Positive Youth Development as a Framework for Examining the Relationships Between Conformity to Gender Norms, Social Support, and Adolescent Mental Health

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POSITIVE YOUTH DEVELOPMENT AS A FRAMEWORK FOR EXAMINING THE
RELATIONSHIPS BETWEEN CONFORMITY TO GENDER NORMS,
SOCIAL SUPPORT, AND ADOLESCENT MENTAL HEALTH

Dissertation

by

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Submitted in partial fulfillment
of the requirements for the degree of
Doctor of Philosophy

May 2014
Positive Youth Development as a Framework for Examining the Relationships Between Conformity to Gender Norms, Social Support, and Adolescent Mental Health

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The mental health issues of depression and substance abuse are a major public health concern in the U.S. The timing of the onset of depression and substance use is critical to the lifelong prevalence of these issues (e.g., Gayman, Lloyd, & Ueno, 2011). Symptoms of depression during adolescence are associated with major depressive episodes during adulthood (e.g., Pine, Cohen, Johnson, Brook, 1999). Alcohol use during adolescence has been linked to substance abuse in young adulthood (Griffin, Bang, & Botvin, 2010) and adulthood (Chung & Martin, 2011). Due to the influence that adolescent depression and alcohol use has on lifelong development, potential factors related these outcomes during adolescence are essential to examine. The Five C’s model of positive youth development (PYD) provided a framework for the current study to understand how internal (e.g., conformity to gender norms) and external (e.g., social support) characteristics of an individual lead to the development of personal qualities of PYD, which in turn are associated with behaviors (e.g., depression, alcohol use; Lerner et al., 2005). A sample of 642 high school students from several Catholic high schools in the Northeast was utilized for the analyses. T-tests indicated that females report greater depressive symptoms compared to males, but no gender differences in alcohol use. Regression analyses indicated significant relationships between greater conformity to feminine norms and decreased alcohol use and increased social support and PYD. Conformity to masculine norms was associated with decreased social support and PYD.
The current study expands the existing body of literature by including internal characteristics involving identity such as conformity to gender norms in the Five C’s model of PYD and examining both the benefits and costs of one’s gender, conformity to gender norms, and social support on PYD, depression, and alcohol use during adolescence. The findings suggest that gender, conformity to gender norms, and social support contribute to the adolescent outcomes of PYD, depression, and alcohol use, which have clinical and developmental implications.
Acknowledgements

I would like to express my gratitude for the support of numerous people who helped make this dissertation possible. To my mentor and dissertation chair, Dr. James Mahalik, thank you for your support and guidance throughout the dissertation process and my doctoral training. I have grown both personally and professionally in my ability to think critically and creatively under your guidance. I would also like to thank Dr. Jackie Lerner and Dr. Julie MacEvoy for serving on my dissertation committee and providing thoughtful feedback.

To my family, words cannot express my gratitude for your unwavering support throughout my life, and especially over these past few years. Mom, my tireless coach, I would not be where I am today without you teaching me the true meaning of dedication and persistence. Dad, my role model, I have always look to you and Mom as the personification of men and women for others. You have inspired me to seek a career that embodies social justice, and I can only hope to touch those the way that I have seen you and Mom inspire others throughout your careers. Ally, my personal editor, thank you for your endless edits and patience in correcting the thousands of run-on sentences in my seven years of graduate school. You were also always a lifesaver in helping understand the need for a break, whether it was a walk in the woods with Lizzie or watching one of our favorite shows. I love you all.

I am also extremely grateful and inspired by my wonderful cohort. Alesha, Amy, Laura, Mary Beth, and Shatina, thank you for your companionship in celebrating both our milestones and difficulties that we’ve encountered together over the past several years. You have each touched me both personally and professionally in a special way, and I
know we will all carry these memories with us wherever we each may go next.

I would also like to acknowledge and thank Dr. Donna Boyle for her support in helping me make my dissertation ideas a reality as well as the school staff and students of the Diocese for their participation and support of my dissertation.
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CHAPTER I

The mental health issues of depression and substance abuse are a major public health concern in the U.S. According to the National Institutes of Mental Health (NIMH), approximately 9.5 percent of the current adult U.S. population was diagnosed with a mood disorder, while 6.7 percent had current diagnosis of Major Depressive Disorder in 2011 (MDD; NIMH, 2012). In addition, it is estimated that 22.5 million individuals ages 12 years and older suffered from substance dependence or abuse in 2011 (Substance Abuse and Mental Health Services Administration, SAMHSA, 2012). Depression accounts for approximately $317 billion in annual direct (e.g., treatment) and indirect (e.g., lost productivity) health costs (NIMH, 2012), while the combined direct and indirect health costs of substance abuse total $484 billion per year (National Institute on Drug Abuse, 2012).

The timing of the onset of depression and substance use is critical to the lifelong prevalence of these mental health issues (e.g., Gayman, Lloyd, & Ueno, 2011; Gomberg, 1999). For example, symptoms of depression during adolescence are associated with major depressive episodes during adulthood (Pine, Cohen, Johnson, Brook, 1999; Rao, Hammen, & Daley, 1999). Major depressive episodes during adolescence have also been associated with impairment in occupational performance, interpersonal functioning, quality of life, and physical well-being during adulthood (Lewinsohn, Rohde, Seeley, Klein, & Gotlib, 2003). In addition, substance use, particularly alcohol use, during adolescence has been linked to substance abuse in young adulthood (Griffin, Bang, & Botvin, 2010) and adulthood (Chung & Martin, 2011; Fothergill, Ensminger, Green, Robertson, & Juon, 2009). Substance use disorders that begin during adolescence also
increase the risk for adult incarceration (Slade et al., 2008), suicide (Cho, Hallfors, & Iritani, 2007), and antisocial and borderline personality disorders (Franken & Hendriks, 2000). Since alcohol is the most widely used substance among adolescents ages 12-17 (Murphey, Vaughan, Barry, & Terzian, 2012), alcohol use, in addition to depression, will serve as a focal risk behavior for the current study. In light of the influence that adolescent depression and alcohol use has on lifelong development, potential key indicators of these mental health outcomes during adolescence are essential to examine. Therefore, the current study will investigate the potential relationships of gender, conformity to gender norms, social support, and positive youth development to adolescent depression and alcohol use, and how positive youth development may mediate the relationship of conformity to gender norms and social support to depression and alcohol use.

**Gender and Mental Health**

Gender differences have been well documented in many mental health outcomes including depression (e.g., Nolen-Hoeksema, 2001) and substance use (e.g., Needham, 2007). Although there are no gender differences in depression during childhood, an increase of depression among females occurs during adolescence (Nolen-Hoeksema, 2001). In fact, research has shown that depressive symptoms actually decrease for boys as they move from childhood to early adolescence (Jenkins & Curwen, 2008). Gender differences in depression were found in an epidemiological study that included the United States, Canada and Great Britain, and these differences were found to typically emerge at age 14 (Wade et al., 2002). Females have a higher incidence of Major Depressive
Disorder during adulthood, and they also exhibit longer depressive episodes compared to males (Essau, Lewinsohn, Seeley, & Sasagawa, 2010).

Gender differences have also been found for substance use and abuse (Needham, 2007). Males are at a greater risk for earlier onset of substance abuse, and they more frequently use alcohol, cigarettes, and marijuana than females during adolescence (Chen & Jacobson, 2011; Mahalik et al., 2011; Mahalik et al., 2013; Piko, 2000). Adolescent and adult males’ greater dependency on alcohol has been associated with depressive symptoms as well (Fleming, Mason, Mazza, Abbott, & Catalano, 2008; Marmorstein, 2009; Needham, 2007). Males may engage in substance use as a means to cope with feelings of distress, while females may internalize their symptoms of distress leading to depressive symptoms.

Although it has been long established that adolescent boys use substances including alcohol more than adolescent females (see Mahalik et al., 2013), additional research suggests that the gap between these gender differences is presently closing (Amaro et al., 2001). In addition, adolescent males may also suffer from depressive symptoms. Therefore, both depression and alcohol use will be investigated for both males and females in the current study. These established gender differences in mental health outcomes that emerge during adolescence highlight the importance of examining gender as a key construct that is associated with depression and alcohol use in the current study of adolescents.

Conformity to Gender Norms and Mental Health

An important developmental task during adolescence is gender role development, or the negotiation of what it means to be a man or woman in society. Consequently,
messages regarding cultural expectations of femininity and masculinity become salient for adolescents. Feminine gender norms in dominant U.S. culture include the importance of developing caring relationships with others, being involved in romantic relationships, attaining a thin body image and continual investment in one’s appearance, modesty, sexual fidelity, and responsibility for and enjoyment of domestic chores and childcare (Mahalik et al., 2005). Conformity to feminine norms is associated with mental health outcomes such as depression during adolescence (Barrett & White, 2002) and throughout the lifespan (Broderick & Korteland, 2002).

One particular feminine norm that appears to be a catalyst for gender differences in depression during adolescence is investment in interpersonal relationships. First, since females are expected to value, act nicely in, and be engaged in relationships with family, peers, and romantic partners, they may experience pressure to maintain these relationships at costs to themselves (Fiese & Skillman, 2000). More specifically, girls are hypothesized to lose their voices, or silence their own needs and opinions, and become relationally inauthentic to maintain caring relationships with others (Brown & Gilligan, 1992). Loss of one’s voice may also be connected to the feminine trait of being modest as one is encouraged not to share her own views and accomplishments. Relational inauthenticity has been linked to greater depression among adolescent girls (Danielsson, Bengs, Samuelsson, & Johansson, 2011; Tolman et al., 2006). Second, the feminine norm of investment in interpersonal relationships (including romantic relationships) may also explain the increase in rumination (e.g., sharing one’s problems with peers) among women compared to men, which is also related to increases in depressive symptoms (Simonson et al., 2011; Stone, Hankin, Gibb, Abela, 2011). Additional research has also
shown an association between investment in interpersonal relationships (e.g., engagement in high expressed levels of empathy and nurturance towards others) and greater alcohol use among adolescent females (Kulis, Marsiglia, & Nagoshi, 2010). In sum, it appears that the feminine norms of investment in interpersonal relationships, the expectation to be nice to others, and modesty are important constructs to investigate due to their established relationships to both depression (e.g., Simonson et al., 2011) and alcohol use (e.g., Kulis et al., 2010).

Traditional masculinity in contemporary U.S. culture encompasses a variety of beliefs including that one must control his emotions and rely solely on oneself to solve life’s problems, maintain a lifestyle that involves taking risks and competition, place priority on one’s work over family and pursue societal status, be dominant and exhibit power and even violence over women, and openly show disdain for homosexuality (Mahalik et al., 2003). In general, masculine beliefs predict health behaviors such as alcohol use and abuse, tobacco use, dietary practices, exercise, wearing seatbelts, physical fighting, and use of social support (Mahalik, Burns, & Syzdek, 2007) and specific behaviors related to heart health (e.g., exercise, diet, going to the doctor; Mahalik & Burns, 2011). More specifically, masculinity has been found to predict greater health risk and less health promoting behaviors among cross-cultural samples including U.S. and Kenyan men (Mahalik, Lagan, & Morrison, 2006), as well as Australian men (Mahalik, Levy-Minzi, & Walker, 2007).

The specific masculine traits of emotional control and self-reliance have particularly been associated with increased depressive symptoms among unemployed adult men (Syzdek & Addis, 2010). Masculine traits of dominance and control over
others are also linked to greater substance use among adolescent men (Kulis et al., 2010). Due to the established connections between specific masculine traits of emotional control, self-reliance, and dominance with mental health outcomes such as depression and substance use among college and adult men, these aspects of masculinity will be considered within the current study when examining adolescent depression and alcohol use.

**Social Support and Mental Health**

Throughout the lifespan, and particularly during adolescence, environmental factors such as social support play a key role in mental health outcomes. Social support is defined as the perception that one has access to a network of individuals, who can provide emotional, financial, and instrumental resources and assistance when needed (Guruge et al., 2012). Social support has been a widely established protective factor against both depression (e.g., Guruge et al., 2012; Nemeroff, Midlarsky, & Meyer, 2010) and alcohol use (e.g., Groh, Jason, & Keys, 2008; Longabaugh, Wirtz, Zywiak, & O’Malley, 2010) across the lifespan.

During adolescence, parental and peer social support has been associated with higher self-esteem and lower depressive symptoms (e.g., Colarossi & Eccles, 2003). The link between social support and depression among adolescents has been validated cross-culturally with a sample of Taiwanese adolescents (Liu, 2006). Social support is also related to adolescent alcohol use in that parental social support and authoritative parenting (e.g., a balance of boundaries and support) has been associated with less alcohol use among adolescents (Aseltine & Gore, 2000). In addition, peer social support related to alcohol use (e.g., peer groups who also use and encourage alcohol use) is
associated with increased adolescent alcohol use (Barnes et al., 1999; Saraceno, Heron, Munafo, Craddock, & van den Bree, 2011). Therefore, social support has key associations with both adolescent depression and alcohol use.

**Conformity to Gender Norms and Social Support**

It is clear that social support plays a significant role regarding adolescent development and has established relationships with the mental health outcomes of depression and alcohol use. Social support may also play a role in the manifestation of individual characteristics such as conformity to gender norms as well. Although past research established a relationship between conformity to gender norms and mental health outcomes of depression (e.g., Broderick & Korteland, 2002) and alcohol use (e.g., Mahalik, Burns, & Syzdek, 2007) during adulthood, less is known about the nature of these relationships for adolescents. Due to the fact that social support plays a major role in adolescent development and one major developmental task during adolescence is the negotiation of gender norms, the current study seeks to examine whether there is a relationship between conformity to gender norms and social support. More specifically, conformity to feminine gender norms for females and masculine gender norms for males may be adaptive during adolescence as they are behaving in ways that meet others’ expectations of them. For example, others’ (e.g., peers’) acceptance of one’s gender typicality (i.e., how masculine males are and how feminine females are) is related to greater self-worth during adolescence (Smith & Leaper, 2005). It may be that adolescents who are more likely to subscribe to gender norms will be treated more favorably and supported by adults and peers in their environment, leading to more positive mental health outcomes. As a result, it is essential to test the relationship between conformity to
gender norms and social support to examine how it may relate to adolescent depression and alcohol use. Therefore, a theoretical model that enables the investigation of both individual-level and environmental factors’ associations with adaptive and maladaptive developmental trajectories during adolescence is essential for the current study.

**Positive Youth Development**

In order to examine the potential contributions of gender, conformity to gender norms, and social support to adolescent depression and alcohol use, a theoretically based model of adolescent development must be utilized. The Five C’s model of positive youth development (PYD) is a model that not only holds prominence for explaining the development of depression and alcohol use among adolescents, but also provides the needed framework to examine the relationships between individual characteristics (e.g., gender, conformity to gender norms) and environmental influences (e.g., social support) on PYD and subsequent outcomes such as mental health (Lerner et al., 2005a). First, individual characteristics, referred to as internal strengths or characteristics, are traits within the individual person such as intentional self-regulation, school engagement, and hope for a positive future (Lerner et al., 2005b). Second, environmental influences, known as ecological assets, are individuals and resources present in the individual’s environment such as social support that impact development (Lerner et al., 2005b). Internal strengths and ecological assets, jointly referred to as developmental assets, interact with one another and contribute to a key adolescent developmental outcome known as the Five C’s (i.e., competence, confidence, character, connection and caring; Roth & Brooks-Gunn, 2003). The Five C’s represent five internal and measurable qualities of individuals that influence their behaviors (Lerner, Fisher, & Weinberg, 2000).
More specifically, the Five C’s have been found to mediate, or explain the relationships, between internal strengths and ecological assets with risk and adaptive behaviors (e.g., Theokas et al., 2005). Therefore, the Five C’s are an essential aspect of the Five C’s model of PYD and indicator of PYD as they directly contribute to trajectories of adolescent mental health (e.g., depression and alcohol use; Lerner et al., 2005b; Theokas et al., 2005).

A wide variety of internal strengths have been studied in connection to adolescent outcomes. For example, internal strengths such as self-efficacy are related to lower depressive symptoms (Olson, 2003), and self-regulation is related to school engagement and academic competence among adolescents (Li, Lerner, & Lerner, 2010). Due to the established gender differences in adolescent mental health outcomes, conformity to gender norms may serve as a key individual characteristic that is associated with PYD and subsequent depression and alcohol use. More specifically, males and females may be more or less likely to experience PYD due to their levels of conformity to gender norms; for example, greater conformity may lead to greater social acceptance, increased adolescent engagement and connection to their communities, and consequent differences in depression and alcohol use. In addition, ecological assets such as social support have been associated with lower risk for suicide ideation (Price et al., 2001), and lower depressive symptoms (Olson, 2003) during adolescence. The current Five C’s model of PYD has taken into account an array of internal strengths and ecological assets that are associated with adaptive and risk behaviors. However, characteristics of one’s identity such as conformity to gender norms have yet to be examined. Furthermore, the study of
these characteristics in relation to a key ecological asset, social support, may further delineate the current knowledge related to PYD.

**Purpose**

The purpose of the current study is to predict adolescents’ depression and alcohol use. The current study seeks to first examine gender differences in mental health outcomes of depression and alcohol use to confirm previous research. The second step of the study is to examine the relationship between a new internal characteristic (i.e., conformity to gender norms) in predicting depression and alcohol use. Third, the relationship between the external asset of social support and depression and alcohol use will be assessed. The association between conformity to gender norms and social support will then be evaluated. Next, the previously established relationship between PYD and depression and alcohol use will be examined. Last, the question of whether PYD mediates the relationship of conformity to gender norms and perceived social support in predicting depression and alcohol use will be examined if the above relationships can be substantiated. In summary, this study seeks to build upon current literature by examining how an internal characteristic such as conformity to gender norms and an ecological asset like social support both individually and jointly operate within the Five C’s model of PYD to predict adolescent depression and alcohol use.
CHAPTER II

The mental health issues of depression and substance abuse have become a public health concern in the U.S. According to the National Institutes of Mental Health (NIMH), approximately 9.5 percent of the current adult U.S. population is diagnosed with a mood disorder, while 6.7 percent are diagnosed with Major Depressive Disorder (MDD; NIMH, 2012). Depression accounts for approximately $317 billion in annual direct (e.g., treatment) and indirect (e.g., lost productivity) health care costs (National Institute on Drug Abuse, 2012). Depression also has other financial and social costs to individuals and society such as lost job wages, lowered productivity at work, and impaired social relationships with one’s co-workers, family members, and friends (Pincus & Pettit, 2001). Following heart disease, depression is the second largest contributor to disease burden (i.e., years of life lost and/or years lived with a disability) due to the chronic nature of the disease. For instance, 60 percent of individuals diagnosed with depression will have a recurrent episode later in life, and the more reoccurrences that one experiences, the greater likelihood there is for future relapses (Pincus & Pettit, 2001).

In addition, it is estimated that 22.1 million individuals ages 12 years and older suffered from substance dependence or abuse in 2010 (SAMHSA, 2011). Excessive alcohol consumption such as binge drinking (i.e., more than 4 drinks for women and 5 drinks for men per occasion), heavy drinking (i.e., more than 1 drink per day for women and 2 drinks per day for men); underage drinking (less than 21 years old); and alcohol consumption by pregnant women, account for an array of detrimental outcomes such as premature death, increased disease and injury, property damage, crime, and lost work and societal productivity (Bouchery, Harwood, Sacks, Simon, & Brewer, 2011). The most
recent estimate showed that excessive alcohol consumption costs the U.S. approximately $223.5 billion annually with impaired/lost productivity, and health care and criminal justice costs as the main contributors (Bouchery et al., 2011).

The mental health outcomes of depression and excessive alcohol consumption place many economic and social costs on individuals, their families, community members, and society at large. Therefore, a greater understanding of the factors associated with depressive symptoms and alcohol use will enable more well-informed and tailored prevention and intervention efforts.

**Adolescence: A Critical Developmental Period**

The onset of depression and alcohol use during adolescence is often linked to lifelong prevalence of mental health issues (e.g., Gayman, Lloyd, & Ueno, 2011; Gomberg, 1999). A large body of research has shown that symptoms of depression during adolescence are associated with major depressive episodes during adulthood (Pine et al., 1999; Rao et al., 1999). In addition, substance use during adolescence has been linked to substance abuse in young adulthood (Griffin, Bang, & Botvin, 2010) and adulthood (Chung & Martin, 2011; Fothergill et al., 2009) as well as other mental health concerns such as suicide (Cho, Hallfors, & Iritani, 2007) and personality disorders (Franken & Hendriks, 2000). Therefore, adolescent populations should be examined to further identify factors associated with the onset and prevalence of depression and alcohol use.

In order to examine potential correlates of depression and alcohol use during adolescence, a consideration of the specific nuances of this time period including biological, cognitive, psychological, and social changes is needed to provide an overall
picture of this developmental stage. Puberty marks the beginning of adolescence, and it has been described as a biological, cognitive, emotional, and social reorganization to prepare for adulthood and its associated tasks (e.g., child rearing, full-time employment; Susman & Rogol, 2004). These changes are often interlinked and dependent upon one another. For example, hormonal changes and physical development during puberty have subsequent effects on adolescent psychological and social development such as problem behaviors (Ge, Brody, Conger, Simons & Murry, 2002) and depressed mood (Angold & Worthman, 1993).

Adolescence is also marked by changes in cognitive development related to reasoning, processing, and expertise, or knowledge (Keating, 2004). Puberty fuels the maturation of the prefrontal cortex, increases in white matter, and overall linkages among parts of the brain, which leads to a greater capacity for abstract thinking and reasoning and complex decision-making skills (Paus, 2005; Steinberg, 2005). As adolescents develop greater perspective taking skills, their capacity for prosocial tendencies such as caring and helping others increase (Eisenberg & Morris, 2004). Other cognitive perspectives emphasize the neural plasticity in brain development throughout the lifespan, particularly during adolescence (Nelson, Thomas, & De Haan, 2006). More specifically, brain development results from a bidirectional interaction between one’s brain and environment, and environmental influences may have positive, or enriching, effects, or negative, depriving, effects, on adolescents’ brain development (Nelson et al., 2006).

The complex interactions of puberty on cognitive and psychological development have a major impact on not only adolescents’ mental health, but also on adolescents’
experiences in society and subsequent social identity and roles including gender identity and PYD as well. Nurmi (2004) argued that adolescent socialization occurs in four major stages: channeling, selection, adjustment, and reflection. First, adolescents experience environments that channel, or construct, their social roles. As adolescents mature, they are able to select their own future paths based on their goals, interests, and opportunities provided to them by society. Once they receive feedback about their successes and failures related to these paths, adolescents often adjust their goals and thinking to match their current developmental trajectories. Finally, adolescents reflect about their developmental paths and identities (Nurmi, 2004).

One important channeling mechanism that adolescents experience is developmental tasks, also known as societal expectations to accomplish an outcome by a certain stage (Nurmi, 2004). Developmental tasks are steps that occur at different life stages (e.g., childhood, adolescence, adulthood), and key adolescent developmental tasks include the development of autonomy, mature interpersonal relationships, and identity (including gender and gender roles), which is particularly significant to the current study (Havighurst, 1953). The completion of these tasks leads to greater well-being and an increased likelihood of completing future developmental tasks, while incompletion often leads to lower well-being, societal disapproval, and less success with future life experiences and tasks (Havighurst, 1953; Seiffge-Kienke & Gelhaar, 2008). Developmental tasks are influenced by the many pubertal changes described above such as physical maturation as well as cultural expectations, individual values, and mental and physical health outcomes.

The Role of Gender in Adolescent Mental Health
Gender role development. As stated above, gender is a key aspect of one’s identity, and gender role development is an important developmental task during adolescence. Gender roles are cultural expectations for how males and females should interact with the outside world, and gender role development begins during infancy and lasts into adulthood (Galambos, 2004). In contemporary U.S. society, masculinity is often described as exhibiting the traits of aggression, ambition, leadership, dominance, and competition, while femininity is associated with the traits of compassion, gentleness, understanding, and being sensitive to the needs of others (Holt & Ellis, 1998). Each individual also develops his/her own gender role attitudes, which reflect the extent to which he/she approves and/or disapproves of societal gender role norms (Galambos, 2004). As stated above, puberty marks the increase of physical differences among males and females due to hormonal changes and the development of secondary sex characteristics. These gender differences in development not only impact cognitive, psychological, and social development, but they also impact how others (e.g., parents and peers) interact with adolescents as well.

Similar to the studies of adolescence in general, there are several well-known theories that examine gender role development from biological, cognitive, and social perspectives. Biological theories of gender role development focus on genetic and evolutionary factors to explain gender differences in behavior and developmental outcomes. For example, gender differences in behavior such as sexual practices and parenting are explained as due to evolutionary principles of natural selection or through biological theories of hormones such as gender differences in testosterone (Galambos, 2004). Kolhberg’s (1966) theory of cognitive development focuses on how both
biological factors and the observations of social roles contribute to children and adolescents’ beliefs as to what it means to be male or female (i.e., gender-related schemas). From a young age, children develop several gender-related schemas about gender such as one’s gender remains the same throughout life (i.e., gender constancy), males and females have different reproductive organs, and males and females have different expectations (i.e., roles) for how to behave in society (Kohlberg, 1966).

Bussey and Bandura’s (1999) social cognitive theory of gender role development emphasizes both psychological and social determinants of one’s gender role development. According to this theory, gender role socialization occurs through triadic reciprocal causation, or the mutual influence of personal characteristics, behavior, and environmental factors (Bussey & Bandura, 1999). Personal characteristics include beliefs about gender, behavioral standards related to gender, and self-regulation processes; behavior includes external activities that are gender-based; and environmental influences are social factors that individuals experience in their daily lives (Bussey & Bandura, 1999). For example, an environmental influence would be a child’s parent stating to him/her that, “Playing with dolls is for girls.” The child would then internalize and endorse the belief that dolls are for girls (i.e., personal characteristic), which would presumably impact his/her future behavior depending on the child’s gender.

Gender roles are socialized primarily through modeling, enactive experience, and direct tuition (Bussey & Bandura, 1999). There are multiple ways that children learn gender roles through the modeling of parental, peer, media, and educational influences (Bussey & Bandura, 1999). Many parents engage in both conscious and unconscious teaching and modeling of gender typical behaviors and ideals (Bronstein, 2006). In
addition, the consequences and reactions to children’s gender-related behaviors from parents, peers, and greater society (e.g., enactive experiences) shape their gendered behavior as well. Third, direct tuition is a concept defined as the direct teaching of rules and expectations for one’s gender (Bussey & Bandura, 1999). These learned behaviors are reinforced by several types of motivators including direct positive or negative reinforcement of individuals’ gendered behaviors, vicarious motivation through observing the consequences of others’ gendered behaviors, and self-evaluation of one’s own behaviors according to societal expectations and reinforcements (Bussey & Bandura, 1999). As individuals grow older, they internalize the external motivators and consequences and rely on the internal regulation of their behaviors.

The theory of gender role socialization that is most applicable to the developmental stage of adolescence is the Gender-Intensification Hypothesis (Hill & Lynch, 1983). According to the Gender-Intensification Hypothesis, puberty marks an important conduit for the escalation and reemphasis on gender role expectations. It posits that males exhibit greater masculine roles and females exhibit greater feminine roles (Hill & Lynch, 1983). More specifically, physical changes during puberty facilitate different expectations and differential treatment by peers and family according to one’s gender (Hill & Lynch, 1983). This differential treatment often leads to societal pressure for adolescents to conform to their respective gender norms in order to meet the expectations set forth by others in their environment (Hill & Lynch, 1983). The pressure to conform to societal expectations may lead to various gender differences in adolescent development. In a sample of adolescents in Poland, Okulicz-Kozaryn (2010) found that females in patriarchal families (i.e., families that endorsed traditional gender norms) were least
likely to consume alcohol compared to females from other family constellations. The Gender-Intensification Hypothesis has been critiqued by researchers such as Galambos (2004) for a lack of empirical evidence to support its claims. However, it is still important to consider this hypothesis, as gender role socialization will be included as a critical mechanism for understanding potential gender differences in mental health outcomes in the current study.

**Gender and depression.** Gender differences have been well-documented in many areas of development including mental health outcomes such as self-esteem (e.g., Robins & Trzesniewski, 2005) and depression (e.g., Hilt & Nolen-Hoeksema, 2009). For example, meta-analyses utilizing clinical samples have shown that females have lower global self-esteem and higher levels of depression than males throughout adolescence and into adulthood (e.g., Kling, Hyde, Showers, & Buswell, 1999). Epidemiological studies of major depression have also documented greater instances of depression in females across all age groups in samples from the United States (e.g., Klose & Jacobi, 2004; Kornstein et al., 2008; Marcus et al., 2005), Europe (e.g., Angst et al., 2002), and Asian countries (e.g., South Korea; Ohayon & Hong, 2006). In addition, an epidemiological study conducted by Smith and colleagues (2008) found that females not only have a greater incidence of depression compared to males, but they also experience earlier onset of diagnosis, more depressive episodes, and a greater number of depressive symptoms compared to men. There have been many hypotheses that seek to explain gender differences in adolescent depression that include biological, cognitive, psychological, and environmental factors.
Physiological changes associated with puberty can influence the development of both anxiety and depressive symptoms (DeRose, Wright, & Brooks-Gunn, 2006; Leussis & Andersen, 2008). For example, hormone and neuroendocrine changes, specifically in girls, have been hypothesized to correlate with subsequent changes in mood (Naninck, Lucassen, & Bakker, 2011). Previous research has shown a link between puberty timing and psychopathology in that girls who enter puberty earlier have an increased risk for internalizing symptoms including depression and anxiety (Hayward & Sanborn, 2002; Negriff & Susman, 2011). This phenomenon is also known as the early-maturational hypothesis (Brooks-Gunn, Petersen, & Eichorn, 1985). This link between early maturation, depression, and anxiety is particularly salient among adolescent girls who perceive themselves as having low popularity among their peers (Teunissen et al., 2011). Increases in body fat during puberty may increase depressive symptoms for some adolescent girls as well (Hayward & Sanborn, 2002). In contrast, early maturation among adolescent boys has been associated with positive outcomes such as higher levels body satisfaction and self-esteem (Benjet & Hernández-Guzmán, 2002).

Pubertal development also affects the relationship between environmental stress (e.g., bereavement, parental divorce, illness, etc.) and depression during adolescence (Edwards, Rose, Kaprio, & Dick, 2011). For example, Edwards and colleagues (2011) found that pubertal development had a greater influence on the relationship between environmental stressors and depressive symptoms during early adolescence for more developed girls than for less developed girls.

Psychological and cognitive factors may also impact gender differences in depression during adolescence. During early adolescence, anxiety-related symptoms such
as general worry and oversensitivity are linked to greater depressive symptoms among adolescent girls compared to adolescent boys (Chaplin, Gillman, & Seligman, 2009). Preadolescent characteristics in girls such as excessive empathy and control of negative emotions have also been implicated as potential precursors to adolescent depression (Keenan & Hipwell, 2005). Furthermore, higher social-evaluative concerns, or concerns of how others perceive oneself, are also linked to increased depressive symptoms and less interpersonal competence in adolescent girls (Rudolph & Conley, 2005). In general, girls also exhibit less social and academic self-efficacy, leading to lower sense of control and depressive symptoms (Bandura, Pastorelli, Barbaranelli, & Caprara, 1999).

Gender differences in emotional reactivity are also linked to depressive symptoms. Adolescent females were found to be more emotionally reactive to stressful situations, which increased their likelihood of experiencing depressive symptoms (Charbonneau, Mezulis, & Hyde, 2009). Gender differences in the experience and response to interpersonal stress related to familial and peer relations may also play a role in the development of gender differences in depression during adolescence (Rudolph, 2002). Factors such as self-esteem and negative life events mediate the relationship between gender and depression during adolescence (Marcotte, Fortin, Potvin, & Papillon, 2002). Another psychological factor contributing to gender differences in adolescent depression is female adolescents’ greater tendency to view themselves as overweight and engagement in dieting practices (Vaughan & Halpern, 2010).

In addition, gender differences in types of cognitive coping strategies may also play a role in the manifestation of adolescent depression. Nolen-Hoeskema’s (1994) response style theory states that adolescent girls are socialized to utilize less action-
oriented coping styles (e.g., rumination and co-rumination), while boys are taught to use action-oriented styles (e.g., problem solving). It may be that co-rumination, frequently sharing one’s problems with peers, may be related to the increase in depressive symptoms, onset, and severity of symptoms for adolescent females (Stone, Hankin, Gibb, & Abela, 2011; Tompkins, Hockett, Abraibesh, & Witt, 2011). The response style theory has been confirmed using several adolescent samples (e.g., Jose & Brown, 2008). In addition, Nolen-Hoeksema and Girgus (1994) developed three possible explanatory models for the etiology of gender differences in depression. Model 1 states that the causes of depression for both females and males are the same, but the causes of girls’ depression become more salient during adolescence. Model 2 states that there are different causes of depression for both girls and boys, and girls’ causes become more prevalent during adolescence. Model 3 states that girls have more risk factors for depression than boys before adolescence, and if girls face challenges or stressors during adolescence then depressive symptoms may follow (Nolen-Hoeksema & Girgus, 1994). Seiffge-Krenke and Stemmler (2002) sought to test these models. For the first model, while the same etiological factors cause depression in both boys and girls, girls actually experience more of the stressors of conflict with mothers and body image concerns than males, which may fuel the gender differences. For the second model, avoidant styles of coping were correlated with greater depressive symptoms for adolescent girls, but not for boys, and for the third model, the causes of depression may be the same, but the precursors such as early puberty and poor body image are more highly present in girls than boys (Seiffge-Krenke & Stemmler, 2002).
There are also many other environmental factors that play a role in gender differences in adolescent depression. Stressful life events during adulthood were shown to have a greater effect on the onset of depression for females than for males (Harkness et al., 2010), which may be due to women’s lack of social power (Nolen-Hoeksema, 2001). Social support has been identified as a key factor in mental health outcomes, particularly with depression (Galambos, Leadbeater, & Barker, 2004). Gender differences have been found in the need for social support whereas women seek more emotional social support, while men seek more tangible social support such as concrete helping strategies (Grav, Hellzen, Romild, & Stordal, 2011). Perceived parental care and attachment are negatively related to depressive symptoms among adolescents and may serve as protective factors for both males and females (Milne & Greenway, 2007; Vaughan, Foshee, & Ennett, 2010). However, lack of authenticity, or the ability to be genuine and honest, in relationships with parents (Theran, 2011), lack of maternal support (Vaughan & Foshee, 2010), and maternal depressive symptoms (Jenkins & Curwen, 2008) have been found to increase depressive symptoms more for adolescent females than for males. Positive peer support is linked to less depressive symptoms for both genders (Makri-Botsari, 2005). Neighborhood factors such as poor building conditions place adolescents at risk for depressive symptoms (Uddin et al., 2011). Lower school-level socioeconomic status disadvantage also has a greater impact on male adolescent depressive symptoms than female symptoms (Botticello, 2009).

**Gender and alcohol use.** As stated above, gender differences in the onset and frequency of substance use and abuse, particularly related to alcohol, during adolescence are also well-documented (e.g., Chen & Jacobson, 2011; Mahalik & Burns, 2011;
Mahalik et al., 2013; Needham, 2007; Piko, 2000). More specifically, adolescent males report greater alcohol consumption than adolescent females (e.g., Mennis & Mason, 2012; Webb, Bray, Getz, & Adams, 2002; White & Huselid, 1999). Adolescent males also experience more negative consequences due to alcohol consumption than females including physical fighting and injuries, family problems, lowered school performance, legal issues, and car accidents (White & Huselid, 1999). Epidemiological studies have shown that males in the United States engage in greater alcohol use (i.e., frequency and consumption levels; e.g., Miller & Cervantes, 1997; Wilsnack et al., 2000) and abuse (e.g., Marcus et al., 2005; Wilsnack et al., 2000) compared to females. Epidemiological research in Europe also found that males are more likely to use alcohol compared to females (Holmila & Raitasalo, 2005). Similar to depression, there are several biological, psychological, and environmental theories that seek to explain gender differences in substance use, particularly alcohol use, during adolescence.

Several genetic and biological findings seek to explain the gender differences in adolescent alcohol consumption. Jang and colleagues (1997) examined the genetic etiology of gender differences in drug and alcohol use. Using a sample of 693 twin pairs, their findings indicated there was a significant genetic influence for males, but not females, on drug and alcohol abuse (Jang et al., 1997). Furthermore, biological factors such as prenatal cocaine exposure place males at greater risk to engage in later substance use (Bennett, Bendersky, & Lewis, 2007). In general, males also experience lower sensitivity to alcohol, which increases their risk of greater consumption (Schulte, Ramo, & Brown, 2009). Alternatively, females have higher blood ethanol concentrations after they consume the same alcohol levels as men (Lieber, 1999). On average women have
lower body water content than men, making the distribution of alcohol in the blood at a greater concentration than men (Lieber, 1999). Therefore, women’s greater susceptibility to the biological effects of alcohol consumption may lead to lower levels of overall consumption.

There are also several psychological factors that influence gender differences in alcohol use during adolescence. For example, research has shown that adolescent females who use alcohol are more likely to report increases in anxiety after use compared to males (Greely & Oei, 1999). Male adolescents are more prone to use alcohol to reduce tension and increase sexual arousal (Cooper, Frone, Russell, & Peirce, 1999; Thompson et al., 2009). Adolescents with lower distress tolerance, defined as the ability to persist in goal-directed behavior while under emotional distress, are more likely to engage in alcohol use (Daughters et al., 2008). Similarly, gender differences in inhibition, or the ability to restrain oneself from a particular task, have also been investigated as precursors to alcohol initiation and use. In a study of 245 sixth grade adolescents, Yucel and colleagues (2012) found that female adolescents showed greater inhibitory control compared to adolescent males on laboratory tasks such as the Stroop test. Gender also moderates the relationship between sensation-seeking and alcohol use among adolescents in that female adolescents are less likely to be influenced by sensation-seeking (Baker & Yardley, 2002) and novelty seeking (Fergusson, Boden, & Horwood, 2008) in their alcohol use compared to males. Males’ generally later maturation of executive function skills (e.g., planning, judgment) may explain their greater likelihood for sensation and novelty seeking (Schulte, Ramo, & Brown, 2009). Therefore, males’ lowered inhibition,
heightened sensation- and novelty seeking are predictive factors of alcohol use during adolescence.

Beliefs about drinking alcohol are important predictors of drinking behaviors, and adolescent males have been found to have more pro-drinking beliefs compared to adolescent females (Lo & Globetti, 2000). In a sample of high school students, Lo and Globetti (2000) found that females who do not drink or drink minimally believe that drinking alcohol has negative consequences such as the loss of physical and emotional control. The majority of males who drank alcohol viewed drinking consequences of loss of physical and emotional control to be less consequential and felt less guilty about these consequences than females (Lo & Globetti, 2000). Lo and Globetti (2002) attributed these gender differences to the fact that males are socialized to believe that it is more acceptable to lose emotional control compared to females.

Environmental factors including family, peers, and community also play a role in gender differences in adolescent alcohol use. For example, parent-children relationships are significant predictors of alcohol use during adolescence (Barnes, Farrell, & Dintcheff, 1999). Previous research has shown that males are less frequently monitored by parents than females; therefore, less monitoring may predict more problem behaviors such as alcohol use (Barnes et al., 1999). Perceived parental monitoring also mediated the relationship between gender and alcohol consumption in that perceived parental monitoring decreased adolescent females’, but not males’, alcohol consumption (Webb, Bray, Getz, & Adams, 2002). Additionally, a general lack of paternal support was related to greater substance use among a sample of adolescents (Piko, 2000). In fact, the lack of overall family support and bonding is also positively related to male adolescent alcohol
use (Locke & Newcomb, 2003). Positive family relations and support have been shown to prevent substance use among adolescent males if it exists before the onset of use (Cooper et al., 1999; Moon, Jackson, Hecht, 2000). Parental drinking behavior was also found to be a greater risk factor for adolescent male alcohol use compared to adolescent females (Fergusson et al., 2008; Yeh, Chiang, & Huang, 2006).

Peers also influence alcohol use during adolescence through their own beliefs and behaviors. For example, alcohol use in adolescent males is also predicted by their associated peers’ substance use (Barnes et al., 1999; Saraceno et al., 2011). Adolescent boys have also been shown to be more prone to consuming alcohol if they simply perceive that their peers are also drinking alcohol (Farhat et al., 2012; Schulte, Ramo, & Brown, 2009). In addition to peer modeling and beliefs, stressful life events such as economic and health-related strain are predictive of male alcohol use (Botchkovar & Hughes, 2010), and perceived discrimination has been identified as a risk factor for general substance use, including alcohol use, for African American males (Brody, Kogan, & Chen, 2012). Therefore, it appears that there are several biological, psychological, and social theories that explain gender differences in alcohol use during adolescence.

**Hypothesis 1: Gender differences in depression and alcohol use.** Past research has shown that the nature and frequency of depressive symptoms during adolescence differ by gender, and this finding has been explained through biological, psychological, and social influences. Therefore, the first hypothesis of the current study is that female adolescents will exhibit greater depressive symptoms compared to male adolescents. Several research findings have also indicated that alcohol use among adolescents differ according to gender. Similar to adolescent depression, there are several hypotheses that
examine biological, psychological, and social factors that contribute to these gender differences in alcohol use during adolescence. The second hypothesis for the current study is that male adolescents will engage in more alcohol use compared to female adolescents.

**The Role of Gender Norm Conformity in Adolescent Mental Health**

Gender role socialization regarding expectations for femininity and masculinity also play a major role in both physical and mental health outcomes. Feminine gender norms in contemporary U.S. society include the importance of developing caring relationships with others, being involved in romantic relationships, attaining a thin body image and persistent investment in one’s appearance, modesty, sexual fidelity, and responsibility for and enjoyment of domestic chores and childcare (Mahalik et al., 2005). Feminine qualities such as investment in oneself and one’s appearance can be beneficial to women’s health. In a study of 402 college students in Israel, females were more likely to engage in the health behaviors of eating breakfast, obtaining eight hours of sleep, and avoiding drugs and alcohol intake (Soffer, 2010). However, women who subscribe to feminine ideals, but believe they do not fully meet these ideals, have been shown to have greater somatic symptoms (Calabrese, 2011). Women who subscribe to feminine norms are also linked to decreased sexual health knowledge, safe sexual behaviors, and self-efficacy (Curtin, Ward, Merriweather, & Caruthers, 2011).

In contemporary U.S. society traditional masculinity encompasses a variety of beliefs including that one must control his emotions and rely solely on oneself to solve life’s problems, maintain a lifestyle that involves taking risks and competition, place priority on one’s work over family, pursue societal status, be dominant and exhibit power
and even violence over women, and openly show disdain for homosexuality (Mahalik et al., 2003). In general, masculine beliefs and males’ perceptions regarding other men’s health behaviors influence their own health behaviors, such as alcohol abuse, tobacco use, dietary practices, exercise, wearing seatbelts, physical fighting, use of social support (Mahalik et al., 2007) and specific behaviors related to heart health (e.g., exercise, diet, going to the doctor; Mahalik & Burns, 2011). For example, men who endorsed masculine beliefs and believed that other men held the same beliefs were more likely to engage in alcohol and tobacco use, practice unhealthy dietary and exercise habits, and not wear seatbelts (Mahalik et al., 2007).

**Gender role socialization and depression.** Feminine gender roles are associated with depression during adolescence (Barrett & White, 2002) and adulthood (Broderick & Korteland, 2002). One particular feminine norm that appears to be a catalyst for gender differences in depression during adolescence is investment in interpersonal relationships. First, since girls are expected to value and be engaged in relationships with family, peers, and romantic partners, they may experience pressure to maintain these relationships at several costs (Fiese & Skillman, 2000). More specifically, girls are hypothesized to lose their voices, silence their own needs, opinions, and accomplishments and become relationally inauthentic to maintain their relationships with others (Brown & Gilligan, 1992). Relational inauthenticity has been linked to greater depression, and lower self-esteem, self-worth, and hope about the future among adolescent girls (Danielsson, Bengs, Samuelsson, & Johansson, 2011; Harter, Marold, Whitesell, & Cobbs, 1996; Tolman et al., 2006). Second, the feminine norm of investment in interpersonal relationships may also explain the increase in rumination (e.g., sharing one’s problems with peers) among
women compared to men, which is also related to increases in depressive symptoms (Simonson, Mezulis, & Davis, 2011; Stone et al., 2011; Tompkins, Hockett, Abraibesh, & Witt, 2011). Third, the Vulnerability Model states that females may be more likely to conform to gender norms due to their lack of power in society compared to men, which may further exacerbate depressive symptoms (Amaro et al., 2001).

Conversely, masculinity was found to be negatively related to depression in males and females, which suggests that masculinity may mediate the relationship between perceived competence and depression (Priess, Lindberg, & Hyde, 2009). More specifically, Barrett and White (2002) view a masculine role orientation as a “psychological resource” throughout adolescence that can ameliorate mental health symptoms (pg. 452). Adolescents ranging from ages 12-25 were administered the Personal Attributes Scale, which measured the masculine traits of being independent, active, competitive, making decisions easily, self-confident, not giving up easily, and standing up well under pressure, while feminine traits were measured as being emotional, devoting oneself to others, acting gentle, helpful, and kind, being aware of others’ feelings, and understanding others. Higher levels of masculinity among both genders were related to fewer depressive symptoms due to the active coping orientation of masculine traits such as independence and ease with decision making when under pressure (Barrett & White, 2002).

**Gender role socialization and alcohol use.** Male gender role socialization may explain the greater consumption of alcohol among adolescent males, particularly with regard to frequency of drinking and drinking to intoxication (Schulte, Ramo, & Brown, 2009). The masculine traits of dominance and emotional control (Kulis, et al., 2010) and
sensation seeking and impulsivity (Baker & Yardley, 2002) are linked to greater substance use among adolescent men. The Gender-Intensification Hypothesis (Hill & Lynch, 1983) can also be used to explain the increase in alcohol use specifically in adolescent males. During adolescence, males are socialized to initiate the tasks of exploration, risk-taking, and independence (Windle & Davies, 1999). Alcohol use is a vehicle to exhibit these attributes as it serves as a means for exploring something new as well as taking a risk by engaging in an illicit act (Windle & Davies, 1999).

Gender role strain, or stress related to one’s gender role, is related to increased alcohol use among college-aged men (Blazina & Watkins, 1996). The threat of gender role strain may lead to confirmatory motivation in which engaging in drinking behaviors reinforces masculine ideals of dominance, self-reliance, and emotional control, or to compensatory motivation, in which engaging in drinking behaviors helps men feel more powerful and confident if they endorse more feminine traits (Ricciardelli & Williams, 2011; White & Huselid, 1999). In addition, women’s alcohol consumption is viewed as less socially acceptable than males’ due to the fact that they are traditionally socialized into roles that involve caring for others (e.g., older family members and children; Wilsnack & Wilsnack, 1999). However, Covington and Surrey (1999) argue that females may engage in alcohol consumption to maintain relationships with those who use substances as well as to alter their persona to fit the needs’ of others in their environment. For example, adolescent females may engage in alcohol use if their significant others and/or peers also engage in alcohol consumption (Covington & Surrey, 1999).

**Hypothesis 2: Conformity to gender norms is associated with depression and alcohol use.** Gender role socialization has an important influence on adolescent
development as a key developmental task during this time period is the consolidation of gender identity. There are several theories that seek to explain the function that gender roles serve in mental health outcomes, and it is hypothesized that conformity to gender norms is associated with both depression and alcohol. In the current study, associations with both depression and alcohol will be examined for conformity to feminine and masculine norms. More specifically, it is hypothesized that conformity to feminine norms is associated with depression, and conformity to masculine gender norms is associated with alcohol use among adolescents.

Figure 1

*Hypothesis 2*

**The Role of Social Support in Adolescent Mental Health**

Social support is a key environmental construct that has been linked to not only prosocial outcomes such as self-worth and competence, but also the mental health issues of depression and alcohol use as well. More specifically, perceived social support from one’s mother is related to greater global self-worth, perceived social support from one’s peers is related to greater social competence and peer acceptance, and perceived social support from a romantic partner is linked to greater romantic competence (Laursen et al., 2006). A lack of social support has also been associated with greater depressive
symptoms throughout the lifespan (e.g., Galambos et al., 2004). Parent-child relationships are also related to adolescent alcohol use in that decreased social support and monitoring from one’s parents is related to increases in alcohol use (e.g., Moon et al., 2000).

In a cross-sectional study of early, middle, and late adolescents, Furman and Burhmester (1992) found that early adolescents (i.e., seventh graders) view parental support as most important, middle adolescents (i.e., tenth graders) view both parent and peer support as important, and late adolescents (i.e., college students) view peer and romantic relationships as most important for their well-being. Different contexts of social support impact each other in that adolescents who perceive conflict among their parents are more likely to report conflict in their romantic relationships as well (Simon & Furman, 2010).

**Parents and peers.** Parental and peer social support are often researched and discussed together as it has been shown that they mutually influence one another (Smetana, Campione-Barr, & Metzger, 2006). Smetana and colleagues (2006) discuss the movement from viewing adolescents’ relationships with their parents and peers as conflictual to complimentary forces that impact developmental outcomes. There are some documented gender differences in that female adolescents often report greater peer support compared to adolescent males, and adolescent males report greater support from their fathers (Colarossi & Eccles, 2003).

Both positive parental and peer social support during adolescence are linked to higher self-esteem (Colarossi & Eccles, 2003) and lower depressive symptoms (Colarossi & Eccles, 2003; Newman, Newman, Griffen, O’Connor, & Spas, 2007; Vaughan, Foshee, & Ennett, 2010; Weber, Puskar, & Ren, 2010). Parental relationships and
perceived parental support are also connected to perceived peer support. For example, in a study of Taiwanese adolescents, those with secure attachments to their parents were more likely to experience peer support and less depressive symptoms compared to adolescents with less secure parental attachments (Liu, 2006). In addition, parental support was shown to moderate the relationship between anticipated perceived peer support and depressive symptoms in a longitudinal study of adolescents (Young, Berenson, Cohen, & Garcia, 2005).

Parenting styles are also strong indicators of adolescent psychological outcomes. For example, adolescents with authoritative parents (i.e., parents who set clear boundaries but also provide support) are more likely to succeed in school and engage in prosocial behaviors, while adolescents that have parents who are withdrawn or neglectful are most likely to engage in risk behaviors such as alcohol use (Brown & Larson, 2009). Parental and peer support are also linked to lower alcohol use among adolescents (Aseltine & Gore, 2000). However, one study showed increased alcohol use was associated with positive peer support (Wills, 1986); therefore, the context of peer relationships must also matter. For example, peer relationships during adolescence serve many important functions such as reinforcing particular group behaviors and peer pressure (Brown & Larson, 2009). Therefore, adolescents within peer networks that use alcohol may be more likely to engage in alcohol use if they feel supported by their peer group. Conversely, adolescents who feel supported by peer groups who do not use alcohol are less likely to utilize alcohol themselves as well (Brown & Larson, 2009).

Peer networks also serve to define, construct, and initiate romantic relationships among adolescents. For example, the likelihood of being in a romantic relationship is
determined by the romantic involvement of one’s peer group (Cavanagh, 2007). The quality of peer relationships also predicts the formation and quality of romantic relationships as well (Connolly et al., 2000).

**Romantic partners.** Less research is known about the psychological influence of romantic relationships during adolescence, defined as mutual, intimate, and often intense interpersonal relationships (Collins, 2003). The context of romantic relationships is influential in the development of identity during adolescence (Florsheim, 2003). In a longitudinal study, Masten and colleagues (1995) identified the developmental course of competence from childhood to adolescence. Results indicated that a key aspect of competence during adolescence is romantic competence, or the perceived mastery over and involvement in romantic relationships (Masten et al., 1995).

Historically, adolescent romantic relationships have been connected to negative outcomes such as depression, particularly in adolescent females (Joyner & Undry, 2000), decreased academic competence and anti-social behavior (Neemann, Hubbard, & Masten, 1995). However, recent research suggests that future studies should examine these relationships from a more nuanced and optimistic perspective. For example, it may not be the actual involvement in romantic relationships that leads to depression, but the potential conflict and break-ups that precipitate these depressive symptoms (Collins, 2003).

Collins (2003) outlined five essential concepts that are important to evaluate in the study of adolescent romantic relationships. Involvement refers to whether or not adolescents date, when they initiated a relationship, and the duration of their relationships; partner selection is the qualitative and process of selecting who adolescents choose to date; content refers to the nature of shared activities that the couple engages in
(e.g., communications, recreational activities); relationship quality is the extent to which the relationship is beneficial to both partners; and cognitive and emotional processes of relationships encompass a range of topics including relationship expectations, emotional responses, and attributions about oneself (Collins, 2003).

This more nuanced approach to the study of romantic relationships allows for an examination of the adaptive function of romantic relationships during adolescence. Connolly and McIssac (2009) report that many adolescents view romantic relationships as their most important support system; however, females view romantic relationships as providing more emotional support compared to male adolescents. In addition to predicting greater self-perceived competence, intimacy in romantic relationships was linked to decreased adolescent marijuana use (Gudonis-Miller et al., 2012). Conversely, decreased closeness in both platonic and romantic relationships among a sample of college students was related to decreased self-esteem and poorer overall psychological health (Cramer & Donachie, 1999).

Gender also matters with particular regard to heterosexual relationships. Underwood and Rosen (2009) state that due to differences in childhood gender role socialization related to peer relations, male and female adolescents develop different expectations for their romantic relationships. Therefore, if males and females adhere to their different social roles, they will be more likely to have different expectations, potential conflict, and less support in their romantic relationships. In addition, there are gender differences in perceptions of favorability and power in romantic heterosexual relationships (Maccoby, 1988). Welsh and colleagues (1999) found that adolescent males are less likely to exhibit depressive symptoms if they view themselves as more favorable
than their girlfriends, and female adolescents are less likely to exhibit depressive 
symptoms if they view themselves as having equal power in comparison to their partner 
in their relationship. In a study of sexual minority youth, Diamond and Lucas (2004) 
found that adolescents who identified as lesbian, gay, and/or bisexual were more likely to 
have smaller overall peer and romantic relationship networks. In addition, they expressed 
greater fear of never engaging in a supportive romantic relationship and less control over 
their romantic relationships compared to their heterosexual peers (Diamond & Lucas, 
2004).

_Hypothesis 3: Social support is associated with depression and alcohol use._

Social support has been linked to depression and alcohol use both across the lifespan 
(e.g., Galambos et al., 2004), and particularly during adolescence (e.g., Moon et al., 
2000). Sources of social support from parents, peers, and romantic partners have all been 
shown to play a unique and often complimentary role in the manifestation of adolescent 
depression and alcohol use. Therefore, in the current study, it is hypothesized that social 
support is associated with both adolescent depression and alcohol use.

Figure 2

_Hypothesis 3_

\[
\begin{align*}
\text{Social Support} & \quad \rightarrow \quad \text{Depression} \\
\text{Social Support} & \quad \rightarrow \quad \text{Alcohol Use}
\end{align*}
\]
The Relationship Between Conformity to Gender Norms and Social Support

Several theories of gender role development including the social cognitive theory of gender role development (i.e., Bussey & Bandura, 1999) and the Gender-Intensification Hypothesis (i.e., Hill & Lynch, 1983) provide evidence that parents and other individuals in adolescents’ environments (e.g., peers, romantic partners) shape gender role behavior through modeling, enactive experiences, and direct teaching. This indirect and direct feedback regarding expectations for how one should think, feel, and act based on their gender intensifies during adolescence as puberty highlights the physical differences between males and females. Therefore, it is often a common occurrence for individuals to provide differential treatment and expectations for adolescents depending on their gender (Hill & Lynch, 1983). Based on these findings, the extent to which adolescents conform to gender norms may impact subsequent social support that they receive from parents, peers, and romantic partners. In addition, the amount of perceived social support may also affect adolescents’ conformity to gender norms as well. For example, if adolescents conform to their specified gender roles (i.e., femininity for females and masculinity for males), then they are complying with societal expectations and may be more likely to receive social support from parents, peers, and romantic partners. However, if adolescents do not perceive that they have adequate social support, they may be less likely to conform to the societal expectations for gender norms.

Hypothesis 4: The relationship between conformity to gender norms and social support. Based on the findings that societal expectations and subsequent support from one’s parents, peers, and romantic partners often lead to adolescents enacting expected
societal norms, including gender norms, the current study hypothesizes that there will be an association between conformity to gender norms and social support.

**Figure 3**

**Hypothesis 4**

![Diagram](image)

**Positive Youth Development**

A contemporary and well-established model for explaining the development of depression and alcohol use among adolescents is the Five C’s model of positive youth development (PYD). PYD employs a strengths-based approach to understand development (Lerner et al., 2005a). An asset for utilizing this model is that it provides a framework to examine the relationships between both individual strengths or characteristics (e.g., conformity to gender norms) and ecological assets (e.g., social support) on outcomes such as mental health, problem behaviors, and contribution to society (Lerner et al., 2005b). The Five C’s model of PYD was derived from environmental approaches to development (e.g., Bronfenbrenner, 1992) and developmental contextualism (e.g., Ford & Lerner, 1992).

Bronfenbrenner (1992) defined the ecology of human development as the study of growth throughout the lifespan focused on the changing of both individuals and the settings that they encounter. This bioecological stance endorsed a multifaceted approach that examined multiple factors (e.g., from internal factors such as biology to broader
societal factors) to understand human development (Bronfenbrenner, 1992). Ecological systems theory acknowledged that as multiple environments impact individual development, individuals can also impact their environments as well. Examples of individuals’ different environments include the microsystem, settings that individuals directly come into contact with on a daily basis (e.g., home, school community); the mesosystem, the interconnections between the microsystem (e.g., individuals’ experiences at school influence their home life); the exosystem, systems in which individuals do not have a direct connection to, but they still affect their development (e.g., parents’ workplaces); the macrosystem, larger societal contexts that impact individual development (e.g., societal values); and the chronosystem, or sociohistorical influences on development (e.g., laws based on gender and race discrimination; Bronfenbrenner, 1992).

The field’s increased focus on relative plasticity, the belief that individuals’ growth is impacted by their life experiences, allowed for a greater emphasis on prevention and optimism related to theories of human development (Ford & Lerner, 1992; Lerner, 1984). Developmental contextualism is a lifespan approach that emphasizes the mutual causality of developmental outcomes from reciprocal transactions between both individuals and their environments (Ford & Lerner, 1992). Individuals are viewed as active agents who shape their environments in several ways. First, individuals influence others’ reactions and treatment towards them through personal characteristics such as their physical appearance and temperament. Individuals also experience the world and their experiences differently depending on their life stage, and individuals are active in selecting their environments and becoming flexible to meet the demands of these
environments as well (Ford & Lerner, 1992). For individuals to receive the benefits of a particular environment (e.g., home, school, community), they must be able to understand and meet the behavioral and psychological demands of a particular context (Ford & Lerner, 1992). Similarly, the environment must also provide individuals with both instrumental and supportive resources to meet these demands.

One of the more contemporary theories of developmental contextualism, relational developmental systems theory, specifically focuses on the unique, nuanced, and ever-evolving bidirectional relationships between individuals and their ecological contexts and associated implications for future growth (Lerner, 2012; Overton, 2010). Relational developmental systems theory allows for the complex examination of intraindividual change, within the framework of individual and contextual factors, that influences numerous trajectories of development across the lifespan (Lerner, 2011; Lerner, 2012). Therefore, this perspective enables the study of diversity among individuals and their multiple ecological contexts (Lerner, 2012). Furthermore, the combined focus on plasticity and diversity promotes a tenor of social justice by seeking to identify key individual characteristics and ecological contexts that promote positive development and resilience (Lerner, Agans, Arbeit, Chase, & Weiner, 2013).

Various internal strengths and ecological assets and their subsequent associations with the PYD indicator of the Five C’s have been specifically applied to mental health outcomes during adolescence such as perceived life satisfaction (Valois et al., 2009), aggression (Taylor, et al., 2005), substance abuse (e.g., Good & Willoughby, 2011), health behaviors (Murphey et al., 2004; Wang et al., 2011), suicide ideation (Price et al., 2001), and disordered eating behaviors (French et al., 2001). Internal strengths such as
positive identity, sense of purpose, and self-esteem are related to less disordered eating (French et al., 2001), and self-efficacy is related to lower depressive symptoms among adolescents (Olson, 2003). In addition, ecological assets such as adult support have been associated with greater perceived life satisfaction (Valois et al., 2009), lower risk for suicide ideation (Price et al., 2001), and lower depressive symptoms (Olson, 2003) during adolescence. Community-related ecological assets such as neighborhood safety have been shown to predict self-esteem among adolescents (Birndorf, Ryan, Auinger, & Aten, 2005).

Lerner and colleagues (2000; 2005b) developed the Five C’s (competence, confidence, connection, character, and caring) as an indicator of PYD, which focuses on the development of five internal and measurable qualities within individuals that influence their behavior. Competence is defined as achievement in academic, cognitive, and vocational domains. Confidence is a sense of positive self-worth and self-efficacy when faced with life demands. Connection refers to positive and mutual relationships with one’s peers, family, school, and greater community. Character is defined as a sense of morality, respect for societal rules, and integrity, while caring refers to showing empathy for others (Lerner, 2005b; Roth & Brooks-Gunn, 2003).

According to the Five C’s model of PYD, the Five C’s (i.e., an indicator of PYD) are proposed to mediate, or explain, the relationship between adolescents’ internal strengths or characteristics such as intentional self-regulation, school engagement, and hope for the future, aspects of their environment such as individuals or institutions (i.e., ecological assets), and their behaviors (e.g., mental health; Lerner et al., 2005b). Lerner and colleagues (2005b) posit that it is the Five C’s that predict the development of
important adolescent mental health outcomes, risk behaviors, and additional signs of thriving behaviors such as school success, leadership, helping others, maintenance of physical health, delay of gratification, values diversity, and outcome adversity (Benson & Scales, 2009; Theokas et al., 2005). Therefore, a strong collection of literature has established that several internal strengths or characteristics and ecological assets are associated with greater PYD and subsequently more adaptive mental health outcomes.

**Hypothesis 5: PYD as a predictor of depression and alcohol use.** Consistent with Lerner and colleagues’ (2005b) findings that PYD has predicted various mental health outcomes including depressive symptoms, self-esteem, substance use, and additional problem behaviors, the current study hypothesizes that PYD will predict the mental health outcomes of depression and alcohol use among the current study’s sample of adolescents.

![Figure 4](image-url)

*Hypothesis 5*
Mediation Model

As stated above, several individual strengths or characteristics have been examined as important contributors to PYD and subsequent mental health outcomes. Intentional self-regulation is the ability to adapt to multiple contexts, and it involves the selection of specific life goals, seeking strategies and resources that will help one meet his/her goals, and avoiding contexts that will inhibit the completion of one’s goals (Gestsdottir, Urban, Bowers, Lerner, & Lerner, 2011). The presence of intentional self-regulation has been linked to access to ecological assets and the development of PYD (Gestsdottir et al., 2011). Similarly, school engagement and hope, particularly hope for the future, are also associated with PYD (Li, 2011; Schmid & Lopez, 2011). Another individual characteristic that has not been yet examined within the Five C’s model of PYD is gender role identity. As explained earlier, gender role socialization is heightened during adolescence, and adolescents are expected to conform to prescribed gender norms. In addition, gender role socialization has been linked to mental health outcomes such as depression and alcohol use. Therefore, the examination of conformity to gender norms as an individual characteristic along with the ecological asset of social support will expand the current scope of PYD and its association with adolescent mental health outcomes.

The current study will utilize a mediation model to investigate the integration of these constructs into the Five C’s model of PYD.

**Hypothesis 6: PYD’s role as a mediator.** A mediator is defined as a variable that explains the relationship between predictor and criterion variables (Frazier, Tix, & Barron, 2004). Previous research has shown that there is a longstanding relationship between the predictor variable of conformity to gender norms and the criterion variables
of both depression (e.g., Barrett & White, 2002; Broderick & Koretland, 2002) and alcohol use (e.g., Kulis et al., 2010; Mahalik et al., 2007; See Figure 5, Path C). In addition, the predictor variable of social support has also been linked to both depression (e.g., Colarossi & Eccles, 2003; Newman et al., 2007; Path C) and alcohol use (e.g., Brown & Larson, 2009; Path C) as well. Past research has shown that PYD mediates, or explains, the relationship between internal strengths and ecological assets and risk and adaptive behaviors (e.g., Theokas et al., 2005; Path B).

In the current study, PYD is hypothesized to explain the relationship between conformity to gender norms and social support and depression and alcohol use. In other words, it is hypothesized that the association between the relationship between conformity to gender norms (i.e., internal characteristic) and social support (i.e., ecological asset) with depression and alcohol use is significantly reduced and/or does not exist without the presence of PYD. It is important to note that due to the limitation of not utilizing a statistical method such as structural equation modeling, a bidirectional transactional effect between the internal characteristic of conformity to gender norms and the ecological asset of social support cannot be examined at this time.
Figure 5

*Mediation Model*

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**Summary of Study Hypotheses**

Previous research has shown that the initiation of mental health issues such as depression and alcohol use during adolescence often lead to lifelong struggles into adulthood. The current study seeks to study these mental health outcomes from the Five C’s Model of PYD. First, gender differences in depression and alcohol use will be tested. Second, the study seeks to explore the relationship between gender role socialization and adolescent depression and alcohol use by assessing the relationship between conformity to gender norms (i.e., internal characteristic) and depression and alcohol use. More specifically, the current study will assess whether conformity to feminine gender norms will predict depression for females and conformity to masculine norms will predict alcohol use for males. Third, the study will then evaluate the relationship between the ecological asset of social support and depression and alcohol use. Next, the potential
relationship between conformity to gender norms (i.e., internal characteristic) and social support (i.e., ecological asset) will also be examined. The well-established relationship between PYD and depression and alcohol use will also be tested within the current study. The current study also seeks to test a mediation model to assess whether PYD mediates the relationship between conformity to gender norms and social support and depression and alcohol use.
CHAPTER III

This chapter will describe the current study’s recruitment, participants and data collection procedures, the measures utilized, and the data analytic plan.

Study Recruitment, Participants, and Procedures

The current study’s research questions and hypotheses were investigated utilizing a quantitative descriptive design and survey data collection methods. Adolescents were recruited from five area high schools of the Diocese of a Northeast Catholic school system to participate in the study. Permission to conduct the study was obtained from the Bishop of the Diocese, Assistant Superintendent for Curriculum, and the principals of each of the five high schools included in the study. Communication with schools, recruitment, and study procedures were approved by the Boston College Institutional Review Board.

All students who attend these five high schools were eligible to participate in the current study (approximately 2700 students). Each principal agreed to use their school’s email system to contact parents about the study. Principals sent a brief email endorsing and explaining the study to parents, and the email contained a link to an online letter written by the researcher that further explains the procedures of the study and a parent permission form. If parents gave permission for their child to participate in the study, they were asked to provide their child’s name, school, grade, and homeroom in order for the researcher to contact them. If parents declined participation in the study, they were sent to the end of the form with a message that thanked them for their consideration. All parents were directed to a copy of the parent permission form that they could print for
their personal records. Students ages 18 and over did not need parental permission to be eligible to complete the survey.

The researcher compiled a list of students whose parents gave permission to participate in the survey according to high school and distributed school-specific lists to each school principal. Eligible students were given the opportunity to take the survey during homeroom, study hall periods, and religion classes (the exact school period was dependent on each high school). Students completed the survey on their own personal laptops or in their school’s computer lab. Students in each high school accessed the survey through their FirstClass or EdLine account, Diocesan wide platforms that hosts email and student-teacher communications. If students reported that they were 17-years-old or under, they were directed to an assent form, and students who reported that they were 18-years-old or older were directed to a consent form. Students who gave assent or consent to participate in the survey were redirected to the online survey. If students declined to participate in the survey, they were directed out of the online survey. All students received a written copy of the assent or consent form from the researcher. Before students either completed the survey or declined to participate, they were directed to click a separate external link that enabled them to be entered into a raffle for four $50 iTunes gift cards. The assent/consent forms, survey, and separate raffle drawing were all created and hosted by Qualtrics software. After the completion of the data collection and analysis, the researcher presented each principal with a report of descriptive statistics from the full sample of students, which was compared to national data when equivalent data estimates were available.
Power Analysis

A power analysis was conducted using the software program G*Power, as described by Balkin and Sheperas (2011). For a regression with the maximum number of predictors in the proposed models (5), a small effect size (.1), alpha = .05, and power of .80, the expected sample size was calculated to be 134 participants. Therefore, the sample of 642 adolescents for the current study is sufficient. A small effect size (.1) was chosen, consistent with Cohen’s (1992) effect size classifications, as it is the most conservative estimate to increase the likelihood that true effects will be found. Previous research has also shown both small and medium effect sizes with adolescent mental health outcomes (e.g., Mahon, Yarcheski, Yarcheski, Cannella, & Hanks, 2006). More specifically, a metanalytic study of depression in both male and female adolescents showed an average effect size of .34 across several studies (e.g., McCarty & Weisz, 2007), and studies examining gender and alcohol use during late adolescence have reported effect sizes ranging from .52 (e.g., Heideman, 2008) to .62. (e.g., Murphy et al., 2001).

Measures

General demographic variables were collected such as age, grade, gender, race/ethnicity, family income, and immigration status of students and their parents.

Depression. Depressive symptoms were measured using the Center for Epidemiologic Studies Depression Scale (CES-D). The CES-D is a 20-item measure designed to measure depression in the general population and is based on a 5-point Likert scale that describes symptoms ranging from 0 (Rarely or none of the time) to 4 (Most or all of the time; Radloff, 1977). Scores on individual items were summed, and higher scores indicated the presence of greater depressive symptoms. The CES-D has been
shown to have sound internal consistency with adolescent samples (α = .87; Needham, 2009; α = .86; Radloff, 1991). In the current study, this measure has also shown sound internal consistency (α = .90). Discriminant validity was also established evidenced from correlations with self-competence, self-concept, and locus of control (-.29 to -.61; Doerfler et al., 1988). Concurrent validity was found with the Beck Depression Inventory with a sample of adolescents (Wilcox, Field, Prodromidis, & Scafidi, 1998).

**Alcohol use.** To assess alcohol use, three alcohol items were administered, which is consistent with past national research designs that assess adolescent alcohol use (i.e., the UNC Add Health Study). First, frequency of alcohol use was measured by asking adolescents to report the following, “During the past 12 months, on how many days did you drink alcohol?” (Response items range from “Everyday/Almost everyday” to “Never”; Harris et al., 2009). To assess drunkenness, or problematic drinking, adolescents were asked the following two items, “Over the past 12 months, on how many days have you gotten drunk or ‘very, very high’ on alcohol?” and “Over the past 12 months, on how many days did you drink five or more drinks in a row?” (Response items range from “Every day to almost every day” to “Never”; Harris et al., 2009). Corresponding scores ranged from 1 (i.e., “Never”) to 9 (“Every day to almost every day”). Consistent with past research, these three ordinal items were averaged to create a composite score of alcohol use (Tanner-Smith, 2011). The composite of these three items has been shown to have a reliability of .88 with an adolescent sample (Tanner-Smith, 2011). In the current study, the alcohol composite measure exhibits sound internal consistency (α = .90). The alcohol composite measure also has reasonable face and content validity as items clearly assess frequency of alcohol use as well as binge drinking and alcohol use and have been utilized
with adolescent samples (e.g., Hope, Wilder, & Watt, 2003).

**Conformity to Gender Norms.** Conformity to gender role norms were measured using three subscales from the *Conformity to Feminine Norms Inventory* (*CFNI*; Mahalik et al., 2005) and three subscales from the *Conformity to Masculine Norms Inventory* (*CMNI*; Mahalik et al., 2003). Both measures assess one’s conformity to feminine or masculine gender norms that are prevalent in dominant U.S. culture. The measures utilize a Likert-scale ranging from 0 (*Strongly Disagree*) to 3 (*Strongly Agree*). Scores are summed to a total score, and higher scores indicate higher levels of conformity to feminine or masculine gender norms.

The three subscales utilized from the *CFNI* were Nice in Relationships, the feminine norm of developing supportive relationships with others, Modesty, the feminine norm of refraining from sharing one’s accomplishments or talents with others, and Romantic Relationships, the feminine norm of investing oneself in romantic heterosexual relationships (Mahalik et al., 2005). Internal consistency for the three *CFNI* subscales of Nice in Relationships ($\alpha = .84$), Modesty ($\alpha = .82$), and Romantic Relationships ($\alpha = .77$; Mahalik et al., 2005). Similar rates of internal consistency were found in the current study for Nice in Relationships ($\alpha = .83$), Modesty ($\alpha = .77$), and Romantic Relationships ($\alpha = .72$). Convergent validity for Nice in Relationships was found with the *Bem Sex Role Inventory* dimension of Feminine Identity (.41; Mahalik et al., 2005). Divergent validity was found with Modesty with the *Bem Sex Role Inventory* dimensions of Masculine Identity (-.19), Feminine Identity dimensions of Embeddedness-Emanation (e.g., connections with select women; -.18), and Synthesis (e.g., the development of a positive feminist identity; -.25). Convergent validity for Romantic Relationships was found with
the *Bem Sex Role Inventory* dimensions of Feminine Identity (.20) and concurrent validity was established with the Feminist Identity dimension of Passive Acceptance (e.g., belief in traditional gender roles and that men are superior; .19; Mahalik et al., 2005).

The three subscales that were utilized from the *CMNI* are Dominance, which refers to the masculine norm of wanting to be admired and have control over others, Self-Reliance, the masculine norm of disconnecting from others and attempting to solve one’s problem by oneself, and Emotional Control, the masculine norm of restricting and not acknowledging one’s emotions to others (Mahalik et al., 2003). Sound internal consistency for the three *CMNI* subscales of Dominance (α = .73), Self-Reliance (α = .85), and Emotional Control (α = .91) was established (Mahalik et al., 2003). Similar rates of internal consistency were found in the current study for Dominance (α = .66), Self-Reliance (α = .84), and Emotional Control (α = .86). Convergent validity for Dominance was found with several factors of the *Brannon Masculinity Scale* including the desire to be admired and respected (.48), to be seen as tough (.54), and seeking violence and adventure (.48; Mahalik et al., 2003). Concurrent validity for Self-Reliance was found with concealing one’s emotions from the *Brannon Masculinity Scale* (.36) and with restrictive emotionality from the *Gender Role Conflict Scale* (.42; Mahalik et al., 2003). Convergent validity for Emotional Control was found with concealing emotions from the *Brannon Masculinity Scale* (.67), the factors of restrictive emotionality (.66) and restrictive affection between men (.39) from the *Gender Role Conflict Scale*, and emotional expressiveness from the *Masculine Gender Role Stress Scale* (.41; Mahalik et al., 2003).
Social support. The construct of social support was assessed using the Multidimensional Scale of Perceived Social Support (MSPSS; Zimet, Dahlem, Zimet, & Farley, 1988). The MSPSS is a 12-item questionnaire that measures participants’ self-perceived support from peers, significant others, and family members. Both a full scale as well as family, peer, and significant other subscales can be calculated. The possible range of scores is 0-84. Example items from the MSPSS include, “I get the emotional help and support I need from my family” and “I can talk about my problems with my friends” (Zimet et al., 1988). This measure has shown internal consistency of .88 and test-retest reliability of .85 with a late adolescent (college) population, and sound internal consistency within an overall adolescent population for the full scale (Doi, Robers, Takeuchi, & Suzuki, 2001). Internal consistency among a sample of adolescents and adults for the full scale ranged from .84 to .92. (Zimet, Powell, Farley, Werkman, & Berkoff, 1990). In the current study, sound internal consistency was found for the full scale (.85). Concurrent validity on the Family subscale was found with family communication and on the Significant Other subscale with marital status (Zimet et al., 1990). The language referring to significant others was changed from “special person” to “boyfriend/girlfriend” in order to clarify that the items were specifically asking about a romantic partner. The overall subscale was utilized in the current study due to the fact that it is the most common use of the MSPSS and the overall scale has shown the highest reliabilities and internal consistency with adolescent populations (e.g., Doi et al., 2001; Zimet et al., 1990). In addition, the researcher sought to examine the relationship between overall social support and conformity to gender norms as well as the relationship of a global measure of social support within the mediation model.
**PYD.** PYD was measured using the *Very Short Form of Positive Youth Development* for older adolescents (*PYD-VSF*; Geldhof, et al., 2014). This measure operationalizes PYD through the PYD indicator of the Five C’s (i.e., competence, confidence, connection, character, and caring). This measure was selected to be implemented in this study as it was suggested by Geldhof and colleagues (2014) as not only practical, but also reliable and valid measure of PYD. The *PYD-VSF* was derived from the *Short Form of Positive Youth Development* (*PYD-SF*; 34 items) and overall PYD measure (i.e., 80 items), which has been validated on a nationally representative sample of adolescents (Geldhof et al., 2014; Lerner et al., 2005b). The *PYD-VSF* replicates the factor structure of both the *PYD-SF* and the full PYD measure (Geldhof et al., 2014). The *PYD-VSF* is a 17-item scale that asks adolescents to choose between one of two statements that is most reflective of themselves and then rate the statement as either “*really true of me,*” or “*sort of true of me.*” For example, adolescents were asked to pick between the two statements, “*Some teenagers are happy with themselves most of the time*” or “*Other teenagers are often not happy with themselves,*” and rate how true the statement is for them. In addition, items also asked adolescents to rate how much they agree or disagree with statements such as, “*All in all, I am glad I am me,*” and rate how important statements are such as, “*Helping the world to be a better place to live in.*” Competence, confidence, and caring are each measured by three items, and character and connection are each measured by four items. The composite PYD variable was generated for the current study, and the possible range of scores is 0-95. In accordance with Geldhof and colleagues (2014), the items related to social and physical competence and physical appearance were removed from the composite PYD variable, as they are not
accurate constructs of the composite construct of PYD. The PYD-VSF has shown significant convergent validity with contribution to society (.21 to .56) and divergent validity with depression (-.40 to -.68) and risk behaviors (-.46 to -.66; Geldhof et al., 2014). In the current study, the composite PYD variable has reasonable internal consistency ($\alpha = .74$).

**Data Analytic Plan**

The current study will examine each piece of the theoretical model proposed in Chapter 2. First, to test Hypothesis 1 (males and females will differ regarding their symptoms of depression and alcohol use), separate t-tests will be run to determine if males and females differ on their symptoms of depression and alcohol use.

To test Hypothesis 2 (conformity to gender norms predict depression and alcohol use) for females, one regression analysis will examine the relationship between conformity to feminine norms and depression, and one regression will examine the relationship between conformity to feminine norms and alcohol use. Similarly for males, one regression will examine the relationship between conformity to masculine norms and depression, and one regression to examine the relationship between conformity to masculine norms and alcohol use. Next, to examine Hypothesis 3 (social support predicts depression and alcohol use), four separate regression analyses will examine whether social support predicts both depression and alcohol use separately for each gender. To examine Hypothesis 4 (whether there was a relationship between conformity to gender norms and social support) separate regression models will be run to examine social support as a potential predictor of both conformity to masculine norms for males and conformity to feminine norms for females. To examine Hypothesis 5 (PYD will predict
depression and alcohol use) separate models will be run for each gender and for both 
depression and alcohol use, which will total to four models.

Last, to analyze the overall proposed model (Hypothesis 6: PYD will mediate the 
relationship between conformity to gender norms and social support and depression and 
alcohol use) a mediation model was employed. Frazier, Tix, and Barron (2004) describe 
several steps to test a mediation model utilizing predictor, criterion, and mediator 
variables. First, there must be a significant relationship between the predictor and 
criterion variables. Therefore, regressions for each gender will be run using the results 
from the first regression (conformity to gender norms and social support; predictor 
variables) and depression (criterion variable), and another regression will be run using the 
results from the first regression (conformity to gender norms and social support; predictor 
variables) and alcohol use (criterion variable). Second, there must be a significant 
relationship between the predictor and mediator variables. Therefore, one regression for 
each gender will be run to determine the relationship between conformity to gender 
norms and social support (predictor variables) and PYD (mediator variable). Third, there 
must be a significant relationship between the mediator and criterion variables. One 
regression for each gender will examine the relationship between the PYD (mediator 
variable) and depression (criterion variable), and another regression for each gender will 
be run using the PYD (mediator variable) and alcohol use (criterion variable). The final 
step of the mediation model is to determine whether the strength of the relationship 
between the predictor and criterion variables decreases when the mediator variable is not 
included in the model (Frazier et al., 2004). Therefore, the regression coefficients will be 
examined to determine the models that account for the greatest amount of variance.
CHAPTER IV

In this chapter, data analytic methods will be discussed including the collection of the final sample, handling of missing data and transformations; preliminary analyses including descriptive statistics, comparisons to normative samples, intercorrelations, and gender comparisons of predictor and criterion variables; and finally, the primary analyses of the testing of each hypothesis.

Sample Collection and Missing Data

From the group of 2700 eligible students, 1362 parents completed the online parent permission form. From this group of students whose parents gave permission for them to participate, 781 students were willing to engage in the survey process and opened the consent or assent form. After opening the consent or assent form, 663 students completed the assent or consent form and opened the link to begin the survey items. Ten students opened the survey link and did not complete any of the survey items, and these cases were deleted using the listwise deletion method. In addition, 11 cases were missing greater than 50 percent of the survey items, and these cases were also deleted using the listwise deletion method. All missing values for the remaining cases (i.e., 642 students) were imputed using the means for each survey item.

Transformations

To determine whether variables assessed in the current study met the assumption of normality for general linear models, all continuous variables were examined for skewness and kurtosis. Alcohol use scores were moderately negatively skewed; therefore, a transformation was achieved using the log10 values for alcohol use scores (Tabachnick & Fidell, 2007). This corrected the skewness from -2.24 to 1.39. Depression scores were
both slightly positively skewed. Skewness was corrected for by transforming the original scores by taking the log10 values of each score (Tabachnick & Fidell, 2007). As a result, skewness was corrected from 1.36 to 0.67 for depression scores. All other variables were normally distributed.

**Demographics**

The current study includes 642 students (28% 9th grade, 25% 10th grade, 21% 11th grade, and 26% 12th grade). The average age of the sample was 16.25 years with a standard deviation of 1.31 years. The sample was 45% male and 56% female. The majority of the students in the study were White (90%) with a small representation of other ethnic groups (i.e., 2% Asian; 2% Black; 2% Latino; <1% Biracial; <1% Native American; 3% who identified as Other). In addition, the majority of the students in the study were born in the United States (96%), and their parents were also born in the U.S. (88%). A large percentage of the students (59%) came from a household with a yearly income of $75,000 or greater. The mean family income was $68,250 with a standard deviation of $28,250.

**Comparisons to Normative Samples**

Means and standard deviations were generated to compare the current sample with other adolescent samples and are presented in Table 1. The mean of depression for the total sample of adolescents (Mean = 13.94) falls within one standard deviation from the normative adolescent sample in which the measure was constructed (Mean = 9.25; SD = 8.58; Radloff, 1977), suggesting that the current sample’s depression scores are slightly higher than the normative sample. Similarly, the mean rates of depression among males (Mean = 11.89) and females (Mean = 15.69) in the current sample are also higher
yet still within one standard deviation of this normative adolescent sample as well. The mean of alcohol use for the total sample of adolescents ($Mean = 1.67$) falls within one standard deviation of a nationally representative sample of adolescents ($Mean = 1.80; SD = 1.27$; Tanner-Smith, 2012) and is slightly lower than the normative sample. In addition, the mean alcohol use for males ($Mean = 1.70$) and females ($Mean = 1.64$) were also a little lower and fell within one standard deviation of this nationally representative sample of adolescents. The mean for perceived social support among the current sample of adolescents ($Mean = 62.11$) was slightly lower yet within one standard deviation of a normative sample of adolescents in which the measure was constructed ($Mean = 70.55; SD = 11.22$). Similarly, the means for males ($Mean = 60.54$) and females ($Mean = 63.44$) also were a little lower and fell within one standard deviation of this sample as well.

Nationally representative means for adolescents for conformity to feminine norms (CFNI), conformity to masculine norms (CMNI), and PYD are not available in the current literature.

**Intercorrelations of Study Variables**

Intercorrelations were also calculated prior to conducting the primary analyses to examine the relationships between predictor and criterion variables. Both mental health constructs of depression and alcohol were positively associated ($.19, p < .01$). In addition, negative associations were found between depression and PYD ($-.42, p < .01$), alcohol use and PYD ($-.24, p < .01$), and depression and perceived social support ($-.24, p < .01$). PYD and social support were positively correlated with one another ($.27, p < .01$).

Conformity to the three feminine norms of being nice in relationships (i.e., Nice in Relationships), being modest about one’s accomplishments (i.e., Modesty), and focus on
romantic relationships (i.e., Romantic Relationships) was positively associated with both PYD (.31, $p < .01$) and social support (.15, $p < .01$), while conformity to the three masculine norms of dominating others (i.e., Dominance), relying on oneself (i.e., Self-Reliance), and controlling one’s emotions (i.e., Emotional Control) was negatively associated with social support. (-.15, $p < .05$).
Table 1

Means (and Standard Deviations) and intercorrelations for All Measures

<table>
<thead>
<tr>
<th>Measures</th>
<th>Males (N = 296)</th>
<th>Females (N = 346)</th>
<th>Total (N = 642)</th>
<th>Depression</th>
<th>Alcohol Use</th>
<th>PYD</th>
<th>CFNI</th>
<th>CMNI</th>
<th>Social Support</th>
</tr>
</thead>
<tbody>
<tr>
<td>Depression</td>
<td>0-50</td>
<td>0-54</td>
<td>0-54</td>
<td>13.94(9.99)</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>Alcohol Use</td>
<td>1-8</td>
<td>1-6</td>
<td>1-8</td>
<td>1.67(1.21)</td>
<td>.19**</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>PYD</td>
<td>37-67</td>
<td>52-84(6.20)</td>
<td>34-67</td>
<td>53.36(6.41)</td>
<td>-.42**</td>
<td>-.24**</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>Conformity to Feminine Norms (CFNI)</td>
<td>--</td>
<td>--</td>
<td>18-88</td>
<td>.666(8.17)</td>
<td>-.02</td>
<td>-.10</td>
<td>.31**</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>Conformity to Masculine Norms (CMNI)</td>
<td>8-48</td>
<td>28.16(7.13)</td>
<td>--</td>
<td>.01</td>
<td>.08</td>
<td>-.27**</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>Social Support</td>
<td>12-84</td>
<td>60.54(10.94)</td>
<td>12-84</td>
<td>62.11(11.64)</td>
<td>-.24**</td>
<td>-.10*</td>
<td>.27**</td>
<td>.22**</td>
<td>-.15*</td>
</tr>
</tbody>
</table>

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

Note. All intercorrelations are based on the total sample, except for CMNI and CFNI, which are based on male and female samples respectively.
Gender Comparisons of Predictor and Criterion Variables

In addition to examining gender differences in depression and alcohol use, which will be examined in the primary analyses, the current study also examined potential gender differences in social support and PYD. To examine whether males and females differ in their reported rates of social support, a t-test was conducted. Results indicated a significant gender difference in that females reported greater social support than males ($t = -3.26, p < .01$; See Table 2). Another t-test was conducted to determine whether males and females in the current study differed in their reported rates of PYD. Results indicated that there was not a significant gender difference in reported rates of PYD ($t = -1.85, p = .07$; See Table 2).

Table 2

Social Support and PYD By Gender

<table>
<thead>
<tr>
<th>Measures</th>
<th>Females</th>
<th>Males</th>
<th>$t$</th>
<th>df</th>
</tr>
</thead>
<tbody>
<tr>
<td>Social Support</td>
<td>63.44(12.06)</td>
<td>60.54(10.94)</td>
<td>-3.26**</td>
<td>662</td>
</tr>
<tr>
<td>PYD</td>
<td>53.79(6.55)</td>
<td>52.83(6.20)</td>
<td>-1.85</td>
<td>662</td>
</tr>
</tbody>
</table>

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

Primary Analyses

First, gender differences in the mental health outcomes of depression and alcohol use were analyzed using t-tests. Next, each segment of the proposed theoretical model was analyzed using regression models. Included in the regression models were several covariates including grade, race, family income, and parent immigration status to capture any unique effects contributed to the models by these demographic factors.
**Hypothesis 1.** To examine whether males and females differ in their reported rates of depressive symptoms, a t-test was conducted. Results indicated a significant gender difference in that females reported greater depressive symptoms than males ($t = -5.19, p < .001$; See Table 3).

To investigate whether males and females differ in their reported rates of alcohol use, another t-test was conducted. Results did not indicate a significant gender difference in alcohol use ($t = 0.18, p = 0.58$; See Table 3); therefore, males and females reported similar frequencies of alcohol use.

Table 3

*Depression and Alcohol Use By Gender*

<table>
<thead>
<tr>
<th>Measures</th>
<th>Females</th>
<th>Males</th>
<th>$t$</th>
<th>df</th>
</tr>
</thead>
<tbody>
<tr>
<td>Depression</td>
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<td>11.89(8.65)</td>
<td>-5.19**</td>
<td>662</td>
</tr>
<tr>
<td>Alcohol Use</td>
<td>1.64(1.11)</td>
<td>1.70(1.33)</td>
<td>0.18</td>
<td>662</td>
</tr>
</tbody>
</table>

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

**Hypothesis 2.** Due to the significant gender differences in depression and social support scores, separate analyses were conducted between males and females for the remaining hypotheses. Since power analyses indicated that 138 was an adequate sample size, conducting separate analyses with sample of 296 for males and 346 for females meets that standard. The question of whether conformity to gender norms predict depressive symptoms and alcohol use was examined separately for each gender. First, a regression was used to test whether conformity to feminine norms predicted depressive symptoms among female participants. Results indicated that conformity to feminine norms
gender norms did not significantly predict depression ($b = .00, t = .02, p = .99$; See Table 4), meaning the degree to which females endorsed the feminine norms was not associated with depressive symptoms. Family income was a significant predictor of depressive symptoms for females ($b = -.01, t = -2.42, p < .05$) in that greater family income was associated with less depressive symptoms. Second, conformity to feminine norms was shown to significantly predict alcohol use ($b = -.00; t = -2.38, p < .05$), along with grade level ($b = .07; t = 7.24, p < .001$). More specifically, greater conformity to feminine norms was related to less alcohol use and higher grade level was associated with greater alcohol use for females.

Third, a regression was used to test whether conformity to masculine norms predicted depression among male participants. Conformity to masculine norms did not significantly predict depressive symptoms among males ($b = -.00; t = .09, p = .93$).

Fourth, regression results indicated that conformity to masculine norms did not significantly predict alcohol use ($b = .00, t = .48, p = .63$; See Table 5), but grade level ($b = .09, t = 8.47, p < .001$) and family income ($b = .03, t = 2.91, p < .01$) were significant predictors of alcohol use among males. More specifically, higher grade level and higher family income were associated with greater alcohol use. These findings indicate that while conformity to feminine norms predicted less alcohol use in adolescent females, in general, conformity to gender norms did not have a significant positive relationship with mental health outcomes such as depression and alcohol in the current study of adolescents.
Hypothesis 3. Next, regressions were utilized to examine whether social support was a significant predictor of the mental health outcomes of depression and alcohol use by gender. For females, social support was a significant predictor of depression ($b = .00$, $t = -6.14$, $p < .05$; See Table 6). More specifically, for females, greater social support was associated with lower depression scores. Both grade and family income levels also

Table 4

<table>
<thead>
<tr>
<th></th>
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<th>Alcohol Use</th>
<th></th>
</tr>
</thead>
<tbody>
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<td>SE B</td>
<td>$\beta$</td>
<td>$t$</td>
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<td>.01</td>
<td>.07</td>
<td>1.17</td>
</tr>
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<td>Race/Ethnicity</td>
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<td>.01</td>
<td>-.09</td>
<td>-1.55</td>
</tr>
<tr>
<td>Family Income</td>
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<td>.01</td>
<td>-.14</td>
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<td>.02</td>
<td>.06</td>
<td>1.03</td>
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<tr>
<td>Conformity to Feminine Norms</td>
<td>(.CFNI)</td>
<td>-.00</td>
<td>.01</td>
<td>-.00</td>
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</table>

Table 5

<table>
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<th>Alcohol Use</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>SE B</td>
<td>$\beta$</td>
<td>0</td>
</tr>
<tr>
<td>Grade</td>
<td>.01</td>
<td>.01</td>
<td>.09</td>
<td>1.41</td>
</tr>
<tr>
<td>Race/Ethnicity</td>
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<td>.01</td>
<td>.04</td>
<td>.54</td>
</tr>
<tr>
<td>Family Income</td>
<td>-.00</td>
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</tr>
<tr>
<td>Parent Immigration Status</td>
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<td>.02</td>
<td>.02</td>
<td>.36</td>
</tr>
<tr>
<td>Conformity to Masculine Norms</td>
<td>(.CMNI)</td>
<td>-.00</td>
<td>.00</td>
<td>.06</td>
</tr>
</tbody>
</table>

$^*p < .05, ^{**}p < .01, ^{***}p < .001$
predicted social support for females in that higher grade level ($b = .01, t = 2.27, p < .05$) and lower family income ($b = -.01, t = -2.13, p < .05$) were both related to higher depression scores. Similarly for males, social support was associated with depression in that greater social support predicted lower depression scores ($b = -.00, t = -3.75, p < .05$).

Social support was a significant predictor of alcohol use in females in that greater social support was associated with less alcohol use ($b = -.00, t = -2.55, p < .05$; See Table 6). Grade level was also a predictor of alcohol use in females in that higher grade level predicted more use ($b = .07, t = 7.77 p < .01$). For males, social support was not a significant predictor of alcohol use ($b = -.00, t = -1.62, p = .11$); however, higher grade level ($b = .09, t = 8.47, p < .01$), greater family income ($b = .03, t = 2.61, p < .01$), and adolescent males with parents born in the U.S. ($b = -.03, t = -.87, p < .05$) were all associated with higher alcohol use scores.
Table 6
Regression Information for the Multiple Regression Analysis for Social Support Predicting Depression and Alcohol Use By Gender

<table>
<thead>
<tr>
<th></th>
<th>Depression</th>
<th></th>
<th>Alcohol Use</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Female</td>
<td>Male</td>
<td>Female</td>
<td>Male</td>
</tr>
<tr>
<td></td>
<td>B</td>
<td>SE B</td>
<td>β</td>
<td>t</td>
</tr>
<tr>
<td>Grade</td>
<td>.01</td>
<td>.01</td>
<td>.12</td>
<td>2.27**</td>
</tr>
<tr>
<td>Race/Ethnicity</td>
<td>-.01</td>
<td>.01</td>
<td>-.08</td>
<td>-1.61</td>
</tr>
<tr>
<td>Family Income</td>
<td>-.01</td>
<td>.01</td>
<td>-.11</td>
<td>-2.13**</td>
</tr>
<tr>
<td>Parent Immigration Status</td>
<td>.00</td>
<td>.02</td>
<td>.01</td>
<td>.15</td>
</tr>
<tr>
<td>Social Support</td>
<td>-.00</td>
<td>.00</td>
<td>-.32</td>
<td>-6.14**</td>
</tr>
</tbody>
</table>
**Hypothesis 4.** The relationship between conformity to gender norms and social support was examined next as it has not yet been studied with an adolescent sample, and two regression models were utilized. For females, conformity to feminine norms was regressed on social support, and social support was found to be a significant predictor of conformity to feminine norms ($b = .14, t = 3.80, p < .01$; See Table 7). For males, conformity to masculine norms was regressed on social support, and social support was found to have a significant and negative association with conformity to masculine norms among males ($b = -.10, t = -2.64, p < .01$). This analysis shows that greater conformity to feminine norms for females is associated with receiving support from parents, peers, and romantic partners, while greater conformity to masculine norms for males is associated with less social support.

<table>
<thead>
<tr>
<th>Table 7</th>
<th>Regression Information from the Multiple Regression Analysis for Social Support Predicting CMNI and CFNI</th>
</tr>
</thead>
<tbody>
<tr>
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<td></td>
</tr>
<tr>
<td>Grade</td>
<td>.48</td>
</tr>
<tr>
<td>Race/Ethnicity</td>
<td>.27</td>
</tr>
<tr>
<td>Family Income</td>
<td>.34</td>
</tr>
<tr>
<td>Parent Immigration Status</td>
<td>-.32</td>
</tr>
<tr>
<td>Social Support</td>
<td>-.10</td>
</tr>
<tr>
<td>B</td>
<td>SE B</td>
</tr>
<tr>
<td>CMNI</td>
<td>______________________________________________________________________________________</td>
</tr>
<tr>
<td>B</td>
<td>SE B</td>
</tr>
<tr>
<td>CFNI</td>
<td>______________________________________________________________________________________</td>
</tr>
</tbody>
</table>

$^{*}p < .05, ^{**}p < .01$

**Hypothesis 5.** Next, regressions were utilized to examine whether PYD was a significant predictor of the mental health outcomes of depression and alcohol use. Results for females indicated that PYD is a significant predictor of depressive symptoms ($b = -.01, t = -10.10, p < .001$; See Table 8). Similarly, PYD was also a significant predictor of depressive symptoms among males ($b = -.01, t = -6.37, p < .001$). More specifically,
greater levels of PYD were associated with decreased depressive symptoms in both males and females. Second, separate regressions were utilized to test whether PYD predicted alcohol use in the current sample. Results indicated that PYD was a significant predictor of alcohol use among both females \((b = -.01, \ t = -5.48, \ p < .001)\) and males \((b = -.01, \ t = -3.19, \ p < .01)\). Therefore, greater levels of PYD were also associated with less alcohol use among both males and females.
Table 8

*Regression Information for the Multiple Regression Analysis for PYD Predicting Depression and Alcohol Use By Gender*

<table>
<thead>
<tr>
<th></th>
<th>Depression</th>
<th></th>
<th>Alcohol Use</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Female</td>
<td>Male</td>
<td>Female</td>
<td>Male</td>
</tr>
<tr>
<td></td>
<td>B</td>
<td>SE B</td>
<td>β</td>
<td>t</td>
</tr>
<tr>
<td><strong>Grade</strong></td>
<td>.00</td>
<td>.01</td>
<td>.03</td>
<td>.52</td>
</tr>
<tr>
<td><strong>Race/Ethnicity</strong></td>
<td>-.01</td>
<td>.01</td>
<td>-.07</td>
<td>-1.50</td>
</tr>
<tr>
<td><strong>Family Income</strong></td>
<td>-.01</td>
<td>.01</td>
<td>-.11</td>
<td>-2.21*</td>
</tr>
<tr>
<td><strong>Parent Immigration Status</strong></td>
<td>.01</td>
<td>.02</td>
<td>.03</td>
<td>.55</td>
</tr>
</tbody>
</table>

| **PYD**       | -.01       | .00           | -.48        | 10.10***      | -.01         | .00           | -.37        | -6.37***      | -.01         | .00           | -.27        | -5.48***     | -.01        | .00           | -.17        | -3.19***      |

*p < .05, **p < .01, ***p < .001
**Hypothesis 6.** Finally, the question of whether PYD mediated, or explained, the relationship between conformity to gender norms and social support with the mental health outcomes of depression for females and alcohol use for males was examined. In order to test for mediation, several steps must be analyzed. First, there must be a relationship between the predictor variable and the mediator variable (Frazier et al., 2004). This first step was tested in several ways. First for females, social support was regressed on PYD, and social support was found to be a significant predictor of PYD ($b = .24$, $t = 6.65$, $p < .001$) in that increased social support was associated with increased PYD. Second, conformity to feminine norms was regressed on PYD, and conformity to feminine norms was found to be a significant predictor of PYD ($b = .23$, $t = 5.46$, $p < .001$); more specifically, greater conformity to feminine norms was associated with greater levels of PYD as well. The second step is that the predictor variable should be significantly related to the mediator variable (Frazier et al., 2004). For females, PYD had a significant and negative association with depression as discussed with Hypothesis 5. Next, there must be a significant relationship between the predictor and criterion variables. For females, while there was a significant and negative relationship between social support and depression (as discussed in Hypothesis 3), conformity to feminine norms was not a significant predictor of depression (as outlined in Hypothesis 2). Therefore, PYD cannot be considered a mediator, and the corresponding analyses cannot be completed.

For males, the first step was tested in two ways. First for males, social support was regressed on PYD, and social support was found to be a significant predictor of PYD ($b = -1.53$, $t = -4.99$, $p < .001$) in that greater social support was associated with greater
PYD. Second, conformity to masculine norms was regressed on PYD, and conformity to masculine norms was also found to be a significant predictor of PYD ($b = -0.22$, $t = -4.25$, $p < .001$); more specifically, greater conformity to masculine norms was associated with less PYD. Second, the relationship between the predictor variable and mediator variable was assessed. For males, PYD had a significant and negative association with alcohol use as discussed with Hypothesis 5. Next, there must be a significant relationship between the predictor and criterion variables. For males, there was no significant relationship between social support and alcohol use (discussed in Hypothesis 3), and conformity to masculine norms was also not a significant predictor of alcohol use (as outlined in Hypothesis 2). Therefore, similar to the female model, PYD cannot be considered as a mediator for males.

**Supplemental Analyses**

In order to examine how the predictor variables of conformity to gender norms and social support interact by different levels of development (i.e., grade level), four regression analyses were conducted (i.e., two regressions for males with one predicting depression and one predicting alcohol use and two regressions for females with one predicting depression and one predicting alcohol use). First, in each regression demographic variables of age, race/ethnicity, and parent immigration status were entered in the first step as covariates. Next, conformity to gender norms (i.e., conformity to feminine norms for females and conformity to masculine norms for males), social support, and grade were entered into the second step as predictor variables. Finally, two interaction terms of conformity to gender norms (i.e., feminine norms for females,
masculine norms for males) x grade and social support x grade were included to examine these internal and ecological factors with a developmental lens.

Results indicated significant interactions of social support x grade for both females ($b = .00, t = 2.58, p < .05$); and males in predicting depression ($b = -.00, t = -2.04, p < .05$; See Tables 9 and 10 respectively). More specifically, for females, the positive effects of high social support on depressive symptoms decreased as they enter higher grades (See Figure 6). Conversely, the negative effects of low social support on depressive symptoms decrease as females increase in grade level translating into decreasing divergence in depressive symptoms over time. For males, the positive effects of high social support in predicting depressive symptoms increase as they enter higher grades, and for males with low social support, the effects of social support on depressive symptoms increase as males enter higher grades, which also increases the divergence in depressive symptoms over time (See Figure 7). To calculate Figures 6 and 7, low social support was considered to be one standard deviation below the average of social support for each grade level, and high social support was considered as one standard deviation above the average of social support for each grade level for both males and females.
<table>
<thead>
<tr>
<th></th>
<th>Depression</th>
<th></th>
<th>Alcohol Use</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>SE B</td>
<td>β</td>
<td>t</td>
</tr>
<tr>
<td><strong>Step 1</strong></td>
<td></td>
<td></td>
<td></td>
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</tr>
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<td>-.99</td>
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<td>.02</td>
<td>.06</td>
<td>1.14</td>
</tr>
<tr>
<td><strong>AR² = .03</strong> Depression; <strong>AR² = .04</strong> Alcohol Use</td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td><strong>Step 2</strong></td>
<td></td>
<td></td>
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<td>.01</td>
<td>.11</td>
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**AR² = .02** Depression; **AR² = .06** Alcohol Use

*p < .05, **p < .01, ***p < .001
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<th>Alcohol Use</th>
<th></th>
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<tbody>
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<td></td>
<td>B</td>
<td>SE B</td>
<td>β</td>
<td>t</td>
</tr>
<tr>
<td>Step 1</td>
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<td></td>
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<td>.01</td>
<td>.04</td>
<td>.65</td>
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<td>.02</td>
<td>.34</td>
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<td>AR² = .01 Depression; AR² = .21** Alcohol Use</td>
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<td></td>
<td></td>
<td></td>
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<td>Step 2</td>
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*p < .05, **p < .01, ***p < .001
Figure 6

*Mean Depression Scores for Female Students With Low and High Social Support by Grade Level*

Figure 7

*Mean Depression Scores for Male Students With Low and High Social Support by Grade Level*
CHAPTER V

The purpose of the current study was to examine (1) gender differences in adolescent depression and alcohol use; (2) the association between conformity to gender norms with depression and alcohol use; (3) the association between social support with depression and alcohol use; (4) the relationship between conformity to gender norms and social support; (5) the relationship between PYD and depression and alcohol use; (6) and PYD as a potential mediator for the relationship between the internal characteristic of conformity to gender norms and the ecological asset of social support with adolescent depression and alcohol use. This chapter will summarize the findings of the current study, its contributions to the current body of literature, and theoretical, clinical, and developmental implications. In addition, the limitations of the study will also be evaluated as well as suggestions for future research.

Preliminary analyses showed gender differences in social support in that females endorsed greater social support compared to males. This finding is consistent with and further supports past research showing the females report greater social support, particularly peer support, during adolescence (e.g., Colarossi & Eccles, 2003). There were no reported gender differences in PYD, which is in contrast to the larger body of literature that examines PYD and its demographic correlates and often shows that females report higher rates of PYD compared to males (e.g., Jelicic, Bobek, Phelps, Lerner, & Lerner, 2007; Lerner & Lerner, 2013). It is important to note this finding as it may be explained through additional unique features or qualities (e.g., religiosity, spirituality) of the current sample of adolescents from Catholic high schools that were not addressed in this study.
In terms of the primary analyses, the first hypothesis of the study was that gender would predict depression and alcohol use. A t-test demonstrated that females in the current study experienced greater depressive symptoms compared to males. This finding is consistent with past epidemiological studies that find this gender difference in both U.S. (e.g., Klose & Jacobi, 2004) and international samples (e.g., Angst et al., 2002) as well as across virtually all age groups including adolescence (e.g., Hilt & Nolen-Hoeksema, 2009; Kling et al., 1999). It is important to note that these findings further support the current body of literature, suggesting that adolescent depression continues to be a gendered mental health issue.

An additional t-tested showed no gender differences in alcohol use among the current sample of adolescents. This is largely inconsistent with the existing literature that shows male adolescents engage in greater general substance use and abuse (e.g., Chen & Jacobson, 2011; Mahalik & Burns, 2011; Mahalik et al., 2013; Needham, 2007; Piko, 2000) and alcohol use (e.g., Mennis & Mason, 2012). However, other recent literature has found that females are now “closing the gender gap” (i.e., increasing their alcohol consumption) and estimates of alcohol use during adolescence do not differ by gender (e.g., Amaro et al., 2001). Therefore, this current finding may support this new trend in adolescent alcohol use. It also warrants future research to further support whether or not alcohol use no longer differs by gender during adolescence and the exact reasons behind the trend. For example, overall, the adolescents in the current study reported low alcohol use; therefore, it is plausible that males may be consuming less alcohol, which may also explain why no gender differences were found as opposed to the possibility that females are increasing their alcohol consumption.
The second hypothesis of the study was that conformity to gender norms would predict both depression and alcohol use. The separate regressions run for each gender demonstrated that conformity to feminine norms is not a significant predictor of depression. The absence of an association between conformity to feminine norms and depression contradicts past research during both adolescence (e.g., Barrett & White, 2002) and adulthood (e.g., Broderick & Korteland, 2002). This contradiction with the majority of literature may suggest another new trend in adolescent development that necessitates further inquiry. In addition, conformity to feminine norms was found to have a negative association with alcohol use in that females who conformed to feminine norms were less likely to engage in alcohol use compared to females who did not conform to feminine norms. This finding supports past research that conformity to feminine norms is linked to less alcohol use in college females as it is often viewed less socially acceptable for females (i.e., Soffer, 2010; Wilsnack & Wilsnack, 1999). However, additional research found that females may engage in alcohol use to enhance their interpersonal relationships (e.g., Covington & Surrey, 1999). Therefore, the current finding related to conformity to feminine norms and alcohol use appears to support the majority of current literature in that alcohol use is viewed as a masculine task and females who conform to feminine norms may be dissuaded from engaging in alcohol use due to this association. An additional investigation to tease out the potential nuances between conformity to feminine norms, alcohol use, and interpersonal relationships may be beneficial.

In this study, conformity to masculine norms was not significantly associated with depression or alcohol use. Both findings contradict past research in that conformity to masculine norms has been shown to be both negatively associated with depression (e.g.,
Priess et al., 2009) and positively associated with alcohol use (e.g., Mahalik et al., 2007). These contradictory findings relative to the current literature may be suggestive that the relationship between conformity to masculine norms and mental health is changing during adolescence. For example, it may be that males who embrace the traits of dominance, self-reliance, and emotional control believe that they are managing their problems, emotions, and distress independently at this developmental stage and thus do not experience or have the inclination to report depressive symptoms to others or feel the need to use alcohol at higher rates than males who report less conformity to masculine norms.

The third hypothesis of the study was that social support would be associated with depression and alcohol use. For both females and males, greater social support was associated with less depression. These findings are consistent with the large body of literature (e.g., Galambos et al., 2004) that examines adolescent mental health. The current study also showed mixed findings related to social support and alcohol use. There was a significant association between social support and alcohol use among females in that greater social support was linked to decreased alcohol use. However, there was no significant relationship between social support and alcohol use for males. These mixed findings reflect the current body of literature on the relationship between social support and alcohol use during adolescence in that some findings show that parent and peer support are linked to lower alcohol use (e.g., Alsetine & Gore, 2000), while other studies show an increase in alcohol use with positive peer support (e.g., Brown & Larson, 2009). Therefore, it appears that the context of these sources of social support matter, and it may be that it is the beliefs and actual behaviors of those whom adolescents seek out for...
support that are associated with use (i.e., adolescents who have supportive parents and peers who use alcohol themselves may be more likely to utilize alcohol). For females, these gender differences may also be explained through the above findings that conformity to feminine norms is linked to decreased alcohol use. More specifically, female adolescents who view investment in interpersonal relationships as an important value and perceive that they have social support from others may be less likely to engage in alcohol use for several reasons. For example, not only is it sometimes viewed as a masculine task, but it also may rupture their relationships with others if they engage in excessive use or if other important people in their lives (e.g., peers, romantic partners) do not themselves engage in alcohol use.

The fourth hypothesis of the study was that there was an association between conformity to gender norms and social support. It was found that female adolescents received greater social support from their parents, peers, and romantic partners when they conformed to societal expectations for feminine norms. It is plausible that when female adolescents receive social support from these individuals, they are also more likely to then continue to conform to traditional feminine norms. These findings for females coincide with the Gender-Intensification Hypothesis in that the developmental stage of adolescence propels others (e.g., parents, teachers, peers) to enforce different societal expectations for adolescents (e.g., gender norms) according to gender (Hill & Lynch, 1983). Therefore, for females, it appears that abiding by these different societal expectations in the form of gender norms during adolescence may actually be an asset that allows them to access greater social support from one’s parents, peers, and romantic partners. For males, an inverse relationship was found in that greater conformity to
masculine norms such as dominance, self-reliance, and emotional control was related to less social support compared to males who exhibited less conformity to masculine norms. It is possible that male adolescents who believe that they must hide their emotional expression and distress from others as well as rely solely on themselves to solve problems are less likely to seek out support from others, which in turn affects how likely others are willing to provide support to them as well.

The fifth hypothesis of the study was that PYD would predict both depression and alcohol use. For both males and females, regression results indicated that PYD is a significant predictor of both depression and alcohol use, in that the more internal qualities of PYD that are present within an adolescent, the less likely he/she is to exhibit depressive symptoms or consume alcohol. These findings are consistent with the large body of literature that utilizes the Five C’s model of PYD (e.g., Lerner et al., 2005b) and further strengthens the predictive relationship of PYD being associated with less maladaptive developmental trajectories, including depression and alcohol use.

The sixth hypothesis of the study was that PYD would mediate the relationship between conformity to gender norms and social support and depression and alcohol use. Due to the fact that there was no relationship found between one of the predictor variables (conformity to gender norms) and the criterion variables (depression, alcohol use), this mediation analysis could not be completed at this time. However, there was a significant relationship between a predictor (conformity to feminine norms) and the mediator (PYD), which suggested that the more female adolescents conformed to feminine norms the greater levels of PYD they reported. In addition, conformity to masculine norms also predicted PYD; however, it was found that greater conformity to
masculine norms for males was associated with less PYD. Therefore, it appears that for females, conformity to feminine norms such as investing in interpersonal relationships is congruent with several of the qualities of PYD such as connection to and caring for others, which may explain the positive association between these two constructs. For males, greater conformity to masculine norms likely highlights individualistic tendencies (e.g., relying on oneself), which may propel males who conform to these norms to be less likely to participate in behavior associated with PYD (e.g., connecting to and caring for others). It is also interesting that the PYD qualities of competence and confidence were not associated with masculine norms as self-reliance is sometimes conceptualized as connected to confidence in one’s abilities.

In summary, although a number of the current study’s results replicate past research findings related to the relationship between both social support and PYD with depression and alcohol use, some of the findings actually contradict past research related to gender, conformity to gender norms, and mental health. In addition, the current study also provides new insights into adolescent development regarding the associations between conformity to gender norms, social support, and PYD. These findings will be discussed in greater detail related to their contributions to the literature as well as their theoretical, clinical, and developmental implications in the following sections.

Contributions to Literature

The above research findings both substantiate and challenge the existing literature related to gender, conformity to gender norms, social support, positive youth development and adolescent mental health. Although expected gender differences were found with depression (i.e., females reported more depressive symptoms compared to
males), findings related to gender differences in alcohol use are potentially aligned with a new trend in the literature (e.g., Amaro et al., 2001) that has found a closing gap in adolescent males consuming more alcohol than females. In addition, the study’s lack of significant relationships between conformity to feminine norms and depression as well as conformity to masculine norms and depression and alcohol use were also not consistent with the majority of past research. Although this is only one study, it is important to note these contradictions to the current literature since they may serve as potential indicators of a shifting trend in the contributions of gender and conformity to gender norms to depression and alcohol use during adolescence.

The current study also indicated that adolescent females in general and especially those who conform to feminine norms received greater social support from parents, peers, and romantic partners. In addition, adolescent females who endorsed conformity to feminine norms, including investment in relationships, being nice to others, and modesty, also reported both less alcohol use and greater PYD compared to females with lower rates of conformity to feminine norms. Therefore, it appears that there are several benefits to endorsing traditional feminine norms for females during adolescence. More specifically, conformity to feminine norms may discourage the use of alcohol since excessive alcohol use is often viewed as a masculine behavior. Excessive alcohol use may also be viewed by some females as a boisterous activity that may be incongruent with those who endorse modesty and do not want to draw attention to themselves by participating in that type of activity. Conformity to feminine norms may also promote the development of prosocial behavior such as PYD. For example, female adolescents who view interpersonal relationships as important in their lives and value being nice to others may be more likely
to develop the PYD attributes of connection to and caring for others as well as overall contributions to their community and society.

Although conformity to feminine norms appears to be adaptive for females during adolescence, the current study illustrates that conformity to masculine norms for male adolescents may have several drawbacks. Findings indicate that male adolescents who endorse more masculine gender norms such as dominance, self-reliance, and emotional control receive less support from parents, peers, and romantic partners. As stated above, this may be due to the fact that males who endorse these masculine norms may be less likely to seek out support from others or form intimate relationships, leading others in their environment to offer less support to them as well. It may also be that adolescent males who endorse masculine norms may simply perceive less support from others as they believe they do not need it. In addition, adolescent males who endorse masculine norms are also less likely to also possess internal traits of PYD. This may be due to several reasons. First, males who seek to control their emotions and not seek out support when in distress may be less likely to see the value in engaging with others and developing a sense of caring or social competence. In addition, males who are socialized to seek dominance over others may also be less likely to not only care about others, but also may be less likely to develop a mature sense of character as well. Therefore, it may be that males who endorse more masculine gender role norms may be socialized not to reciprocate support to others due to the expectations of masculinity. While greater conformity to masculine norms is associated with less adaptive factors such as social support and PYD, it is not linked to increased depression or alcohol use. It is also important to note that there were no gender differences in PYD in the current study. It
may be that greater conformity to masculine norms for males is associated with greater independence and may serve as a “psychological resource” for adolescents as described by Barrett and White (2002). Although the current findings are preliminary, they provide important data regarding the relationships between conformity to gender norms, social support, PYD, and mental health during adolescence.

**Theoretical Implications**

The current study has several theoretical implications. First, the findings contribute to the expansion of the Five C’s model of PYD as it provides evidence for the new internal characteristic of conformity to gender norms and its relative association with the ecological asset of social support, PYD, and adolescent mental health outcomes. The inclusion of conformity to gender norms as an internal characteristic strengthens the theoretical framework of the Five C’s model of PYD by including a construct related to both human diversity and identity development. Although the Five C’s model of PYD has utilized numerous diverse samples (e.g., individuals from various socioeconomic backgrounds; Quane & Rankin, 2006), the inclusion of conformity to gender norms directly into the model further infuses elements of diversity and individual differences to provide a more nuanced approach to understand the underpinnings of PYD. In addition, since identity development is a key task of adolescence, the inclusion of one aspect of identity such as conformity to gender norms allows for the Five C’s model of PYD to acknowledge this timely element of adolescent development.

Second, the current study’s findings are also a reminder that conformity to societal norms is not necessarily an inherently “good” or “bad” quality within an individual. In light of the current findings, it appears that there are both advantages and
disadvantages to conforming to gender norms during adolescence. More specifically, adolescent females appear to benefit from conforming to feminine norms (i.e., decreased alcohol use and gains in social support and PYD) while adolescent males may experience some disadvantages by conforming to masculine norms (i.e., decreased social support and PYD). It is also important to note that although conformity to masculine norms is linked to decreased PYD, the current study did not find any gender differences in PYD at this time. All in all, these findings point to the continued need to investigate social phenomena as both potentially adaptive and/or maladaptive to overall human development.

**Clinical and Developmental Implications**

The current study’s findings also highlight important clinical and developmental considerations. Findings support past gender differences related to adolescent mental health in that females report greater symptoms of depression than males. Current findings also found no gender differences in alcohol use, which contribute to the mixed findings related to adolescent alcohol use. Based on this study’s findings, and in the context of the current body of research, screening and prevention efforts should continue to focus on the gender differences in depression and also acknowledge a potential decrease in the gender gap in alcohol use. In addition, the relationship between greater conformity to feminine norms and less alcohol use may be considered as means for both prevention and intervention for females. For example, focusing on adolescent females’ investment in interpersonal relationships can be seen as an asset, and prevention efforts may seek to enrich adolescent females’ relationships with others to promote a sense of connection and caring. In addition, these relationships can be used as an intervention point to illustrate to
female adolescents that there are many other ways to connect and seek intimacy beyond alcohol use as well as to foster a supportive network of individuals who do not use alcohol.

For males, the relationships between conformity to masculine norms and the study constructs are more complicated. Greater conformity to masculine norms was related to less social support and PYD, suggesting there are potential drawbacks for adolescent males who conform to masculine norms. However, it is also notable that greater conformity to masculine norms did not predict negative mental health outcomes such as depression or alcohol use. Therefore, it may be advisable that adolescent males who conform to masculine norms be monitored in prevention efforts as they, on the whole, are not receiving as much support from their environments and exhibiting as much prosocial behavior (i.e., PYD) as other males. This group is important to track because even though they are not experiencing negative mental health outcomes in this current stage of development, their endorsement of lowered social support and PYD may eventually affect their mental health and overall development as they transition into adulthood.

Overall, the current study provides new knowledge about the roles that gender and conformity to gender norms play in relation to social support, PYD, and adolescent mental health. As adolescence is a time of identity development, the development of one’s gender role orientation is a key task at this time. While conforming to feminine norms for adolescent females appears to be adaptive and conforming to masculine norms for adolescent males may have some disadvantages, it appears that overall adolescents are not experiencing the same negative associations with depression and alcohol use that is seen with conformity to gender norms during adulthood. Therefore, adolescence may
be a time period for prevention of this association by encouraging adolescents to explore their values, attitudes, and behaviors. This exploration may expose adolescents to and facilitate the development of individuals who are open to incorporating additional qualities into their identity in addition to those that are deemed strictly “feminine” or “masculine.”

In addition, when designing prevention and intervention efforts for adolescents, the current study’s findings that illustrated associations between mental health outcomes and several demographic variables should be also considered. First, in the context of depression prevention and intervention efforts for females, the associations between higher grade level and lower family income with increased depression should be considered. For both males and females, the relationship between higher grade level and increased alcohol use as well as the associations for male adolescents with higher family income and parents born in the U.S. with increased alcohol use should also be considered to further specify which adolescents to monitor and at what point in their development.

The significant findings related to the interaction of social support x grade level when predicting depression is also important to consider for both females and males. More specifically, it appears that for females, the positive effects of high social support decrease for depressive symptoms as female adolescents enter higher grades and for males, the positive effects of high social support actually increase for depressive symptoms as they enter higher grades. In addition, the negative effects of low social support on depressive symptoms appear to decrease, or decrease the divergence in depression scores, as females increase in grade level. For males, the negative effects of social support appear to increase, or increase divergence in depression scores, as males
enter high grades. These developmental factors may influence decisions as to not only what types of prevention and intervention efforts should be considered in high schools, but also the timing (i.e., grade level) in which they are introduced to males and female students as well.

**Study Limitations**

There are several limitations to the current study. One major limitation is that the study population was fairly homogenous in nature in terms of race/ethnicity, immigration status, and family income level. Therefore, the generalizability of these results should be cautioned. In addition, the current sample was taken from several private religiously affiliated (i.e., Catholic) high schools in the Northeast. It is also unclear whether the current study’s results can be generalized to other public high schools and other high schools within the United States. In addition, the study did not include a measure of sexual orientation, as it was not permitted by the Diocese. This is another limitation as sexual orientation is considered to be an important demographic variable that researchers are called to examine in social science research (e.g., Sell, 2007). In addition, sexual orientation may also be important to examine in the context of the current study as gender atypicality (e.g., not subscribing to heterosexual norms) is associated with less peer support and lowered self-worth during adolescence, two related constructs to the current study (Smith & Leaper, 2005).

In addition to demographic variables, another limitation of the current study was that conformity to gender norms was only examined in terms of femininity in females and masculinity in males. Recent research examining masculinity in females has shown that greater conformity to masculine norms is associated with increased alcohol use during
late adolescence (Iwamoto & Smiler, 2013). In addition, investigations of conformity to feminine norms among males have shown a link between greater conformity and increased mental health concerns such as eating disorders (e.g., Murray & Touyz, 2013). Therefore, the current study does not allow for an examination of how masculinity in females and femininity in males may be associated with adolescent mental health outcomes.

The current study also utilized all self-report measures. Past research has shown that when individuals report mental health outcomes, particularly alcohol use, there may be issues with response bias (e.g., Del Boca & Darkes, 2003). Response bias may occur for several reasons including selective memory of past experiences (e.g., simply remembering positive or negative aspects of experience) and/or intentional or unintentional minimization of symptoms and use. It is important to note that the students were asked sensitive questions related to depressive symptoms and alcohol use at school. While precautions were taken to ensure students’ privacy and comfort (i.e., explaining the confidentiality of the study; asking teachers to position themselves so they could not see the students’ computer screens), the school setting may still have led to some inaccurate reporting and possibly minimizing of depressive symptoms and alcohol use.

In addition to limitations to the study sample and measures, there was also a limitation regarding the study design. The current study provides novel information regarding the function of conformity to gender norms within the Five C’s model of PYD. However, the current study did not examine the directional and transactional relationship of the internal characteristic of conformity to gender norms and the external asset of social support due to the use of regression models.
**Future Research**

The above limitations can be addressed in future research. First, the limitation of the homogeneity of the sample can be addressed through replication of the study with more diverse adolescent samples in terms of race/ethnicity, immigration status, socioeconomic status, sexual orientation, and country region. Second, to measure a wider range of norms for each gender, both conformity to masculine and feminine norms for both males and females could be examined. For example, it would be interesting to examine if and how other aspects of identity during adolescence (e.g., traditional masculinity in females, traditional femininity in males, interests, skills, hobbies) may interact with these norms to buffer their effects on mental health during this developmental stage.

Third, the limitation of self-report measures can be addressed through the addition of informant report measures to corroborate self-report findings. For example, parent and/or teacher reports of adolescents’ depressive symptoms, alcohol use, social support, and PYD may help to combat some of the self-report limitations such as selective memory and minimization of symptoms. In order to foster a greater sense of privacy in reporting on sensitive matters such as depressive symptoms and alcohol use, future studies may want to consider administering measures outside of the school settings (e.g., home computers). Lastly, the limitation related to study design could be addressed through more robust data analytic methods such as structural equation modeling (SEM). The use of SEM would allow for the more nuanced investigation of the transactional relationship between conformity to gender norms and social support.
The current study’s findings and limitations also point to several directions for future inquiry. Continued tracking of gender differences in depression and alcohol use is needed in order to investigate a potential shift in the gender differences in these outcomes. Additionally, it would be interesting to examine what is unique about the time period of adolescence that conformity to gender norms do not relate to depression and alcohol use when these same relationships exist during adulthood. In other words, future research may further examine the extent to which adolescents endorse feminine and masculine norms compared to adults and how that influences mental health outcomes.

Further examination and incorporation of additional internal characteristics and ecological assets will allow for a more nuanced understanding of how both conformity to gender norms and social support contribute to adolescent mental health. For example, a key internal characteristic during adolescence that is associated with both PYD and adaptive behavior is intentional self-regulation (Gestsdottir et al., 2011). Since intentional self-regulation is characterized as selecting specific life goals and seeking strategies to meet these goals, the presence of this characteristic may interact with aspects of identity in influencing health behaviors such as alcohol use. More specifically, intentional self-regulation may interact with specific feminine norms such as investment in interpersonal relationships, which would enable adolescence to use their interpersonal relationships as resources in meeting their goals. Conversely, masculine norms such as self-reliance and dominance may prevent individuals from utilizing strategies such as seeking support from others to meet their goals.

Additional internal characteristics such as spirituality and the ecological assets of religious settings and social support may be examined in future research utilizing the Five
C’s model of PYD to extend the scope of the current study. For example, students in the current sample attended Catholic high schools in the Northeast; however, constructs of religiosity and spirituality were not assessed in the current study. Religiosity and spirituality are both constructs that have been studied within the Five C’s model of PYD. For example, recent research has examined the potential relationship between spirituality and PYD. Within the context of adolescent development, Lerner and colleagues (2008) define spirituality as the internal belief in something greater than oneself, which is considered an internal characteristic. Religiosity can also encompass spirituality, but it is also defined as the participation in an organized denomination, which can be categorized as an ecological asset. Both spirituality and religion have been strongly linked to psychological well-being (e.g., Urry & Poey, 2008). For example, particularly during adolescence, the spiritual practice of meditation can increase emotion regulation (i.e., the ability to monitor, evaluate and modify emotional reactions to accomplish one’s goals), which increases likelihood one will complete goals and gain positive psychological outcomes (Urry & Poey, 2008).

Spirituality is also an important factor that can fuel a particular aspect of PYD known as thriving (Lerner et al., 2008). It is hypothesized that the mechanism that drives the relationship between spirituality and thriving could be a sense of purpose, generosity and/or positive contributions to others (Lerner et al., 2008). Purpose is defined as a stable intention to accomplish something that is meaningful to the self and affects some aspect of the outside world beyond oneself (Mariano & Damon, 2008). Qualitative research has shown that spirituality guides adolescents towards having a purpose, or intention to contribute to society, which can ultimately lead to an actual contribution, which is
another key construct of PYD (Mariano & Damon, 2008). Involvement in a religious community can influence adolescents’ development of shared purpose, which supports the development of a personal sense of purpose (Mariano & Damon, 2008). It is also important to consider the relationship between spirituality, religion, and PYD will likely differ according to specific traditions and cultures (Nasir, 2008). Therefore, the connections between the internal characteristic of spirituality, the ecological asset of religion, and PYD is still an area to be further investigated. More specifically, future research could address the role of spirituality and/or religion as it relates to internal characteristics (e.g., conformity to gender norms) and ecological assets (e.g., social support) and subsequent PYD discussed in the current study.

Additionally, identifying specific circumstances within the context of spirituality and/or religiosity that contribute to PYD according to gender would also be beneficial. There have been some studies that have already begun to examine the gendered effects of religion and spirituality on adolescent development. Findings indicated that while viewing religion as important in one’s life was related to positive outcomes such as school bonding and self-efficacy for males, it was religious attendance that was related to school bonding and self-efficacy for females (Milot & Ludden, 2009). Therefore, it appears that males may benefit from the rules and expectations of a religious institution, while females seem to benefit from the community associated with attending religious services and events (Milot & Ludden, 2009). Although these gender differences have been documented, remaining questions include whether conformity to gender norms, in addition to gender, affects access to the ecological asset of religion and how that in turn impacts adolescents’ development of PYD.
In addition to the context of religion, other potential sources of social support may be examined as additional ecological assets in future studies as well. While the current study examined a composite of perceived family, peer, and romantic partner social support, there are additional sources of social support during adolescence (e.g., teacher, neighborhood, and extended family support) that may also be associated with conformity to gender norms and subsequent psychological outcomes.

For example, past research has shown a strong relationship between teacher support and an array of school-related positive outcomes during adolescence such academic achievement (e.g., Klem & Connell, 2004; Yıldırım, 2012), academic self-efficacy (e.g., Diseth, Danielson, & Samdal 2012), and academic initiative (Danielson, Breivik, & Wold, 2011). More recent research has begun to examine the impact of teacher support on adolescent mental health outcomes such as depression and substance use. Adolescents who experience higher levels of teacher support showed decreased depressive symptoms and increased self-esteem (Reddy et al., 2003) and are less likely to initiate alcohol use (McCarty, Rhew, Murowchick, McCauley, & Stoep, 2012; Samdal, Wold, Klepp & Kannas, 2000). For both male and female adolescents who experience negative life events (e.g., family conflict/divorce, illness of self or family member), perceived teacher support was related to lower depressive symptoms (Possel, Rudsill, Sawyer, Spence, & Bjerg, 2013) and substance use (Murberg & Bru, 2009). More specifically, in a nationally representative sample of high school students, LaRusso and colleagues (2008) found that adolescents who not only reported perceived teacher support, but also felt that their teachers respected their ideas and opinions, reported greater social belonging at school and fewer depressive symptoms. In addition to teacher
support, distal school factors such as school climate have been studied in connection to adolescent mental health. For example, Kidger and colleagues (2012) completed a recent metaanalysis of overall school climate and adolescent mental health. While there is little evidence that the overall school climate impacts adolescent mental health, more proximal factors such as perceived social support and school connectedness led to more positive psychological health outcomes. Therefore, teacher support, in addition to other forms of social support, plays a key role in understanding the manifestation of depression and alcohol use during adolescence. A future research question may investigate the relationship between conformity to gender norms (i.e., internal characteristic) and teacher support (i.e., ecological asset) and its association with PYD and mental health outcomes for both males and females.

In addition, a more specific examination of peer networks may also highlight the unique interplay of this ecological assets in conjunction with internal characteristics such as conformity to gender norms. For example, it would be interesting to investigate constructs of identity such as conformity to gender norms among adolescents’ peer networks to determine its potential effect on adolescents’ own conformity to gender norms (i.e., whether individuals who conform to masculine and/or feminine norms also have peer networks with similar or different levels of conformity to gender norms).

In summary, the current study contributes to the body of existing literature by examining how gender and conformity to gender norms operate within the Five C’s model of PYD and its subsequent consequences for the adolescent mental health outcomes of depression and alcohol use. The inclusion of conformity to gender norms as an internal characteristic within the Five C’s model of PYD helps to extend the model to
include additional aspects of identity development. Results suggest that the associations between conformity to gender norms, social support, PYD, and mental health are enacted differently by gender; therefore, future research and clinical strategies should be attuned to these gender differences during adolescence.
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Dear Parent/Guardian,

Attached you will find a parental/guardian permission form for your child to participate in a research study conducted by a doctoral candidate at Boston College. The research study seeks to learn more about high school student life to promote positive development and mental health. The research study requests that your child complete a brief, anonymous internet survey that will last approximately 30 minutes. Anonymous means that the researcher will not collect any personal information from your child such as his/her name, social security number, address or phone number. The researcher will not be able to link your child’s answers to him/her. The only optional information that we request is an email address if your child would like to be entered into the raffle discussed below. The email address cannot be linked to your child’s answers.

There will be designated times in the day for each student to complete the survey, and your child will not miss classroom instruction while completing the survey. If you would like your child to participate in the survey, please click the following link and complete the form: https://bclynch.qualtrics.com/SE/?SID=SV_6W14910icuQV7hj. After this form is received by the researcher, your child will be able to consent to their participation and gain access to the online survey. After your child completes the survey, they will have the option to be entered into a raffle for several $50 iTunes gift cards.

If you have any questions or concerns regarding the permission form, the survey administration, or the research study in general, please contact the lead researcher, Alyssa Milot, at milot@bc.edu. Thank you for your time and consideration.

Sincerely,

Alyssa Milot, M.A.
Doctoral Candidate
Boston College
Introduction

• Your child is being asked to be in a research study that examines aspects of youth development such as social support, personal characteristics, and mental health.

• Your child was selected as a possible participant because they are a current high school student in the Diocese of X, XX.

• We ask that you read this form and ask any questions that you may have before giving permission for your child to be in the study.

Purpose of Study:

• The purpose of this study is to identify factors in adolescents’ daily lives such as social support, personal qualities such as character, and beliefs regarding gender roles that impact symptoms of depression and alcohol use.

• Participants in this study are high school students from the Diocese of X

Description of Study Procedures:

• If you give permission for your child to be in this study, your child will be asked to participate in a 30 minute survey that is administered online on students’ personal or school computers at school. Before they begin the survey, they will also have the opportunity to decide whether they want to participate in the survey.

Risks to Being in Study:

• There are no reasonable foreseeable (or expected) risks. There may be unknown risks.

Benefits of Being in Study:

• While there are no direct expected benefits for your child’s participation, the results of this study will help to inform future prevention and interventions to help promote positive youth development and mental health.

Payments:

• Your child will have the option of being entered into a drawing for several $50 iTunes gift cards, which will be raffled off approximately one week after the survey.
They will be entered into the raffle even if they choose to withdraw from the study during the survey administration.

**Costs:**
- There is no cost for your child to participate in this research study.

**Confidentiality:**
- The records of this study will be kept private. In any sort of report we may publish, we will not include any information that will make it possible to identify a participant. Research records will be kept in a locked file. Access to the records will be limited to the researchers; however, please note that sponsors, funding agencies, regulatory agencies, and the Institutional Review Board may review the research records.
- Since the survey is confidential, we will not be able to link students’ names with their responses to any of the survey items, including items that ask about depression and alcohol use. For this reason, we will provide students with local mental health resources and encourage them to contact their guidance counselors if they have any questions or concerns about their responses to the survey items.

**Voluntary Participation/Withdrawal:**
- Your child’s participation is voluntary. If you choose not to give permission for your child to participate or if your child does not agree to participate, it will not affect your or your child’s current or future relations with the University or your child’s school.
- Your child is free to withdraw at any time, for whatever reason.
- There is no penalty or loss of benefits for not taking part or for stopping your participation. For example, your child’s grades or school performance will not be affected if he/she chooses to withdraw from the study.

**Contacts and Questions:**
- The researcher conducting this study is Alyssa Milot. For questions or more information concerning this research you may contact her at milot@bc.edu.
- If you have any questions about your child’s rights as a research participant, you may contact: Director, Office for Research Protections, Boston College at (617) 552-4778, or irb@bc.edu

**Copy of Consent Form:**
- You will be given a copy of this form to keep for your records and future reference.

**Statement of Consent:**
- I have read (or have had read to me) the contents of this consent form and have been encouraged to ask questions. I have received answers to my questions. I give my consent for my child to participate in this study. I have received (or will receive) a copy of this form.
Signatures/Dates:

Name of Child (Print Name) : ________________________________

Parent/Guardian (Print Name): ________________________________

Parent/Guardian (Signature): ________________________________ Date _______
Introduction

- You are being asked to be in a research study that looks at aspects of youth development in areas such as social support and mental health.
- You were selected as a possible participant because you are a high school student in the Diocese of X, XX.
- Please read this form and ask any questions that you may have before agreeing to be in the study.

Purpose of Study:

- The purpose of this study is to identify factors in adolescents’ daily lives such as social support, personal qualities such as character, and beliefs regarding gender roles that impact symptoms of depression and alcohol use.
- Other people being asked to be in the study are from your high school and other high schools from the Diocese of X.

Description of Study Procedures:

- If you agree to be in this study, we would ask you to complete an online survey that would take approximately 30 minutes.

Risks to Being in Study:

- There are no reasonable foreseeable (or expected) risks. There may be unknown risks.

Benefits of Being in Study:

- While there are no direct expected benefits for your participation, the results of this study will help to create future programs to help promote positive development and mental health for other high school students.
Payments:
- You will have the option of being entered into a drawing for several $50 iTunes gift cards, which will be raffled off approximately one week after the survey.

Costs:
- There is no cost to you to participate in this research study.

Confidentiality:
- The records of this study will be kept private. We will not let anyone else see personal information about you. Research records will be kept in a locked file. Only the researchers will be able to access the research records – but you should know some officials at Boston College may also ask to see the records as well.
- Since the survey is confidential, we will not be able to link students’ names with their responses to any of the survey items, including items that ask about depression and alcohol use. For this reason, we will provide you with local mental health resources and encourage you to contact your guidance counselors if you have any questions or concerns about your responses to the survey items.

Voluntary Participation/Withdrawal:
- Your participation is voluntary.
- You are free to stop being in the study at any time for any reason.
- There is no penalty if you do not take part or if you decide not to continue being in the study. For example, your grades or future relationship with the University or your school will not be affected if you decide to stop participating in the study. You will also still be entered into the raffle for the iTunes gift cards.

Contacts and Questions:
- The researcher conducting this study is Alyssa Milot. For questions or more information about this research you may contact her at milot@bc.edu.
- If you have any questions about your rights as a research subject, you may contact: Director, Office for Research Protections, Boston College at (617) 552-4778, or irb@bc.edu

Copy of Consent Form:
- You will be given a copy of this form to keep for your records and future reference.

Signatures/Dates

Study Participant (Print Name):

Study Participant (Signature):

Date: __________

☐ I have received a copy of this form for my personal records.
APPENDIX C

Boston College
Department of Counseling, Developmental, and Educational Psychology
Consent to Participate in “Examining the Relationships Between Conformity to Gender Role Norms, Social Support, Positive Youth Development, and Adolescent Mental Health”
Alyssa Milot, M.A.
Consent Ages 18+
IRB Approval Date: March 21, 2013

Introduction
• You are being asked to be in a research study that looks at aspects of youth development in areas such as social support and mental health.
• You were selected as a possible participant because you are a current high school student in the Diocese of X, XX.
• Please read this form and ask any questions that you may have before agreeing to be in the study.

Purpose of Study:
• The purpose of this study is to identify factors in adolescents’ daily lives such as social support, personal qualities such as character, and beliefs regarding gender roles that impact symptoms of depression and alcohol use.
• Other people being asked to be in the study are from your high school and other high schools from the Diocese of X.

Description of Study Procedures:
• If you agree to be in this study, we would ask you to complete an online survey that would take approximately 30 minutes.

Risks to Being in Study:
• There are no reasonable foreseeable (or expected) risks. There may be unknown risks.

Benefits of Being in Study:
• While there are no direct expected benefits for your participation, the results of this study will help to inform future programs to help promote positive youth development and mental health for other high school students.
Payments:
• You will have the option of being entered into a drawing for several $50 iTunes gift cards, which will be raffled off approximately one week after the survey.

Costs:
• There is no cost to you to participate in this research study.

Confidentiality:
• The records of this study will be kept private. We will not let anyone else see personal information about you. Research records will be kept in a locked file. Only the researchers will be able to access the research records – but you should know some officials at Boston College or people who are paying for this study may also ask to see the records as well.
• Since the survey is confidential, we will not be able to link students’ names with their responses to any of the survey items, including items that ask about depression and alcohol use. For this reason, we will provide you with local mental health resources and encourage you to contact your guidance counselors if you have any questions or concerns about your responses to the survey items.

Voluntary Participation/Withdrawal:
• Your participation is voluntary.
• You are free to stop being in the study at any time for any reason.
• There is no penalty if you do not take part or if you decide not to continue being in the study. For example, your grades or future relationship with the University or your school will not be affected if you decide to stop participating in the study. You will also still be entered into the raffle for the iTunes gift cards.

Contacts and Questions:
• The researcher conducting this study is Alyssa Milot. For questions or more information concerning this research you may contact her at milot@bc.edu.
• If you have any questions about your rights as a research subject, you may contact: Director, Office for Research Protections, Boston College at (617) 552-4778, or irb@bc.edu

Copy of Consent Form:
• You will be given a copy of this form to keep for your records and future reference.

Signatures/Dates

Study Participant (Print Name): ____________________________

Study Participant (Signature): ____________________________

Date: ___________

☐ I have received a copy of this form for my personal records.
APPENDIX D

Boston College Doctoral Dissertation Project:
Examining the Relationships Between Positive Youth Development, Gender Role Conformity, Depression, and Alcohol Use

Alyssa Milot, M.A.
Boston College, Lynch School of Education

Teacher Administration Guide

Explanation of Study

• Please explain to students that they have been invited to participate in a confidential research study by Boston College. The goal of the survey is to learn more about high school students’ experiences to help promote positive development and mental health.

Survey Completion & Distribution of Student Assent/Consent Forms

• During a designated time, students will be asked to complete the online survey in the computer lab or on their personal laptops. Please remind students that (1) they may withdraw from the survey at any time and (2) that they will still be entered into the raffle for iTunes gift cards if they wish. (Their responses will not be connected to their email address in any way).

• First, students will locate the folder on their First Class Menu labeled “Student Survey” and click on the folder.

• Next they will click on the link titled “Student Survey.”

• Students will be first directed to a page that gives them the option of entering their email address for the iTunes raffle.

• After students chose whether to enter the raffle, they will be directed to the beginning of the survey.

• At the beginning of the survey, students will complete an assent (ages 17 and below) or a consent (ages 18 and up) form. The student has the option whether to agree to the terms of the survey. If they choose not to participate in the survey, they will be directed out of the survey. If the student chooses to participate, he/she will be directed to begin the survey items.

• Regardless of whether the student agrees to participate, they will be required to check a box that states that they received a copy of the study’s assent (for students ages 17 and below) or consent (for students ages 18 and above) forms. Please distribute these forms to the students at this time, and ask them to take them home with them for future reference.

• It will take students approximately 30 minutes to complete the entire process.

• Please make sure to maintain appropriate physical space from students to allow them ample privacy to complete the confidential survey.
Questions Regarding the Research Study

- Ask students at the beginning and end of the survey period if they have questions regarding the forms or participation in the research study in general. If students have questions, please ask them to hold their questions and refer them to the lead researcher Alyssa Milot. Alyssa will be on site the day of the survey collection to answer questions.

Thank you for your participation!
APPENDIX E

Student Survey

Thank you for choosing to participate in the survey. If you would like to participate in the drawing for a $50 iTunes gift card, please list your email address below. Your answers and your email address will not be linked together.

Email address: _____________________

Please click here to begin the survey: (Survey link)

(Note: Students are then redirected to the assent/consent form and survey, which are in a separate file from the above email request so email addresses and responses cannot be linked together.)

Demographic Items

Select your age:
- 14
- 15
- 16
- 17
- 18
- 19
- 20

Select your grade:
- Freshman
- Sophomore
- Junior
- Senior

Select one:
- Asian/Asian American
- Black/African American
- Caucasian
- Latino
- Bi-racial/multi-racial
- Native American
- Middle Eastern
- Other

Please estimate your family’s yearly income:
- less than $25,000
- $25,000 to $50,000
Select one:
- I was born in the U.S.
- I was not born in the U.S.

Were your parents born in the U.S.?
- Yes
- No

Select your one:
- Male
- Female

(Note: If a student identifies as female, she will be directed to answer items from the Conformity to Feminine Norms Inventory; If a student identifies as male, he will be directed to answer items from the Conformity to Masculine Norms Inventory)
Conformity to Feminine Norms Inventory (Mahalik et al., 2005)

The following pages contain a series of statements about how people might think, feel or behave. The statements are designed to measure attitudes, beliefs, and behaviors associated with both traditional and non-traditional feminine gender roles. For example, the statements are about issues such as appearance, taking care of others, sexuality, and relationships.

**Thinking about your own actions, feelings and beliefs,** please indicate how much you personally agree or disagree with each statement by circling SD for "Strongly Disagree", D for "Disagree", A for "Agree", or SA for "Strongly agree" to the right of the statement.

**EXAMPLE ITEM:**
It is important to let people know they are special

Circle SD if you strongly disagree with the statement.
Circle D if you disagree with the statement.
Circle A if you agree with the statement, or
Circle SA if you strongly agree with the statement

There are no right or wrong responses to the statements. You should give the responses that most accurately describe your personal actions, feelings and beliefs. It is best if you respond with your first impression when answering.

1. It is important to let people know they are special  SD D A SA
2. I feel uncomfortable being singled out for praise  SD D A SA
3. When I am in a romantic relationship, I give it all my energy  SD D A SA
4. Putting energy into friendships is a waste of time  SD D A SA
5. Being mean gets you ahead in life  SD D A SA
6. I tell everyone about my accomplishments  SD D A SA
7. Whether I’m in one or not, romantic relationships are often on my mind  SD D A SA
8. I believe that my friendships should be maintained at all costs  SD D A SA
9. There is nothing wrong with bragging  SD D A SA
10. I pity people who are single  SD D A SA
11. I feel good about myself when others know that I care about them  SD D A SA
12. When I succeed, I tell my friends about it  SD D A SA
13. Having a romantic relationship is essential in life  SD D A SA
14. Being nice to others is extremely important  SD D A SA
15. I don’t go out of my way to keep in touch with friends  SD D A SA
16. It is impossible to always be nice to others  SD D A SA
17. I hate telling people about my accomplishments  SD D A SA
18. I can be happy without being in a romantic relationship  SD D A SA
19. I would feel burdened if I had to maintain a lot of friendships  & SD D A SA
20. I make it a point to get together with my friends regularly  & SD D A SA
21. I always downplay my achievements  & SD D A SA
22. Being in a romantic relationship is important  & SD D A SA
23. I always try to make people feel special  & SD D A SA
24. I am not afraid to tell people about my achievements  & SD D A SA
25. My life plans do not rely on my having a romantic relationship  & SD D A SA
26. If a friendship isn’t working, I’ll end it  & SD D A SA
27. I try to be sweet and nice  & SD D A SA
28. I don’t seek recognition for my efforts  & SD D A SA
29. When I have a romantic relationship, I enjoy focusing my energies on it  & SD D A SA
30. I am not afraid to hurt people’s feelings to get what I want  & SD D A SA
31. I enjoy being in the spotlight  & SD D A SA
32. If I were single, my life would be complete without a partner  & SD D A SA
33. I rarely go out of my way to act nice  & SD D A SA
34. I am only nice to people I like  & SD D A SA
35. I don’t feel guilty if I lose contact with a friend  & SD D A SA
36. I would be ashamed if someone thought I was mean  & SD D A SA
Conformity to Masculine Norms Inventory (Mahalik et al., 2003)

The following pages contain a series of statements about how people might think, feel or behave. The statements are designed to measure attitudes, beliefs, and behaviors associated with both traditional and non-traditional masculine gender roles.

Thinking about your own actions, feelings and beliefs, please indicate how much you personally agree or disagree with each statement by circling SD for "Strongly Disagree", D for "Disagree", A for "Agree", or SA for "Strongly agree" to the left of the statement. There are no right or wrong responses to the statements. You should give the responses that most accurately describe your personal actions, feelings and beliefs. It is best if you respond with your first impression when answering.

1. It is best to keep your emotions hidden  
2. In general, I must get my way  
3. I hate asking for help  
4. I should take every opportunity to show my feelings  
5. I should be in charge  
6. Feelings are important to show  
7. I love to explore my feelings with others  
8. I ask for help when I need it  
9. I bring up my feelings when talking to others  
10. I never share my feelings  
11. Asking for help is a sign of failure  
12. I like to talk about my feelings  
13. I never ask for help  
14. I tend to keep my feelings to myself  
15. I am comfortable trying to get my way  
16. I am not ashamed to ask for help  
17. I tend to share my feelings  
18. It bothers me when I have to ask for help  
19. I hate it when people ask me to talk about my feelings  
20. I prefer to stay unemotional  
21. I make sure people do as I say
Multidimensional Scale of Perceived Social Support (Zimet et al., 1990)

We are interested in how you perceive the following statements. Read each statement carefully. Indicate how you feel about each statement.

Circle “1” if you **Very Strongly Disagree**  
Circle “2” if you **Strongly Disagree**  
Circle “3” if you **Mildly Disagree**  
Circle “4” if you are **Neutral**  
Circle “5” if you **Mildly Agree**  
Circle “6” if you **Strongly Agree**  
Circle “7” if you **Very Strongly Agree**

1. I have a girlfriend/boyfriend who is around when I am in need.  
2. I have a girlfriend/boyfriend with whom I can share my joys and sorrows.  
3. My family really tries to help me.  
4. I get the emotional help and support I need from my family.  
5. I have a girlfriend/boyfriend who is a real source of comfort to me.  
6. My friends really try to help me.  
7. I can count on my friends when things go wrong.  
8. I can talk about my problems with my family.  
9. I have friends with whom I can share my joys and sorrows.  
10. There is a girlfriend/boyfriend in my life who cares about my feelings.  
11. My family is willing to help me make decisions.  
12. I can talk about my problems with my friends.
Very Short Form of Positive Youth Development for older adolescents (PYD-VSF; Geldhof et al., 2014)

The following pairs of sentences are talking about two kinds of kids. We’d like you to decide whether you are more like the kids on the left side, or you are more like the kids on the right side. Then we would like you to decide whether that is only sort of true for you or really true for you and mark your answer.

FILL IN ONLY ONE CIRCLE FOR EACH PAIR OF SENTENCES.

Sample

<table>
<thead>
<tr>
<th></th>
<th>Really True of Me</th>
<th>Sort of True of Me</th>
<th></th>
<th>Sort of True of Me</th>
<th>Really True of Me</th>
</tr>
</thead>
<tbody>
<tr>
<td>(a)</td>
<td>☐</td>
<td>☐</td>
<td>BUT</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td></td>
<td>Some kids would rather play outdoors in their spare time.</td>
<td>Other kids would rather watch T.V.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

2. ○ ○ Some teenagers have a lot of friends. BUT Other teenagers don’t have very many friends. ○ ○

4. ○ ○ Some teenagers do very well at their class work. BUT Other teenagers don’t do very well at their class work. ○ ○

5. ○ ○ Some teenagers feel that they are better than others their age at sports. BUT Other teenagers don’t feel they can play as well. ○ ○

6. ○ ○ Some teenagers are happy with BUT Other teenagers are often not ○ ○
<table>
<thead>
<tr>
<th></th>
<th></th>
<th>themselves most of the time.</th>
<th>happy with themselves.</th>
</tr>
</thead>
<tbody>
<tr>
<td>9.</td>
<td>O</td>
<td>O</td>
<td>Some teenagers do things they know they shouldn’t do.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>BUT</td>
<td>Other teenagers hardly ever do things they shouldn’t do.</td>
</tr>
<tr>
<td>10.</td>
<td>O</td>
<td>O</td>
<td>Some teenagers really like their looks.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>BUT</td>
<td>Other teenagers wish they looked different.</td>
</tr>
</tbody>
</table>

How much do you agree or disagree with the following?

<table>
<thead>
<tr>
<th></th>
<th>Strongly Agree (5)</th>
<th>Agree (4)</th>
<th>Neutral (3)</th>
<th>Disagree (2)</th>
<th>Strongly Disagree (1)</th>
</tr>
</thead>
<tbody>
<tr>
<td>13. All in all, I am glad to be me.</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
</tbody>
</table>

How important is each of the following to you in your life?

<table>
<thead>
<tr>
<th></th>
<th>Not important (1)</th>
<th>Somewhat important (2)</th>
<th>Not sure (3)</th>
<th>Quite important (4)</th>
<th>Extremely important (5)</th>
</tr>
</thead>
<tbody>
<tr>
<td>15. Helping to make the world a better place to live in.</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>18. Accepting responsibility for my actions when I make a mistake or get in trouble.</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
</tbody>
</table>

Think about the people you know well. How do you think they would rate you on each of these?

<table>
<thead>
<tr>
<th></th>
<th>Not at all like me (1)</th>
<th>A little like me (2)</th>
<th>Somewhat like me (3)</th>
<th>Quite like me (4)</th>
<th>Very much like me (5)</th>
</tr>
</thead>
<tbody>
<tr>
<td>20. Enjoying being with people who are of a different race than I am.</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
</tbody>
</table>
How well do each of these statements describe you?

<table>
<thead>
<tr>
<th>Statement</th>
<th>Not well</th>
<th>(1)</th>
<th>(2)</th>
<th>(3)</th>
<th>(4)</th>
<th>(5) Very well</th>
</tr>
</thead>
<tbody>
<tr>
<td>21. When I see someone being taken advantage of, I want to help them.</td>
<td></td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>24. When I see someone being picked on, I feel sorry for them.</td>
<td></td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>26. When I see another person who is hurt or upset, I feel sorry for them.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

How much do you agree or disagree with the following?

<table>
<thead>
<tr>
<th>Statement</th>
<th>Strongly agree</th>
<th>Agree</th>
<th>Not sure</th>
<th>Disagree</th>
<th>Strongly disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>27. I get a lot of encouragement at my school.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>30. In my family I feel useful and important</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>31. Adults in my town or city make me feel important.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

How true is each of these statements for you?

<table>
<thead>
<tr>
<th>Statement</th>
<th>Always true</th>
<th>Usually true</th>
<th>Sometimes true</th>
<th>Seldom true</th>
<th>Almost never true or never true</th>
</tr>
</thead>
<tbody>
<tr>
<td>33. I feel my friends are good friends.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>


Center for Epidemiologic Studies Depression Scale (CES-D); Radloff, 1991

Below is a list of ways you might have felt or behaved. Please tell me how often you have felt this way during the past week.

<table>
<thead>
<tr>
<th>Question</th>
<th>During the Past Week</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Rarely or none of the time (less than 1 day)</td>
</tr>
<tr>
<td>1. I was bothered by things that usually don’t bother me.</td>
<td>○</td>
</tr>
<tr>
<td>2. I did not feel like eating; my appetite was poor.</td>
<td>○</td>
</tr>
<tr>
<td>3. I felt that I could not shake off the blues even with help from my family or friends.</td>
<td>○</td>
</tr>
<tr>
<td>4. I felt I was just as good as other people.</td>
<td>○</td>
</tr>
<tr>
<td>5. I had trouble keeping my mind on what I was doing.</td>
<td>○</td>
</tr>
<tr>
<td>6. I felt depressed.</td>
<td>○</td>
</tr>
<tr>
<td>7. I felt that everything I did was an effort.</td>
<td>○</td>
</tr>
<tr>
<td>8. I felt hopeful about the future.</td>
<td>○</td>
</tr>
<tr>
<td>9. I thought my life had been a failure.</td>
<td>○</td>
</tr>
<tr>
<td>10. I felt fearful.</td>
<td>○</td>
</tr>
<tr>
<td>11. My sleep was restless.</td>
<td>○</td>
</tr>
<tr>
<td>12. I was happy.</td>
<td>○</td>
</tr>
<tr>
<td>13. I talked less than usual.</td>
<td>○</td>
</tr>
<tr>
<td>15. People were unfriendly.</td>
<td>○</td>
</tr>
<tr>
<td>16. I enjoyed life.</td>
<td>○</td>
</tr>
<tr>
<td>17. I had crying spells.</td>
<td>○</td>
</tr>
<tr>
<td>18. I felt sad.</td>
<td>○</td>
</tr>
<tr>
<td>19. I felt that people dislike me.</td>
<td>○</td>
</tr>
<tr>
<td>20. I could no get “going.”</td>
<td>○</td>
</tr>
</tbody>
</table>
Add Health measures of frequency of alcohol use (1 item) and drunkenness (problematic drinking; 2 items; Harris et al., 2009; Tanner-Smith, 2012)

During the last 12 months, how often did you usually have any kind of drink containing alcohol? By a drink we mean half an ounce of absolute alcohol (e.g., a 12 ounce can or glass of beer or cooler, a 5 ounce glass of wine, or a drink containing 1 shot of liquor). Choose only one.

- Every day
- 5 to 6 times a week
- 3 to 4 times a week
- Twice a week
- Once a week
- 2 to 3 times a month
- Once a month
- 3 to 11 times in the past year
- 1 or 2 times in the past year
- I did not drink alcohol in the past year.

Over the past 12 months, on how many days have you gotten drunk or “very, very high” on alcohol?

- Every day or almost every day
- 3-5 days a week
- 1 or 2 days a week
- 1 or 3 days a month
- Once a month or less (3-12 times in the past 12 months)
- 1 or 2 days in the past 12 months
- Never

Over the past 12 months, on how many days did you drink five or more drinks in a row?

- Every day or almost every day
- 3-5 days a week
- 1 or 2 days a week
- 1 or 3 days a month
- Once a month or less (3-12 times in the past 12 months)
- 1 or 2 days in the past 12 months
- Never
Depression and excessive alcohol use are mental health issues that are common in teenagers and adults. While it is common for teenagers to feel occasionally blue or sad, depression often interferes with your daily life and affects your relationships with those around you. Similarly, it is also common for teenagers to experiment with substances such as alcohol; however, when teenagers’ substance use begins to impact their daily lives and relationships with others, it can become a major concern. There have been many studies that examine what factors predict and prevent depression and excessive alcohol use in teenagers. The purpose of this study was to predict high school students’ symptoms of depression and alcohol use through a greater understanding of their sources of support from parents, peers, teachers, and girlfriends/boyfriends, beliefs of how they should act based on their gender, and positive characteristics that they may have such as confidence and caring for others.


If you have questions about the study please contact the lead researcher Alyssa Milot at milot@bc.edu. If this study brought up any questions or concerns related to your own thoughts, feelings, and/or substance use, please contact your guidance counselor. You can also contact the below organizations for additional mental health resources and counseling services.

Thank you very much for your participation.

*Mental health organizations were omitted from the appendix to maintain confidentiality of the geographic area that was sampled.*