fundamental human need. Van Orden et al. propose that when the three constructs of their theory; thwarted belonging, acquired capability and perceived burdensomeness occur in tandem, the desire for death can develop.

#### Implications for Social Work Practice

The Sense of Belonging Measure could be used as a tool to inform an agency social worker of the adolescents’ belonging needs that are met. Unmet needs could be assessed as well. Information gleaned from the measure could be used to educate not only the client, but also the family members and pertinent associates of the client.

Contrasting with agency social workers, school social workers have an opportunity to observe the adolescents whom they serve, in their actual school environment. Using the Sense of

Belonging Measure, the school social worker may gain information regarding the belonging needs of adolescents. Assessment of the student's belonging needs would be informed by the adolescent's ethnicity, gender and age.

In addition to agencies and schools, clients served in a mental health setting would benefit from their social work clinician using the Sense of Belonging measure. As opposed to other settings, social workers in a mental health setting have a unique opportunity to consult with the family members and loved ones of an adolescent client. The Sense of Belonging measure could be used to educate not only the adolescent, but those important to the adolescent, regarding the belonging needs of the adolescent.

The United States is comprised of an increasingly diverse population. The Sense of Belonging Measure could be used as a tool by social workers to educate the public at large regarding the disparate needs of the adolescents in the local community. For instance, people in churches, community centers, and youth organizations could benefit in being educated regarding the belonging needs of the adolescents within in their constituency.

The adolescents whose parents are active duty in our military could be served by the Sense of Belonging Measure. Soldiers and active duty personnel, with their families, serve all over the world. The ethnicities of our active duty personnel vary greatly, and their adolescent children are trying to manage and understand several cultures simultaneously. The Sense of Belonging measure may be used to inform the social work clinician, the adolescents that they serve, and the adolescents' families regarding the adolescents' need to belong.

### **Recommendations for Social Work Education**

Training regarding suicidal behavior and prevention is not part of the typical social work bachelor's or master's level curriculum. Training regarding factors that impact suicidal behavior



is usually left for the social worker to find independently. Social workers and their clients are at a disadvantage if proper training does not inform assessment and treatment. A social work curriculum which includes evidence based assessment and treatment for suicidal behavior could prove to be helpful.

Although education regarding suicidal behavior and prevention is not part of the typical social work bachelor's or master's level curriculum, it is beneficial that social workers *are* trained to be multi-culturally aware. Social workers would benefit from training that would specifically target the belonging needs of the adolescents whom they serve. Such an education would inform the social worker of the impact of ethnicity, gender, and age upon adolescents' need to belong.

### **Recommendations for Future Research**

The dearth of literature regarding African-Americans' sense of belonging is unfortunate. It is recommended that future research examine the sense of belonging for African-Americans generally, and African-American adolescents specifically. Gender differences in African-American belonging could especially be explored.

Similarly, scarce literature exists regarding the salience of religious sense of belonging for adolescents. The possibility that religious belonging could serve as a protective factor for adolescents could be explored. The gender, ethnic, and age group influence in religious belonging could also be examined.

The Sense of Belonging Measure needs to be clinically tested. It may be helpful to learn whether or not the measure could identify adolescents who are feeling isolated or disconnected. The mental health community could benefit if the Sense of Belonging measure identifies adolescents who are at risk.

This research could be continued, with the purpose of examining the research questions separately for each subscale. Should that examination occur, then each subscale could be explored separately. A further understanding of adolescent sense of belonging could then be provided.

### **Limitations of This Study**

The results of the three way ANOVA showed that the effect sizes produced in this study were small. The reason for the small effect size could be explored further. Perhaps testing each subscale of the Sense of Belonging Measure could shed further light on the reason for the small effect sizes.

Although proposed as a factor for adolescent sense of belonging, a factor of Peer Belonging was not produced in this study. This finding was puzzling, and warrants further study. Perhaps using different questions, from a different data source, would lead to a supported factor for Peer Belonging.

Considerable focus of this study was given to the production of main effects. One interaction effect was produced. Future research could include more emphasis on the production of additional interaction effects.

The clinical usefulness of the Sense of Belonging Measure has not been tested. The testing of this measure could prove to be useful. Until the measure is tested, the utility of the measure will remain unknown.

A measure for adolescent sense of belonging, incorporating the 11-18 year old age group, which includes gender and ethnicity variables, has not been found in the literature by this researcher. A test has not been conducted regarding how well this measure correlates with a previously validated measure. Therefore, concurrent validity has not been established.

Finally, further study of Hispanic and African-American adolescents could prove to be useful. 19% of the adolescents surveyed were Hispanic, 19 % were Non-Hispanic Black, and 56% were Non-Hispanic White. Therefore, a study with more robust representation of Hispanics and African-American could have utility.

### **Conclusion**

The need existed to develop an instrument that measured the sense of belonging for adolescents, incorporating the influence of ethnicity, age, and gender. Therefore, the Sense of Belonging Measure was developed, tested, and found to be reliable. The measure should be clinically tested to further examine its utility.

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## Appendix A: Initial Sense Of Belonging Measure

### *Family Belonging Domain*

1. CH36a. How often did family members feel close to each other?

(1) All of the time (2) Most of the time (3) Some of the time (4) Little of the time (5) Never (8)

Don't know

2. CH36d. How often did the whole family do things together?

(1) All of the time (2) Most of the time (3) Some of the time (4) Little of the time (5) Never (8)

Don't know

3. CH36g. How often did family members go along with what family members decided to do?

(1) All of the time (2) Most of the time (3) Some of the time (4) Little of the time (5) Never (8)

Don't know

4. CH36h. How often did family members share interests and hobbies and hobbies with each other?

(1) All of the time (2) Most of the time (3) Some of the time (4) Little of the time (5) Never (8)

Don't know

5. CH36i. How often did family members find it easy to express their opinions to each other?

(1) All of the time (2) Most of the time (3) Some of the time (4) Little of the time (5) Never (8)

Don't know

6. CH36j. How often did each family member have input in major family decisions?

(1) All of the time (2) Most of the time (3) Some of the time (4) Little of the time (5) Never (8)

Don't know

7. CH36k. How often did you have a say in your discipline?



(1) All of the time (2) Most of the time (3) Some of the time (4) Little of the time (5) Never (8)

Don't know

8. CH36m. How often did everyone compromise when there were disagreements?

(1) All of the time (2) Most of the time (3) Some of the time (4) Little of the time (5) Never (8)

Don't know

9. CH36q. How often could family members talk to each other about their feelings?

(1) All of the time (2) Most of the time (3) Some of the time (4) Little of the time (5) Never (8)

Don't know

10. CH36s. How often did family members let each other know when they were sad or worried?

(1) All of the time (2) Most of the time (3) Some of the time (4) Little of the time (5) Never (8)

Don't know

11. CH36v. How often was it difficult to get everyone to agree on decisions?

(1) All of the time (2) Most of the time (3) Some of the time (4) Little of the time (5) Never (8)

Don't know

12. S8. Overall, would you say that your relationship with your [brother(s)/and /sister(s)] is excellent, very good, fair, or poor?

(1) Excellent (2) Very good (3) Fair (4) Poor (5) No contact with siblings (8) Don't know (9)

Refused

***Parent Belonging Domain***

13. CH39. When you were first allowed out on your own, how often did your parents/people who raised you make you tell (him/her/them) before you went out?

(1) All of the time (2) Most of the time (3) Some of the time (4) Little of the time (5) Never (8)

Don't know

14. CH41. When you were first allowed out on your own, how often did your parents/people who raised you know how to find you if they needed to when you were out?

(1) All of the time (2) Most of the time (3) Some of the time (4) Little of the time (5) Never (8)

Don't know

15. CH42. When you were first allowed out on your own, how often did you have a set time when you had to be home on school nights?

(1) All of the time (2) Most of the time (3) Some of the time (4) Little of the time (5) Never (8)

Don't know

16. CH46. Over the years, what woman spent the most time raising you-your biological mother or someone else?

(1) Biological mother (2) Adoptive mother (3) Stepmother (4) Foster mother (5) Other female relative (6) Nanny/babysitter (7) No Woman (8) Other

17. CH47. How emotionally close were you with (woman who raised you) while you were growing up?

(1) Very (2) Somewhat (3) Not very (4) Not at all (8) Don't know (9) Refused

18. CH47.1. Was the communication between you and her during most of your childhood excellent, good, fair, or poor?

(1) Excellent (2) Good (3) Fair (4) Poor (8) Don't know (9) Refused

19. CH 47.2. How often did you talk to her about school or about your friends or about your feelings during the time you were growing up?

(1) Every day (2) Few days a week (3) Once a week (4) Less than once a week (5) Never (8)

Don't know (9) Refused

20. CH47.3. How much did she know about what you were doing and how you were feeling during the time you were growing up?

(1) A lot (2) Some (3) A little (4) None (8) Don't know (9) Refused

21. CH47.4. How much tension did you have in your relationship with her during much of the time you were growing up?

(1) A lot (2) Some (3) A little (4) None (8) Don't know (9) Refused

22. CH48a. How much love and affection did she give you?

(1) A lot (2) Some (3) A little (4) None (8) Don't know (9) Refused

23. CH48b. How much did she really care about you?

(1) A lot (2) Some (3) A little (4) None (8) Don't know (9) Refused

24. CH48d. How much did she understand your problems and worries?

(1) A lot (2) Some (3) A little (4) None (8) Don't know (9) Refused

25. CH48e. How much could you open up talk to her about things that were bothering you?

(1) A lot (2) Some (3) A little (4) None (8) Don't know (9) Refused

26. CH48g. How strict was she with her rules for you?

(1) A lot (2) Some (3) A little (4) None (8) Don't know (9) Refused

27. CH48i. How much did she expect you to do your best in everything you did?

(1) A lot (2) Some (3) A little (4) None (8) Don't know (9) Refused

28. CH75. Over the years, what man spent the most time raising you-your biological father or someone else?

(1) Biological father (2) Adoptive father (3) Stepfather (4) Foster father (5) Other male relative

(6) Nanny/babysitter (7) No man (8) Other

29. CH76. How emotionally close were you with (man who raised you) while you were growing up?

(1) Very (2) Somewhat (3) Not very (4) Not at all (8) Don't know (9) Refused

30. CH76.1. Was the communication between you and him during most of your childhood excellent, good, fair, or poor?

(1) Excellent (2) Good (3) Fair (4) Poor (8) Don't know (9) Refused

31. CH76.2. How often did you talk to him about school or about your friends or about your feelings during the time you were growing up?

(1) Every day (2) Few days a week (3) Once a week (4) Less than once a week (5) Never (8) Don't know (9) Refused

32. CH76.3. How much did he know about what you were doing and how you were feeling during the time you were growing up?

(1) A lot (2) Some (3) A little (4) None (8) Don't know (9) Refused

33. CH76.4. How much tension did you have in your relationship with him during much of the time you were growing up?

(1) A lot (2) Some (3) A little (4) None (8) Don't know (9) Refused

34. CH77a. How much love and affection did he give you?

(1) A lot (2) Some (3) A little (4) None (8) Don't know (9) Refused

35. CH77b. How much did he really care about you?

(1) A lot (2) Some (3) A little (4) None (8) Don't know (9) Refused

36. CH77d. How much did he understand your problems and worries?

(1) A lot (2) Some (3) A little (4) None (8) Don't know (9) Refused

37. CH77e. How much could you open up and talk to him about things that were bothering you.

(1) A lot (2) Some (3) A little (4) None (8) Don't know (9) Refused

38. CH77g. How strict was he with her rules for you?

(1) A lot (2) Some (3) A little (4) None (8) Don't know (9) Refused

39. CH77i. How much did he expect you to do your best in everything you did?

(1) A lot (2) Some (3) A little (4) None (8) Don't know (9) Refused

***Peer Belonging Domain***

40. SN1. How popular are you with other people your own age? Very popular, somewhat, not very, or not popular at all?

(1) Very (2) Somewhat (3) Not very (3) Not at all (8) Don't know (9) Refused

41. SN8. "It is easy for me to become emotionally close to others. I am comfortable depending on them and having them depend on me. I don't worry about being alone or having others not accept me." What number between 0-10 best describes how much those statements sounds like you?

NUMBER (0-10) (8) Don't know (9) Refused

42. SN13. About how many friends do you have who you either hangout with, talk to on the phone, or get together with socially?

\_\_\_\_\_ Number (98) Don't know (99) Refused

43. SN16. How often do you talk on the phone, hang out, or get together with socially with this friend or these friends?

(1) Most every day (2) A few times a week (3) A few times a month (4) Less than one a month (5) Never (8) Don't know (9) Refused

44. SN27. How much can rely on friends when have serious problem?

(1) A lot (2) Some (3) A little (4) Not at all (8) Don't know (9) Refused

45. SN28. How much can you open up to your friend(s) if you need to talk about your worries?  
(1) A lot (2) Some (3) A little (4) Not at all (8) Don't know (9) Refused

46. DA27. How closely do you identify with other people who are of the same racial and ethnic descent as yourself?  
(1) Very closely (2) Somewhat closely (3) Not very closely (4) Not at all (8) Don't know (9) Refused

47. DA28. How close do you feel in your ideas and feelings about things to other people of the same racial and ethnic descent?  
(1) Very closely (2) Somewhat closely (3) Not very closely (4) Not at all (8) Don't know (9) Refused

48. DA29.1. How many of your friends are of your same racial and ethnic group?  
(1) All (2) Most (3) Some (4) A few (5) None (8) Don't know (9) Refused

***School Belonging Domain***

49. ED6b. How important was it to your parents that you did well at school?  
(1) Very important (2) Somewhat important (3) Not very important (4) Not at all important (5) Don't know (6) Refused.

50. ED25b. I (care/cared) a lot about what my teachers (think/thought) about me?  
(1) Very (2) Somewhat (3) Not very (4) Not at all (8) Don't know (9) Refused.

51. ED25c. I (like/liked) school.  
(1) Very (2) Somewhat (3) Not very (4) Not at all (8) Don't know (9) Refused.

52. ED25d. Getting good grades (is/was) important to me.  
(1) Very (2) Somewhat (3) Not very (4) Not at all (8) Don't know (9) Refused.

53. ED25f. I (like/liked) my teachers.

(1) Very (2) Somewhat (3) Not very (4) Not at all (8) Don't know (9) Refused.

54. ED25h. I (feel/felt) as if I (don't/didn't) belong at school.

(1) Very (2) Somewhat (3) Not very (4) Not at all (8) Don't know (9) Refused.

55. ED26a. How many years were you involved in sports teams other than in gym?

\_\_\_\_\_ Number (98) Don't know (99) refused

56. ED26b. How many years were you involved in band or chorus?

\_\_\_\_\_ Number (98) Don't know (99) refused.

57. ED26c. How many years were you involved in student newspaper or yearbook?

\_\_\_\_\_ Number (98) Don't know (99) refused.

58. ED26d. How many years were you involved in student council or honor society?

\_\_\_\_\_ Number (98) Don't know (99) refused.

## Appendix B : Final Sense Of Belonging Measure

### *Family Belonging Factor*

1. CH36a. How often did family members feel close to each other?

(1) All of the time (2) Most of the time (3) Some of the time (4) Little of the time (5) Never (8)

Don't know

2. CH36d. How often did the whole family do things together?

(1) All of the time (2) Most of the time (3) Some of the time (4) Little of the time (5) Never (8)

Don't know

3. CH36g. How often did family members go along with what family members decided to do?

(1) All of the time (2) Most of the time (3) Some of the time (4) Little of the time (5) Never (8)

Don't know

4. CH36h. How often did family members share interests and hobbies and hobbies with each other?

(1) All of the time (2) Most of the time (3) Some of the time (4) Little of the time (5) Never (8)

Don't know

5. CH36i. How often did family members find it easy to express their opinions to each other?

(1) All of the time (2) Most of the time (3) Some of the time (4) Little of the time (5) Never (8)

Don't know

6. CH36j. How often did each family member have input in major family decisions?

(1) All of the time (2) Most of the time (3) Some of the time (4) Little of the time (5) Never (8)

Don't know

7. CH36q. How often could family members talk to each other about their feelings?



(1) All of the time (2) Most of the time (3) Some of the time (4) Little of the time (5) Never (8)  
Don't know

8. CH36s. How often did family members let each other know when they were sad or worried?

(1) All of the time (2) Most of the time (3) Some of the time (4) Little of the time (5) Never (8)  
Don't know

9. S8. Overall, would you say that your relationship with your [brother(s)/and /sister(s)] is  
excellent, very good, fair, or poor?

(1) Excellent (2) Very good (3) Fair (4) Poor (5) No contact with siblings (8) Don't know (9)  
Refused

***Mother Belonging Factor***

10. CH47. How emotionally close were you with (woman who raised you) while you were  
growing up?

(1) Very (2) Somewhat (3) Not very (4) Not at all (8) Don't know (9) Refused

11. CH47.1. Was the communication between you and her during most of you childhood  
excellent, good, fair, or poor?

(1) Excellent (2) Good (3) Fair (4) Poor (8) Don't know (9) Refused

12. CH 47.2. How often did you talk to her about school or about your friends or about your  
feelings during the time you were growing up?

(1) Every day (2) Few days a week (3) Once a week (4) Less than once a week (5) Never (8)  
Don't know (9) Refused

13. CH47.3. How much did she know about what you were doing and how you were feeling  
during the time you were growing up?

(1) A lot (2) Some (3) A little (4) None (8) Don't know (9) Refused

(1) A lot (2) Some (3) A little (4) None (8) Don't know (9) Refused

14. CH48a. How much love and affection did she give you?

(1) A lot (2) Some (3) A little (4) None (8) Don't know (9) Refused

15. CH48d. How much did she understand your problems and worries?

(1) A lot (2) Some (3) A little (4) None (8) Don't know (9) Refused

16. CH48e. How much could you open up talk to her about things that were bothering you?

(1) A lot (2) Some (3) A little (4) None (8) Don't know (9) Refused

### **Father Belonging Factor**

17. CH76. How emotionally close were you with (man who raised you) while you were growing up?

(1) Very (2) Somewhat (3) Not very (4) Not at all (8) Don't know (9) Refused

18. CH76.1. Was the communication between you and him during most of your childhood excellent, good, fair, or poor?

(1) Excellent (2) Good (3) Fair (4) Poor (8) Don't know (9) Refused

19. CH76.2. How often did you talk to him about school or about your friends or about your feelings during the time you were growing up?

(1) Every day (2) Few days a week (3) Once a week (4) Less than once a week (5) Never (8)

Don't know (9) Refused

20. CH76.3. How much did he know about what you were doing and how you were feeling during the time you were growing up?

(1) A lot (2) Some (3) A little (4) None (8) Don't know (9) Refused

21. CH77a. How much love and affection did he give you?

(1) A lot (2) Some (3) A little (4) None (8) Don't know (9) Refused

22. CH77d. How much did he understand your problems and worries?

(1) A lot (2) Some (3) A little (4) None (8) Don't know (9) Refused

23. CH77e. How much could you open up and talk to him about things that were bothering you.

(1) A lot (2) Some (3) A little (4) None (8) Don't know (9) Refused

***School Belonging Factor***

24. ED25b. I (care/cared) a lot about what my teachers (think/thought) about me?

(1) Very (2) Somewhat (3) Not very (4) Not at all (8) Don't know (9) Refused.

25. ED25c. I (like/liked) school.

(1) Very (2) Somewhat (3) Not very (4) Not at all (8) Don't know (9) Refused.

26. ED25d. Getting good grades (is/was) important to me.

(1) Very (2) Somewhat (3) Not very (4) Not at all (8) Don't know (9) Refused.

27. ED25f. I (like/liked) my teachers.

(1) Very (2) Somewhat (3) Not very (4) Not at all (8) Don't know (9) Refused.

***Religious Belonging Factor***

28. How often do you usually attend religious services?

(1) More than once a week (2) About once a week (3) One to three times a month (4) Less than once a month (5) Never (8) Don't know (7) Refused

29. In general, how important are religious or spiritual beliefs in your daily life-very important, somewhat important, not very, or not important at all?

30. When you have problems or difficulties in your family, work, or personal life, how often do you seek comfort through religious or spiritual means, such as praying, meditating, attending a religious or spiritual service, or talking to a religious or spiritual advisor-often, sometimes, not very often, or never?

(1) Often (2) Sometimes (3) Not very often (4) Never (8) Don't know (9) Refused

31. When you have decisions to make in your daily life, how often do you think about what your religious or spiritual beliefs suggest you should do – often, sometimes, not very often, or never?

(1) Often (2) Sometimes (3) Not very often (4) Never (8) Don't know (9) Refused

## Appendix C: Initial Sense Of Belonging Measure With Embedded Variables And Literature Support

Questions chosen from the NCS-A, and duplicated in the Sense of Belonging Measure, are found below in the first column. The variables associated with each question are found in the second column, and the corresponding literature support is found in the third column.

*The table below contains some items that are from scales that are copyrighted. Following proposal approval by this study's dissertation committee, copyright permission will be requested to use those scale items, for this study.*

### Family Belonging Domain

<b>Question number on the Sense of Belonging Measure</b>	<b>Embedded variable for the question</b>	<b>Literature support for the variable</b>
1. CH36a. How often did family members feel close to each other?	<i>How often family members felt close to each other.</i>	Chubb and Fertman 1992, p. 387; King, Boyd, and Thorsen, 2015, p.763; McCubbin and McCubbin, 1988, p. 249; Crosnoe and Elder, 2004, p. 599; Brown and Manning, 2009, p. 91; Lac, Unger, Basanez, Ritt-Olson, Soto, and Baezconde-Garbanati, 2011, p. 645; Cupito, 2015, p. 1645.
2. CH 36D How often did the whole family do things together?	<i>How often family members did things together.</i>	Bridge, Goldstein, and Brent, 2006, p. 380; Lac, Unger, Basanez, Ritt-Olson, Soto, and Baezconde-Garbanati, 2011, p. 647; Crosnoe, 2004, p. 580, 599; Resnick 1997, p. 825, 827; King, Boyd, and Thorsen, 2015, p. 762; Brown and Manning, 2009, p. 90; Cavenagh, 2008, p. 55; Cupito, 2015, p. 1645.
3. CH36g. How often did family members go along with what family members decided	<i>How often family members</i>	Cupito, 2015, p. 1643, Polo and Lopez (2009, p. 275).

to do?	<i>willingly did what family decided.</i>	
4. CH36h. How often did family members share interests and hobbies and hobbies with each other?	<i>How often family members shared interests and hobbies.</i>	King, Boyd, and Thorsen, 2015, p.762, Lac, Unger, Basanez, Ritt-Olson, Soto, and Baezconde-Garbanati, 2011, p. 645, 647, Brown and Manning, 2009, p. 91; Crosnoe, 2004, p. 580; Resnick, 1997, p. 825, 827; Cavenagh, 2008, p. 955; Cupito, 2015, p. 1645.
5. CH36i. How often did family members find it easy to express their opinions to each other?	<i>How often family members easily expressed opinions.</i>	Lac, Unger, Basanez, Ritt-Olson, Soto, and Baezconde-Garbanati, 2011, p. 645; Chubb and Fertman 1992, p. 387; Olson, Sprenkle, and Russel, 1979, p. 5; Allison, Stacy, Dadds, Roeger, Wood, and Martin, 2003, p. 278; Cupito, 2015, p.1643.
6. CH36j. How often did each family member have input in major family decisions?	<i>How often family members each had input on major decisions.</i>	Lac, Unger, Basanez, Ritt-Olson, Soto, and Baezconde-Garbanati, 2011, p. 645; Chubb and Fertman 1992, p. 387; Olson, Sprenkle, and Russel, 1979, p. 5.
7. CH36k. How often did you have a say in your discipline?	<i>How often children had say in their discipline.</i>	Olsen, 1985, FACES II & FACES III, p. 1, scale items #5, # 27.Chubb and Fertman 1992, p. 387.
8. CH36m. How often did everyone compromise when there were disagreements?	<i>How often family members compromise.</i>	Lac, Unger, Basanez, Ritt-Olson, Soto, and Baezconde-Garbanati, 2011, p. 647; Cupito, 2015, p. 1643.
9. CH36q. How often could family members talk to each other about their feelings?	<i>How often family members talk about feelings.</i>	Lac, Unger, Basanez, Ritt-Olson, Soto, and Baezconde-Garbanati, 2011, 645; Crosnoe, 2004, p. 580; Duncan, Duncan, and Hops, 1994, p. 591; Allison, Stacy, Dadds, Roeger, Wood, and Martin, 2003, p. 278.
10. CH36s. How often did family members let each other know when they were sad or	<i>How often family members talked when sad/worried.</i>	Lac, Unger, Basanez, Ritt-Olson, Soto, and Baezconde-Garbanati, 2011, p. 645; Crosnoe 2004, p. 580;

worried?		Allison, Stacy, Dadds, Roeger, Wood, and Martin, 2003, p. 278; Duncan, Duncan, and Hops, 1994, p. 59.
11. CH36v. How often was it difficult to get everyone to agree on decisions?	<i>How often was it difficult to get whole family to agree.</i>	Lac, Unger, Basanez, Ritt-Olson, Soto, and Baezconde-Garbanati, 2011, p. 647; Olsen, 1985, p. 1, Faces II & FACES III scale item #5; Cupito, 2015, p. 1643.
12. S8. Overall, would you say that your relationship with your [brother(s)/and /sister(s)] is excellent, very good, fair, or poor?	<i>S8. Quality of relationship with siblings</i>	Crosnoe, 2004, p. 580; Karcher, 2001, scale items p. 58, #5, #15, #25, # 35, p. 57 #45.
<b>Parent Belonging Domain</b>		
13. CH39. When you were first allowed out on your own, how often did your parents/people who raised you make you tell (him/her/them) before you went out?	<i>How often parents make you tell them before going out.</i>	Winfree and Jiang, 2010, p.37; Lac, Unger, Basanez, Ritt-Olson, Soto, and Baezconde-Garbanati, 2011, p. 645; Brown and Manning, 2009, p. 90; Cavanaugh, 2008, p. 955; Resnick, 1997, p. 825.
14. CH41. When you were first allowed out on your own, how often did your parents/people who raised you know how to find you if they needed to when you were out?	<i>How often parents knew how to find you.</i>	Lac, Unger, Basanez, Ritt-Olson, Soto, and Baezconde-Garbanati, 2011, p. 645; Cavanaugh, 2008, p. 955; Brown and Manning, 2009, p. 90.
15. CH42. When you were first allowed out on your own, how often did you have a set time when you had to be home on school nights?	<i>How often had a set time to be home.</i>	Winfree and Jiang, 2010, p. 26; Bridge, Goldstein, and Brent, 2006, p. 380; Lac, Unger, Basanez, Ritt-Olson, Soto, and Baezconde-Garbanati, 2011, p. 645; Cavanaugh, 2008, p. 955; Brown and Manning, 2009, p. 90.

16. CH46. Over the years, what woman spent the most time raising you-your biological mother or someone else?	<b><i>Woman who raised you</i></b>	Hedin, 2014, p. 166, 172; Hedin, Hojer, and Brunnberg, 2011, p. 2282; King, Boyd, and Thorsen, 2015, 762; Leake, 2007, p. 145, 147, 149.
17. CH47. How emotionally close were you with (woman who raised you) while you were growing up?	<b><i>How emotionally close when growing up.</i></b>	Brown and Manning, 2009, p. 91; Crosnoe 2004, p. 580; Cavanaugh, 2008, p. 955; Resnick, Bearman, Blum, Bauman, Harris, Jones, and Udry, 1997, p. 830; King, Boyd, and Thorsen, 2015, p. 771.
18. CH47.1 Was the communication between you and her during most of you childhood excellent, good, fair, or poor?	<b><i>Communication when growing up.</i></b>	Lac, Unger, Basanez, Ritt-Olson, Soto, and Baezconde-Garbanati, L. 2011, p. 645; Brown and Manning, 2009, p. 91; Cavanaugh, 2008, p. 955; Karcher, 2001, p. 57, #34, #63, #75
19. CH 47.2 How often did you talk to her about school or about your friends or about your feelings during the time you were growing up?	<b><i>How often talk about school friends and feelings.</i></b>	Lac, Unger, Basanez, Ritt-Olson, Soto, Baezconde-Garbanati, 2011, 645; Karcher, 2001, p. 57, scale item #75.
20. CH47.3 How much did she know about what you were doing and how you were feeling during the time you were growing up?	<b><i>Amount she knew about what you did/felt.</i></b>	King, Boyd, and Thorsen, 2015, p.762; Lac, Unger, Basanez, Ritt-Olson, Soto, Baezconde-Garbanati, 2011, p. 645; Resnick, Bearman, Blum, Bauman, Harris, Jones, and Udry, 1997, p.830. Karcher 2001, p. 57, scale item #75.
21. CH47.4 How much tension did you have in your relationship with her during much of the time you were growing up?	<b><i>How much tension in relationship.</i></b>	Resnick, Bearman, Blum, Bauman, Harris, Jones, and Udry, 1997, p. 830; King, Boyd, and Thorsen, 2015, p. 771; Karcher, 2001, p. 58, #34, p. 57 #44, #57, #63.
22. CH48a. How much love and affection did she give you?	<b><i>How much love and affection.</i></b>	Brown and Manning, 2009, p. 91; Resnick et al., 1997, p. 830, Crosnoe 2004, p. 580; Cavanaugh,



		2008, p. 955 Karcher, 2001, p. 57; Brown and Manning 2009, p. 91; Resnick, Bearman, Blum, Bauman, Harris, Jones, and Udry, 1997, p. 830; King, Boyd, and Thorsen, 2015, p. 771. Karcher, 2001, p. 57, scale items #24, #34, #57, #63, #68.
23. CH48b. How much did she really care about you?	<b><i>How much mother cared.</i></b>	Hall-Lande, Eisenber, Christenson, and Neumark-Sztainer, 2007, p. 272; Brown and Manning, 2009, p. 91; Crosnoe 2004, p. 580; Brown and Manning 2009, p. 91; Resnick, Bearman, Blum, Bauman, Harris, Jones, and Udry, 1997, p. 830; King, Boyd, and Thorsen, 2015, p. 771; Karcher, 2001, p. 57, #57, #63, #68.
24. CH48d. How much did she understand your problems and worries.	<b><i>Extent she knew about your problems and worries.</i></b>	Lac, Unger, Basanez, Ritt-Olson, Soto, and Baezconde-Garbanati, 2011, p. 645; Crosnoe 2004, p. 580; Cavanaugh, 2008, p. 955; Karcher 2001, p. 57, scale item #75.
25. CH48e. How much could you open up and talk to her about things that were bothering you.	<b><i>Extent you could discuss things that bothered you.</i></b>	King, Boyd, and Thorsen 2015, p.762; Hall-Lande, Eisenber, Christenson, and Neumark-Sztainer, 2007, p. 272; Brown and Manning, 2009, p. 91; Resnick, Bearman, Blum, Bauman, Harris, Jones, and Udry, 1997, p. 830; Crosnoe 2004, p. 580; Cavanaugh, 2008, p. 955; Karcher, 2001, p. 57, scale item #34, #63, #75.
26. CH48g. How strict was she with her rules for you?	<b><i>How strict about rules?</i></b>	Lac, Unger, Basanez, Ritt-Olson, Soto, and Baezconde-Garbanati, 2011, p. 645; Resnick, Bearman, Blum, Bauman, Harris, Jones, and Udry, 1997, p.831-832.
27. CH48i. How much did she expect you to do your best in everything you did?	<b><i>Extent expected you to do your best.</i></b>	Bridge, Goldstein, and Brent, 2006, p. 380; Resnick, Bearman, Blum, Bauman, Harris, Jones, and Udry,

		1997, p. 825, 827, 831; Crosnoe 2004, p. 580.
28. CH75 Over the years, what man spent the most time raising you-your biological father or someone else?	<b><i>Man who raised you.</i></b>	Hedin, 2014, p. 166, 172; Hedin, Hojer, and Brunnberg, 2011, p. 2282; King, Boyd, and Thorsen, 2015, 762; Leake, 2007, p. 145, 147, 149.
29. CH76 How emotionally close were you with (man who raised you) while you were growing up?	<b><i>How emotionally close when growing up.</i></b>	Brown and Manning, 2009, p. 91; Crosnoe 2004, p. 580; Cavanaugh, 2008, p. 955; Resnick, Bearman, Blum, Bauman, Harris, Jones, and Udry, 1997, p. 830; King, Boyd, and Thorsen, 2015, p. 771.
30. CH76.1 Was the communication between you and him during most of your childhood excellent, good, fair, or poor?	<b><i>Communication when growing up.</i></b>	Lac, Unger, Basanez, Ritt-Olson, Soto, and Baezconde-Garbanati, L. 2011, p. 645; Brown and Manning, 2009, p. 91; Cavanaugh, 2008, p. 955; Karcher, 2001, p. 57, #34, #63, #75.
31. CH 76.2 How often did you talk to him about school or about your friends or about your feelings during the time you were growing up?	<b><i>How often talk about school friends and feelings.</i></b>	Lac, Unger, Basanez, Ritt-Olson, Soto, Baezconde-Garbanati, 2011, 645; Karcher, 2001, p. 57, scale item #75.
32. CH76.3 How much did he know about what you were doing and how you were feeling during the time you were growing up?	<b><i>Amount he knew about what you did/felt.</i></b>	King, Boyd, and Thorsen, 2015, p.762; Lac, Unger, Basanez, Ritt-Olson, Soto, Baezconde-Garbanati, 2011, p. 645; Resnick, Bearman, Blum, Bauman, Harris, Jones, and Udry, 1997, p.830. Karcher 2001, p. 57, scale item #75.
33. CH76.4 How much tension did you have in your relationship with him during much of the time you were growing up?	<b><i>How much tension in relationship.</i></b>	Resnick, Bearman, Blum, Bauman, Harris, Jones, and Udry, 1997, p. 830; King, Boyd, and Thorsen, 2015, p. 771; Karcher, 2001, p. 58, #34, p. 57 #44, #57, #63.
34. CH77a How much love and	<b><i>How much love and affection.</i></b>	Brown and Manning, 2009, p.

affection did he give you?		91; Resnick et al., 1997, p. 830, Crosnoe 2004, p. 580; Cavanaugh, 2008, p. 955 Karcher, 2001, p. 57; Brown and Manning 2009, p. 91; Resnick, Bearman, Blum, Bauman, Harris, Jones, and Udry, 1997, p. 830; King, Boyd, and Thorsen, 2015, p. 771. Karcher, 2001, p. 57, scale items #24, #34, #57, #63, #68.
35. CH77b How much did he really care about you?	<b><i>How much father cared.</i></b>	Hall-Lande, Eisenber, Christenson, and Neumark-Sztainer, 2007, p. 272; Brown and Manning, 2009, p. 91; Crosnoe 2004, p. 580; Brown and Manning 2009, p. 91; Resnick, Bearman, Blum, Bauman, Harris, Jones, and Udry, 1997, p. 830; King, Boyd, and Thorsen, 2015, p. 771; Karcher, 2001, p. 57, #57, #63, #68.
36. CH77d How much did he understand your problems and worries?	<b><i>Extent he knew about your problems and worries.</i></b>	Lac, Unger, Basanez, Ritt-Olson, Soto, and Baezconde-Garbanati, 2011, p. 645; Crosnoe 2004, p. 580; Cavanaugh, 2008, p. 955; Karcher 2001, p. 57, scale item #75.
37. CH77e How much could you open up and talk to him about things that were bothering you?	<b><i>Extent you could discuss things that bothered you.</i></b>	King, Boyd, and Thorsen 2015, p. 762; Hall-Lande, Eisenber, Christenson, and Neumark-Sztainer, 2007, p. 272; Brown and Manning, 2009, p. 91; Resnick, Bearman, Blum, Bauman, Harris, Jones, and Udry, 1997, p. 830; Crosnoe 2004, p. 580; Cavanaugh, 2008, p. 955; Karcher, 2001, p. 57, scale item #34, #63, #75.
38. CH77g. How strict was he with his rules for you?	<b><i>How strict about rules?</i></b>	Lac, Unger, Basanez, Ritt-Olson, Soto, and Baezconde-Garbanati, 2011, p. 645; Resnick, Bearman, Blum, Bauman, Harris, Jones, and Udry, 1997, p. 831-832.

39. CH77i. How much did he expect you to do your best in everything you did?	<b><i>Extent expected you to do your best.</i></b>	Bridge, Goldstein, and Brent, 2006, p. 380; Resnick, Bearman, Blum, Bauman, Harris, Jones, and Udry, 1997, p. 825, 827, 831; Crosnoe 2004, p. 580.
<b>Peer Belonging Domain</b>		
40. SN1. How popular are you with other people your own age?	<b><i>Popularity with people your own age. (How popular are you with people your age)</i></b>	Wallace, Ye, and Chhuon 2012, p. 124; Karcher 2001, p. 57-58, scale items #5, #15, #25, # 35, p. 57 #45.
41. SN8. “It is easy for me to become emotionally close to others. I am comfortable depending on them and having them depend on me. I don’t worry about being alone or having others not accept me.” What number between 0-10 best describes how much that statements sounds like you?	<b><i>Easy to get close to and depend on others/no fear of abandonment.</i></b>	Wallace, Ye, Chhuon,2012, p. 124; Karcher and Sass, 2010, p. 284; Newman, Lohman, and Newman, 2007, p. 258; Lee and Robbins, 1995, p. 236; Lee and Robbins, 1995, p. 236, scale items #4; Karcher, 2001, p. 58, scale item #32.
42. SN13. About how many friends do you have who you either hang out with, talk to on the phone, or get together with socially?	<b><i>Friends often call/hang out/get together socially.</i></b>	Wallace, Ye, and Chhuon,2012, p. 124; Goodenow 1992, p. 185; Crosnoe 2004, p. 580; Newman, Lohman, & Newman, 2007, p. 242, 258; Karcher and Sass, 2010, p. 284; Lee and Robbins 1995, p. 236, scale items #4, #8.
43. SN16. How often do you either talk on the phone, hang out, or get together with socially with this friend or these friends?	<b><i>Frequency call/hang out/get together socially with friend.</i></b>	Wallace, Ye, and Chhuon 2012, p. 124; Goodenow 1992, p. 185; Crosnoe 2004, p. 580; Baskin, Wampold, Quinana, and Enright, 2010, p. 630; Newman, Lohman, and Newman 2007, p. 242, 258;Karcher, 2001, p. 58, scale item #22.
44. SN27. How much can rely on friends when have serious problem.	<b><i>How much can rely on friends when have serious problem.</i></b>	Karcher and Sass, 2010, p. 284; Karcher, 2001, p. 58, scale item # 12, #32, p. 57 #52.

45. SN28. How much can you open up to your friend(s) if you need to talk about your worries?	<b><i>SN28. How much can you open up and talk to friends about worries.</i></b>	Hall-Lande, Eisenber, Christenson, and Neumark-Sztainer, 2007, p. 272; Karcher and Sass, 2010, p. 284; Scale-Karcher, 2001, p. 58, scale items # 12, #32, p. 57 #52.
46. DA27. How closely do you identify with other people who are of the same racial and ethnic descent as yourself?	<b><i>Identify with others of the same racial descent.</i></b>	<b>School:</b> Goodenow and Grady, 1993 p. 60, 88; Derlan and Umana-Taylor, 2015, p. 4.
47. DA28. How close do you feel in your ideas and feelings about things to other people of the same racial and ethnic descent?	<b><i>DA28. Feel close in your feelings with others of same racial descent?</i></b>	<b>School:</b> Goodenow and Grady, 1993, p. 60, 88; Derlan and Umana-Taylor, 2015, p. 4.
48. DA29.1 How many of your friends are of your same racial and ethnic group?	<b><i>Number of friends of same racial/ethnic group.</i></b>	<b>School:</b> Goodenow and Grady, 1993, p. 88; Derlan and Umana-Taylor, 2015 p. 4.
<b>School Belonging Domain</b>		
49. ED6b. How important was it to your parents that you did well at school?	<b><i>Important to parents that you did well at school.</i></b>	Bridge, Goldstein, and Brent, 2006, p. 380; Resnick, Bearman, Blum, Bauman, Harris, and Udry, 1997, p. 831; Goodenow and Grady 1993, p. 60, 69.
50. ED25b. I (care/cared) a lot about what my teachers (think/thought) about me?	<b><i>I care what teachers think about me.</i></b>	Lee and Robbins 1995, p. 233; Chhuon and Wallace, 2014, p. p. 381, 383, 394; Resnick, Bearman, Blum, Bauman, Harris, and Udry, 1997, p. 831; Whelage, 1989; Hall-Lande, 2007, p. 269; Goodenow and Grady, 1993, p. 61, 68; Karcher and Sass 2010, p. 284.
51. ED25c. I (like/liked) school.	<b><i>I like school.</i></b>	Goodenow, 1993, p. 63; Hall-Lande, Eisenber, Christenson, and Neumark-Sztainer, 2007, p. 269, 272; Goodenow and Grady, 1993, p.

		69; Karcher and Sass, 2010, p. 284; Karcher, 2001, p. 57, #46, #53, p. 58, scale items #16.
52. ED25d. Getting good grades (is/was) important to me.	<b><i>Getting good grades is important to me.</i></b>	Cupito, Stein, and Gonzalez, 2015, p. 1643; Goodenow and Grady, 1993, p. 61, 69; Goodenow, 1993b, p. 84, scale item # 15.
53. ED25f. I (like/liked) my teachers.	<b><i>I like my teachers.</i></b>	Resnick, Bearman, Blum, Bauman, Harris, Jones, and Udry, 1997, p. 831; Crosnoe, 2004, p. 58; Whelage, 1989; Chhuon and Wallace, 2014, p. p. 383, 396; Hall-Lande, 2007, p. 269; Goodenow and Grady, 1993, p. 61, 68; Karcher and Sass 2010, p. 284; Goodenow, 1993b, p. 84, scale items #5, #7, # 9, #14.
54. ED25h. I (feel/felt) as if I (don't/didn't) belong at school.	<b><i>I feel that I do not belong at school.</i></b>	Goodenow and Grady, 1993, p. 61. Goodenow, 1993b, p. 84, scale items #1, #3, #6, #10, #12, #18.
55. ED26a. How many years were you involved in sports teams other than in gymn?	<b><i>School years involved on sports teams.</i></b>	Lee and Robbins, 1995, p. 233; Goodenow, 1993, p. 80; Chhuon and Wallace, 2014, p. 383.
56. ED26b. How many years were you involved in band or chorus?	<b><i>School years involved in band or chorus.</i></b>	Lee and Robbins, 1995, p. 233; Wallace, Ye, and Chhuon, 2012, p. 124, Goodenow, 1993, p. 80; Hall-Lande, 2007, p. 269; Chhuon and Wallace, 2014, p. 383.
57. ED26c. How many years were you involved in student newspaper or yearbook?	<b><i>School years involved in newspaper or yearbook.</i></b>	Lee and Robbins, 1995, p. 233; Wallace, Ye, and Chhuon, 2012, p. 124; Goodenow, 1993, p. 80; Hall-Lande, 2007, p. 269; Chhuon and Wallace, 2014, p. 383.
58. ED26d. How many years were you involved in student council or honor society?	<b><i>School years involved in student council or honor society.</i></b>	Lee and Robbins, 1995, p. 233; Wallace, Ye, and Chhuon, 2012, p.124; Goodenow, 1993, p. 80; Hall-

		Lande, 2007, p. 269; Chuunon and Wallace, 2014, p. 383.
59. DA. 33. How frequently did you attend religious services?	<b><i>Frequency attend religious services.</i></b>	Sinha, Cnaan, and Gelles, 2004, p.231.
60. DA 34. How important are religious beliefs in your daily life?	<b><i>Importance of religious beliefs in daily life.</i></b>	Cnaan, Gelles, and Sinha, 2004, p. 175
61. DA 35. How often during difficult times do you seek comfort in religion?	<b><i>During difficult times seek comfort in religion.</i></b>	Cotton, Zebracki, Rosenthal, Tsevat, and Drotar, 2006, p. 472; Rew and Wong, 2005, p. 433
62. DA 36. During times of decision making, how frequently were you guided by religious belief?	<b><i>During decision making-guided by religious belief.</i></b>	Rew and Wong, 2005, p. 433. Cotton, Zebracki, Rosenthal, Tsevat, and Drotar, 2006, p. 472;

## Appendix D: Sampling Procedure

It is important to examine the NCS and the NCS-R (*adult*) household sampling procedures because, as noted previously, the NCS-A (*adolescent*) household survey was implemented as a supplement to the NCS-R, which in turn was derived from the NCS.

**NCS households sample procedure.** The NCS utilized a stratified, multistage area probability sample of individuals aged 15-54 years old, in the coterminous U.S. (Kessler, McGonagle, Zhao, Nelson, Hughes, & Kendler, 1994). The NCS sample provided 62 primary sampling units (PSUs), representative of the population, which were later linked to sampling units used for the NCS-R (*adults*) sampling (Kessler et al., 2004). 176 counties throughout the country were represented (Kessler, Sonnega, Bromet, Hughes, & Nelson, 1995). The NCS-R households that contained adolescents were utilized for the NCS-A (*adolescents*) household sample. Such continuity provided consistency in the household sampling population of all three surveys (Kessler et al., 2009).

**NCS-R households sample procedure.** The respondents for the NCS-R (*adults*) were selected from a probability sample of the non-institutionalized civilian population using small area data collected by the U.S. Bureau of the Census from the year 2000 census. A sample was created in which the probability of any individual housing unit being selected to participate in the survey was equal for every housing unit in the coterminous U.S.

**Household sample design-Stage one.** The NCS-R chose a probability sample of 62 primary sampling units (PSUs) that were representative of the population. These PSUs were linked to the original PSUs that were used in the baseline NCS. “Each PSU consisted of all counties in a census-defined metropolitan statistical area (MSA)...” (Kessler, Berglund, Chiu,



Demler, Heeringa, & Zheng, 2004, p. 74). In the case of counties not included in the MSA, each PSU consisted of individual counties. PSUs were chosen with probabilities proportional to size (PPS) and geographic stratification of all of the possible sectors in the U.S. (Kessler et al.)

The 62 PSUs include 16 MSAs with “certainty” designation, 31 MSAs with “non-certainty designation,” and 15 non-MSA counties (Kessler et al., 2004, p. 74). The 16 PSUs with a certainty designation were referred to as “self-representing” because they were so large that they were not selected randomly to represent other MSAs, but instead they represent themselves (p. 74). These 16 PSUs were not actual PSUs in the technical sense of the term, but rather population strata. The remaining 46 PSUs were “non self-representing,” as they were chosen to represent smaller areas of the country (p. 74). Selection of the non self-representing PSUs was accomplished by systematic selection from an ordered list. Following selection, the three largest PSUs were each divided into four pseudo-PSUs, and each of the remaining 13 self-representing PSUs were divided into two pseudo-PSUs. When combined with the 46 non-self-representing PSUs, a sample of 84 PSUs and pseudo-PSUs resulted . Therefore, both PSUs and pseudo-PSUs were referred to as PSUs (Kessler et al., 2004).

**Household sample design-Stage two.** Each PSU was divided into sections of between 50 and 100 housing units. A probability sample of 12 such sections from each non-self-representing PSU was selected. Using a ratio of the population size over the systematic sampling interval, a larger number of sections were chosen from the self-representing PSUs. Inside each PSU, sections were systematically chosen from an ordered list in which probabilities of selection were proportional to size. In the entire sample, a total of 1,001 area segments were chosen (Kessler et al., 2004).

**Household sample design-Stage three.** Once the sample segments were chosen, the addresses of all housing units (HUs) that were not included in the baseline NCS were recorded. The addresses were entered into a centralized computer data file. Adjustments were made for discrepancies between expected and observed numbers of HUs (Kessler et al., 2004).

This three-stage design resulted in the probability that any single HU being chosen to participate in the survey was equal for every HU in the coterminous U.S. A household listing of all residents 18 years and older was obtained from a household informant. The informant was asked if each household resident spoke English. The Kish tables selection procedure (a probability procedure) was used to choose one, or in some cases two respondents to interview (Kessler et al., 2004).

The NCS-R repeated and expanded upon many of the questions from the NCS. Assessments were included that were based on the DSM IV diagnostic system (American Psychiatric Association, 1994). Interviews were administered face-to-face to respondents (Kessler et al., 2004).

**NCS-A sample procedure.** As mentioned above, the NCS-A was a late add on to the NCS-R. The U.S. Congress requested that The National Institute of Mental Health provide national data on the prevalence and correlates of mental disorders among U.S. youth. The age range of the NCS-R (adults) was lowered, allowing 13-17 year old adolescents to be interviewed. The NCS-A was thereby created.

Due to the small number of adolescents residing in NCS-R (adults) households, it was not possible to generate the target sample of 10,000 respondents. A school based sample was consequently added to supplement the households sample. Consequently, the final NCS-A sample was based on a dual frame design . The first sample was recruited from the NCS-R

households, and the second sample from a representative sample of schools in the same community as the NCS-R households. “All schools were included in their true population proportions” (Kessler et al., 2009b, p. 70). From each school, a stratified probability sample of students was chosen to participate in the survey (Kessler et al).

**NCS-A households sample procedure.** As noted earlier, the NCS-R (*adults*) households that included adolescents were included in the NCS-A (*adolescents*). The sampling procedure for the NCS-R households is explained above. Adolescents that were not currently enrolled in school ( $n = 25$ ) were also included in the NCS-A household sample.

**NCS-A schools sample procedure.** The school sample was taken from the same sample counties as the NCS-R (*adult*). A representative sample of middle, junior, and high schools was chosen. Probabilities were proportional to the size of the student body, in the classes relevant to the target sample (i.e. ages 13-17 years old), in each of the counties or county clusters that made up the primary sampling units of the nationally representative NCS-R sample (Kessler et al., 2009b).

After letters were sent describing the purpose of the study, and with the school district’s approval, principles provided rosters from which to contact student families for study participation. With \$200.00 provided as a token of appreciation, a random sample of 40-50 students within each school was selected for sampling. Using a systematic selection procedure with a random start, a random sample of 40-50 eligible students, in each school, was selected for sampling. As more schools were needed for recruitment, the payment was increased to \$300.

If more than one adolescent per household was selected for the school sample, both were invited to participate. Only after informed consent was signed by the parent was any contact made with the adolescent (Kessler et al., 2009).

The number of schools that participated in the survey totaled 320. Of 289 schools initially contacted, only 81 agreed, due to reluctance to release student information. Some refusal districts acquiesced, with the stipulation that student information would be released only if the district first received parental written consent. This situation occurred in 15% of the schools. The response rate was dramatically lower in this subsample of blinded schools, so named because the survey team was blinded to the identities of the sample students until after the principals received the parental signed consent (Kessler, et al., 2009b).

Because of the initial low school response rate, multiple replacement schools were recruited. Replacement schools were chosen using standard procedures which matched the refusal schools, regarding demographic characteristics, geographic area, and school size.

“The overall adolescent response rate was 75.6%, with a total of 10 148 completed interviews (Kessler, et al., 2009b).