

RELATIONAL SPIRITUALITY IN ADOLESCENTS:  
EXPLORING ASSOCIATIONS WITH DEMOGRAPHICS,  
PARENTING STYLE, RELIGIOSITY, AND PSYCHOPATHOLOGY

by

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## ABSTRACT

### RELATIONAL SPIRITUALITY IN ADOLESCENTS: EXPLORING ASSOCIATIONS WITH DEMOGRAPHICS, PARENTING STYLE, RELIGIOSITY, AND PSYCHOPATHOLOGY

Alethea Desrosiers

This study sought to investigate the construct of *Relational Spirituality* through: 1) identifying its correlates among demographic, spiritual, and parenting variables in a large, religiously and ethnically diverse sample of adolescents, and 2) investigating its associations with highly prevalent forms of psychopathology in adolescents. Participants were 615 adolescents representing a broad range of ethnicities (Caucasian, African-American, Asian-American, Latino, and multiracial, and other) and religious denominations (Catholic, Protestant, Jewish, Atheist, Agnostic, Buddhist, and other). The Brief-Multidimensional Measure of Spirituality/Religiosity, the Mysticism Scale, the Beck Depression Inventory and the Beck Anxiety Inventory were used to measure spirituality, depression, and anxiety, respectively, while frequency of alcohol use was ascertained with a single item. Parental relationship quality was measured using the Parental Bonding Instrument and the Parental Transparency Scale. Given that rates of depression, anxiety and spirituality have been demonstrated to be higher in girls than boys, gender differences in patterns of association were examined with respect to each type of psychopathology. Results of stepwise regression analyses revealed that

exclusively in females, Relational Spirituality accounted for a significant portion of the variance in depressive symptomatology above and beyond demographic, parenting, and religious variables. Stepwise regression analyses also showed that Relational Spirituality contributed to a significant portion of variance in alcohol use above and beyond other correlated variables in both boys and girls. In contrast, Relational Spirituality did not contribute to the variance in anxiety; rather, the quality of religious social support was protective against anxious symptomatology. Findings suggest that Relational Spirituality is differentially associated with widespread forms of psychopathology in adolescents, and our understanding of these disorders may be enhanced through a spiritual perspective.

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## Chapter I

### INTRODUCTION & LITERATURE REVIEW

The nature and development of spirituality and religiosity in adolescents has been increasingly investigated throughout the literature (Smith, 2005; Roehlkepartain, King, Wagener & Benson, 2006; Paloutzian & Park, 2005), and religiosity appears to play a vital role in the lives of adolescents. Results of national survey data collected by the Gallup Organization indicated that approximately 76 % of adolescents believe in a personal God and 74% pray at least occasionally (Gallup and Bezilla, 1992). In another nationally representative sample of 8<sup>th</sup>-12<sup>th</sup> graders, 60% of youth reported that religion was an important part of their life, and 50% attended religious services regularly (Wallace, Forman, Caldwell, & Willis, 2003). More recently, Smith (2005) found that 84% of adolescents believe in God, 55% have made a personal commitment to live their life for God, and 65% pray alone at least once per week. Furthermore, the majority of adolescents experience God in a personal way; 65 % report viewing God as a personal being involved in the daily lives of people, and 71% feel 'somewhat close' to 'extremely close' to God, with 36% reporting a 'very close' to 'extremely close' relationship to God (Smith, 2005).

The salutary effects of spirituality and religiosity have been studied extensively in both adults and adolescents. Higher levels of spirituality have been associated with many prosocial outcomes in adolescents, including positive identity development (Dowling, 2004; Markstrom, 1999; Furrow, King, & White, 2004), overall sense of well-being and life satisfaction (Cohen, 2002;

Miller & Kelly, 2007), and reduced risk of delinquency (Benda & Corwyn, 1997; Powell, 1997), substance abuse (Miller, Davies, & Greenwald, 2000; Smith, 2005; Smith & Faris, 2002), and psychopathology (Miller & Gur, 2002; Pearce, Little & Perez, 2003). However, the ability to draw inferences and comparisons across studies is limited by the tendency to rely on single-item measures of religiosity/spirituality or to focus only on specific religious dimensions, such as religious behavior or religious beliefs. Considering that associations between spirituality and various indicators of mental health, well-being, and social functioning also differ according to dimensions, multidimensional analyses of spirituality are essential for understanding the protective qualities of spirituality in a more fine-grained and comprehensive way.

Though spirituality and religiosity are often closely interwoven, there are important distinctions between these terms, prompting initial conceptual clarification. Past definitions often describe religion as a system of beliefs in a divine power, including individual and communal practices of worship directed towards this higher power. Spirituality more often includes a personalized focus on sacred experience regardless of adherence to a specific religious tradition. For example, spirituality has been defined as “that which is involved in contacting the divine with the Self or self” (Falberg, 1991, p. 275). In their review of the meanings of religiousness and spirituality, Zinnbauer and Pargament (2005) suggest that religiousness and spirituality are both multi-level constructs that include biological, affective, cognitive, moral, relational,

individual, social and cultural aspects, but religiousness is more frequently associated with social phenomena, while spirituality is associated with individual phenomena.

In the current study, spirituality is defined as a sense of closeness with G-d, feelings of inter-connectedness with the world or an awareness of a transcendent dimension, while religiosity is defined as commitment to a system of beliefs and worship which may include personal and communal practices. A spiritual experience may occur within a religious meaning system through the practice of religion, or it may occur outside of a religious system of meaning (for instance in relation to nature or through lived good works). This conceptualization of religiousness and spirituality is congruent with that espoused by Zinnbauer, in which spirituality and religiousness are both defined as the personal or communal search for the sacred, but religiousness is characterized by a search that unfolds within an organized/established faith tradition (Zinnbauer & Pargament, 2005).

#### *Demographics and Adolescent Religiosity/Spirituality*

Of the studies examining associations between demographic variables, such as gender, race, age, socioeconomic status (SES), and religious affiliation, and adolescent spirituality/religiosity, results suggest that several demographic variables are linked with religiousness. Perhaps most notably, a strong relationship between gender and spirituality has been demonstrated repeatedly. Adolescent girls, as compared with adolescent boys, tend to be moderately higher in social religiosity (church attendance and interaction with other

religious individuals), forgiveness (including regard of other people as G-d regards us), unvengefulness (absence of desire to retaliate), and thankfulness (gratitude towards G-d). Boys overall tend to show a greater tendency to view “G-d as Judge” and to regard the rules within religious order as binding (Kendler, Liu, Gardner, McCullough, Larson, & Prescott, 2003; Taminien, 1994). Findings from the 1995-1997 World Values Surveys consistently showed strong gender differences in church attendance, belief in life after death, and frequency of prayer, with females reporting higher levels than males on each dimension (Miller & Stark, 2002). Furthermore, gender differences in positive religious coping have also been shown, with higher levels of religious coping being linked with female status (Bjorck & Cohen, 1993; Ferraro & Koch, 1994; Pargament, 1997; Park & Cohen, 1993).

Nationally representative samples of adolescents and young adults show that adolescent girls as compared with adolescent boys exhibit higher levels of general religiosity, broadly measured (Gallup & Bezilla, 1992; Smith, 2005). Relative to boys, girls regard religion as more important and attend services more often (Wallace, Forman, Caldwell, & Willis, 2003). In college students, Gallup and Bezilla (1992) found that 66% of females as compared to 44% of males identified religious beliefs as very important in their lives. Smith (2005), defining religiosity in terms of religious service attendance, importance of religious faith in shaping daily life, personal commitment to G-d, involvement in youth groups, frequency of praying alone, and closeness to G-d, found that girls scored significantly higher on all religiosity variables. Among adolescents

surveyed in Monitoring the Future (1976-2003), 68% of 12<sup>th</sup> grade girls reported that religion is “pretty” important or “very” important to them, while 57% of 12<sup>th</sup> grade boys reported the same (Roehlkepartain, King, Wagener, & Benson, 2006).

With respect to race, African-American youth consistently report higher levels of religiosity than Caucasian youth (Donahue & Benson, 1995; Markstrom, 1999; Gunnoe & Moore, 2002). In both nationally representative samples and smaller regional samples, African-American adolescents report higher importance of religion, more frequent church attendance (Wallace, Forman, Caldwell, & Willis, 2003; Johnston, Bachman, & O’Malley, 1999; Smith, 2005) and also higher levels of private religious practice (prayer, reading the Bible), self-ranked religiousness, and congregational support (Pearce et al., 2003). Additionally, using data from a nationally representative sample, Smith (2005) found that African-American adolescents are also higher than their Caucasian peers on closeness to God and frequency of praying alone. Studies have also indicated that Hispanic adolescents tend to be somewhat more religious/spiritual than Caucasian adolescents (Benson, 1993; Wallace et al., 2003; Smith, 2005) and Asian-Americans tend to be less religious than Caucasians (Smith, 2005).

In contrast to race, relationships between spirituality and both SES and age are less apparent. Smith (2005) reported that SES was not a significant predictor of variance in any dimension of spirituality/religiosity (frequency of prayer, frequency of church attendance, closeness to God, importance of

religion), but in a smaller sample of adolescents from New England, Pearce et al. (2003) found that lower SES was associated with higher religiosity, private religious practice, and congregational support. Other studies support results suggesting that there is no clear pattern between SES and religiosity (Regenerus, Smith, & Fritsch, 2003; Wallace et al., 2003; ), although Smith (2005) found that social class variables were not significantly associated with adolescent religiosity, with the exception that adolescents with more highly educated parents were significantly less likely to report committing their lives to God. Overall, with respect to age, religiosity/spirituality, especially frequency of church attendance, appears to decline slightly with age (Regenerus, Smith, & Fritsch, 2003; Wallace et al., 2003).

Similarly, associations between spiritual/religious dimensions and religious affiliation have been investigated to a much lesser extent and findings are somewhat inconclusive. For example, in a study of depressed mothers and offspring identifying as Catholic or Protestant, no relationship was found between denomination and either importance of religion or frequency of church attendance in offspring (Miller, Warner, Wickramaratne, & Weissman, 1997). Among adolescents in the National Comorbidity Study, Miller, Davies, and Greenwald (2000) found that personal devotion and personal conservatism was highest for fundamental Protestants, followed by Baptists, mainline Protestants, and Catholics. However, whether these differences were statistically significant was not reported. Moreover, Smith (2005) reported that closeness to God was highest among black Protestants and conservative Protestants (50% indicated

feeling very or extremely close to God), followed by mainline Protestants and then Catholics. Jewish adolescents were lowest on closeness to God, with only 10% reporting that they felt very or extremely close to God. Additionally, it is noteworthy that of the studies exploring level of spirituality across religious affiliation, adolescents representing Buddhist, Hindu, and Muslim traditions have been largely absent from comparisons.

#### *Parental Relationships and Adolescent Religiosity/Spirituality*

While parental religiosity/spirituality has been shown to be a strong predictor of religiosity in children (Miller, Warner, Wickramaratne, & Weissman, 1997; Smith, 2005; King, Elder, & Whitbeck, 1997; Gunnoe & Moore, 2002; Boyatzis, Dollahite, & Marks, 2006), the current study focuses on the associations between the parent-child relationship and adolescent spirituality. The quality of parental relationships is increasingly thought to serve as a conduit for the intergenerational transmission of religious beliefs and practices and to establish a context in which personal spiritual exploration in adolescents may be embraced and supported or negated (Smith, 2005; Kelley, Athan, & Miller, 2007). For instance, parental warmth and emotional closeness have been positively correlated with adolescent religiosity and adoption of parental religious practices (Ozorak, 1989; Potvin & Lee, 1982), and parental acceptance has been shown to moderate the transmission of parental religious beliefs and practices (Bao, Whitbeck, & Conger, 1999). In a study on religious involvement in rural youth, King, Elder, and Whitbeck (1997) reported that highly religious youth are more strongly identified with their parents and



experience higher levels of parental warmth than their less religious or non-religious peers. Giesbrecht (1995) found that an authoritative and supportive parenting style fostered intrinsic commitment among adolescents, and parental religious commitment was not significantly related to adolescent religious commitment. Moreover, authoritative parenting has consistently been positively associated with adolescent religiosity (Gunnoe, Hetherington, & Reiss, 1999; Wilcox, 1998; Weigert & Thomas, 1972).

Parental openness to discussion and questioning also appear to play an important role in adolescent spiritual and religious development (Boyatzis & Janicki, 2003; Dollahite & Marks, 2005; Kelley, Athan, & Miller, 2007). In a study investigating adolescents' personal experience of God (experiencing God's forgiveness and help) and importance of faith, family communication demonstrated the strongest predictive power in relation to importance of religion and experience of God (King, Furrow, & Roth, 2002). Similarly, Flor and Knap (2001) found that sustained discourse on religion between parents and adolescents was strongly related to how the adolescent felt about religion, namely, parental dyadic discussions predicted religious behavior and importance of religion in adolescents. Finally, the retrospective reports of adults indicate that conversations about religion in childhood were important in developing and internalizing their religious beliefs (Dudley & Wisbey, 2000).

#### *Spirituality and Depression in Adolescents*

One highly robust protective factor against depression identified thus far, broadly defined, is spirituality (Miller and Kelley, 2006 for an overview).

Within the dimension of religious action, defined as church attendance and religious belief, adolescents whose responses placed them in the “frequent church attenders-high spiritual support” range had the lowest mean depression scores (Wright, Frost, & Wisecarver, 1993). The protective qualities of religious service attendance and religious social support have been demonstrated by others studies as well. Pearce, Little, and Perez (2003) found that frequency of church attendance and self-ranked religiosity were both negatively correlated with depressive symptoms in adolescents, while private religious practice (i.e., reading the bible, prayer) was not associated with depression. Furthermore, the experience of religious social support (i.e., congregation support, congregation problems) accounted for a significant, though moderate, amount of variance in depressive symptoms in adolescents above and beyond that accounted for by demographics and other religiosity variables. Spirituality as delineated by existential well-being, religious well-being, and total spiritual well-being has been associated with significantly fewer depressive symptoms in adolescents as well (Cotton, Larkin, Hoopes, Cromer, & Rosenthal, 2005).

Given the disparate gender rates in adolescent onset of depression (Angold, Costello, & Worthman, 1998; Aube, Fichman, Saltaris, & Koestner, 2000; Ge, Lorenz, Conger, Elder, & Simons, 1994; Kubik, Lytle, Birnbaum, Murray, & Perry, 2003) it is not surprising that gender differences in the protective qualities of spirituality with respect to depression in adolescents have also emerged throughout the literature. Personal devotion, defined as a personal

relationship to the divine, was associated with a 32-43% decrease in adolescent females' depression post-puberty (Miller & Gur, 2002), a finding that is consistent with research on adult women (Kendler, Gardner, & Prescott, 1997). Coping with life stressors by turning to religion in a personal manner (i.e., praying, talking to a priest) and by staying connected with friends predicted lower levels of depressive symptoms at five-year follow-up in adolescent females, but not in adolescent males (Feldman, Fisher, Ransom, & Dimiceli, 1995). From an inter-generational perspective, in a ten-year follow-up study of offspring of depressed mothers, maternal personal sense of spirituality was protective against depression for daughters, while maternal denomination was protective against depression for sons (Miller, Warner, Wickramaratne, & Weissman, 1997). Taken together, this pattern of findings seems to suggest that spirituality experienced in a personal way through a relationship to G-d may be uniquely protective against depression in females.

#### *Spirituality and Alcohol Use in Adolescents*

Spirituality, including spiritual activities, coping, beliefs, and a sense of connection to a higher power, has been negatively correlated with alcohol use in diverse adolescent and young adult samples (Ritt-Olson et al., 2004; Leigh, Bowen, & Marlatt, 2005). Religiosity as measured by belief in G-d and use of religious beliefs and prayer to cope with daily problems has also been negatively correlated with overall alcohol use (Wills, Yaeger, & Sandy, 2003). Within the rubric of spirituality and religiosity, several specific dimensions have been shown to protect against alcohol use as well.

Regarding specific dimensions of religiosity, importance of religion has consistently shown inverse associations with alcohol use. In nationally representative samples, youth who were more religiously devoted were less likely to drink alcohol and to drink to get drunk (Smith, 2005; Smith & Faris, 2002). Similarly, adolescents who considered religion to be highly important were significantly less likely to report alcohol use (Miller, Wiessman, Gur, & Adams, 2001; Wills, Yaeger, & Sandy, 2003) or to engage in binge drinking (Pirke & Richter, 2006). Frequency of church attendance and degree of religious participation has also been inversely related to alcohol intake (Miller et al., 2001; Hodge, Cardenas, & Montoya, 2001).

More personal dimensions of spirituality and religiosity have also demonstrated protective qualities with respect to alcohol use. Personal devotion, defined as a personal relationship with the divine, predicted lower levels of alcohol use in a nationally representative sample of adolescents (Miller, Davies, & Greenwald, 2000), a finding which has also emerged in the adult literature on religiosity and alcohol use (Kendler, Gardner, & Prescott, 1997). Closely related to personal devotion, personal religiosity, which encompasses religious importance, religious beliefs, spirituality, and forgiveness, contributed uniquely to frequency of alcohol, with higher levels of personal religiosity predicting lower levels of drinking (Walker, Ainette, Wills, & Mendoza, 2003).

*Spirituality and Anxiety in Adolescents*

The relatively few studies focusing on associations between spirituality/religiosity and anxiety in adolescents have yielded differing results. Schapman and Inderbitzen-Nolan (2002) reported that more religious involvement (i.e. church attendance, prayer, reading the Bible) was not associated with anxious symptomatology. Also, spirituality as a global construct (i.e., belief in sacredness of life, altruism, inner experience, behavioral expression) was not predictive of anxiety in a sample of young undergraduates (Young, Cashwell, & Shcherbakova, 2000). However, other findings suggest that a stronger sense of religiosity, as defined by religious commitment, prayer life, and relating to others in a religious community, is associated with lower levels of anxiety (Harris, Schoneman, & Carrera, 2002). Gender differences in associations between spirituality and anxiety have also emerged, with differences corresponding to specific spiritual dimensions. In a study of late adolescents and young adults, intrinsic religious orientation, meaning “lived” religion and internalization of religious beliefs, was inversely related to anxiety in females alone, while frequency of prayer was negatively correlated with anxiety in both males and females (Maltby, Lewis, & Day, 1999).

#### *Relational Spirituality*

While a range of spiritual and religious dimensions have demonstrated protective qualities in adolescents, an overview of the literature suggests that a direct, personal relationship with God is one of the most robust protective factors against prevalent forms of psychopathology in adolescents, specifically, depression and alcohol use, but not anxiety (Desrosiers & Miller, 2007;

Desrosiers and Miller, 2008; Miller & Gur, 2002; Miller, Davies, & Greenwald, 2000). In an effort to encompass consistent findings from previous studies underscoring the protective effects of a personal connection with God, Desrosiers and Miller (2007) posited the notion of *Relational Spirituality*. Specifically, Relational Spirituality is defined as the self in relationship with G-d or the Universe (broadening the definition to include non-theists). A sense of Relational Spirituality is characterized by a dynamic, personal relationship with G-d, a tendency to turn to G-d or the Universe for guidance, and the belief that G-d is ever-present in daily life experience. As such, Relational Spirituality may be postulated to include three subscales: daily spiritual experiences, positive religious coping, and forgiveness, all of which capture an aspect of relational experience with G-d or experience guided by relationship with G-d. For example, positive religious coping incorporates the idea that daily experience can be organized and understood through dialogue with G-d. Similarly, forgiveness has been previously formulated as a spiritual approach toward interpersonal relationships, as a sense of the self in relation to another person under G-d (McCullough, Bono, & Root, 2005). Within this framework of understanding, the nature of the relationship with G-d may extend to shape daily relationships with fellow humans.

Given that differential patterns have emerged in associations between Relational Spirituality depression, alcohol use, and anxiety, respectively, it appears that Relational Spirituality may operate as a unique protective factor for particular disorders in adolescents (Desrosiers & Miller, 2007; Desrosiers &

Miller, 2008). Extending this concept further, findings from previous research on the protective qualities of Relational Spirituality suggest that a lack of a personally experienced, dyadic relationship with God may generate vulnerability for developing depression or substance use disorders, but not anxiety disorders. With respect to anxiety in adolescents, religious social support (congregation benefits and congregation problems) appears to be more important in protecting against anxious symptomatology (Desrosiers & Miller, 2008). Additionally, protective qualities of Relational Spirituality have been shown to differ according to gender, specifically, Relational Spirituality is uniquely protective against depression for girls, and compared with boys, girls report higher levels of Relational Spirituality overall (Desrosiers & Miller, 2007). Taken together, these findings raise the possibility of developing a spiritual understanding of disorders and might potentially be useful in guiding treatment and intervention efforts, thus underscoring the importance of elucidating additional demographic, psychosocial, and religious correlates of relational spirituality.

### *Purpose*

The purpose of the present study is to investigate Relational Spirituality (i.e., daily spiritual experiences, religious coping, and forgiveness) through: 1) identifying its correlates among demographic, spiritual, and parenting variables in a large, religiously and ethnically diverse sample of adolescents, and 2) conducting a more fine-grained analysis of its associations with several highly prevalent forms of psychopathology in adolescents. In the first wave of the

study, correlations between Relational Spirituality and both demographic variables (i.e., gender, age, race, SES, and religious affiliation) and other spiritual/religious variables (i.e., private religious practice, public religious practice, congregation benefits, congregation problems, mysticism, and quest) will be investigated. Associations between Relational Spirituality and parenting style, including parental bonding and parental transparency, will also be explored in the first wave. Next, in the second wave, associations between Relational Spirituality and psychopathology (depression, alcohol use, and anxiety) will be reexamined while controlling for demographic, religiosity/spirituality, and parenting variables found to be correlated with Relational Spirituality in wave one. Considering that gender differences in depression (Angold, Costello, & Worthman, 1998; Aube, Fichman, Saltaris, & Koestner, 2000; Ge, Lorenz, Conger, Elder, & Simons, 1994; Kubik, Lytle, Birnbaum, Murray, & Perry, 2003) and anxiety (Roberts, Roberts, & Xing 2007; Romano, Tremblay, Vitaro, Zoccolillo, & Pagani, 2001; Lewinsohn, Gotlib, Lewinsohn, Seeley, & Allen, 1998; *Mental Health*, 1999) are prevalent in adolescents and also that girls tend to show higher levels of spirituality/religiosity than boys (Smith, 2005; Gallup & Bezilla, 1992; Roehlkepartain et al., 2006; Wallace et al., 2003), the third wave will consist of exploring differential patterns of association according to gender.



## Chapter II

### METHOD

#### *Participants*

Participants were 615 adolescents representing a broad range of ethnicities (Caucasian, African-American, Asian-American, Latino, and multiracial, and other) and religious denominations (Catholic, Protestant, Jewish, Atheist, Agnostic, Buddhist, and other) (see Table 1). The age of participants ranged from 11-23 years ( $M = 15.73$  years,  $SD = 2.22$ ). The inclusion of the 60 participants aged 19-23 is justified by research suggesting that the issues and transitions characteristic of adolescents are continuing into the early 20s and to bridge research on adolescent religion/spirituality with literature on “emerging adulthood” (Arnett, 2000; Arnett & Tanner, 2006). The sample included 190 adolescents (31%) who completed the questionnaire online and 425 adolescents (69%) who completed a paper and pencil version. No differences in reporting were found based on method of survey completion, but online participants represented a higher socio-economic bracket (Desrosiers & Miller, 2007).

Table 1

*Demographic Characteristics of the Sample*

Characteristic	%	N
<b>Gender</b>		
Female	58.7	361
Male	41.0	252
<b>Age</b>		
11 yrs	1.8	11
12 yrs	10.6	65
13 yrs	10.2	63
14 yrs	11.6	71
15 yrs	14.6	90
16 yrs	16.6	102
17 yrs	11.4	70
18 yrs	13.5	83
19-23 yrs	9.8	60
<b>Ethnicity</b>		
White	42.6	262
African-American	14.6	90
Asian-American	17.7	109
Latino	14.6	90
Mixed	5.4	33
Other	3.4	21
<b>Religious Affiliation</b>		
Catholic	18.4	113
Protestant	27.8	171
Jewish	12.2	75
Muslim	5.7	35
Agnostic	8.5	52
Buddhist	10.2	63
Other	14.1	87
<b>Household Income (annual)</b>		
Less than \$30,000	16.7	103
\$30,000-49,000	16.1	99
\$50,000-75,000	15.9	98
\$75,000 and above	18.9	116

*Note.*  $N = 615$  for the total sample.

*Note.* Household Income categories reflect missing data.

### *Procedure*

Participants were recruited from various church groups, youth organizations, schools and camps primarily in the New York City Metropolitan area, New Jersey, Illinois, and San Francisco. The sample was purposefully targeted in attempt to reflect diversity in religious affiliation, ethnicity, age and socioeconomic status, and therefore oversampled minority ethnic and religious groups. Youth leaders, principals, camp counselors or other relevant administrative personnel were contacted via a letter explaining the purpose and intent of the study. Before completing the questionnaire, all participants provided informed consent and signed a participant's rights form, and participants were treated in accordance with APA ethics and IRB approval (American Psychological Association, 2002). Adolescents who volunteered for the study received compensation in the form of a \$10 book store gift card (funding provided by the William T. Grant Foundation). Online participants were ascertained through the personal and professional networks of research assistants supervised by the Principal Investigator, as well as through advertisements posted on search engines and popular teen religion websites. Internet subjects were not remunerated.

### *Measures*

#### *Brief Multidimensional Measure of Religiousness/Spirituality (BMMRS)*

This 40-item measure of spirituality and religiosity was developed by the Fetzer Institute and the NIA (1999) as a short, multidimensional assessment of spirituality and religiosity (Idler et al. 2003). The measure taps into several

components of the construct and is intended to apply to both adherents of traditional religious practice as well as those of institutionally-free forms of spirituality. While some questions tend to center around a Judeo-Christian religious perspective (Idler et al. 2003; Traphagan, 2005), many items are independent of the principles of any particular religion, thus increasing the suitability of the measure for a religiously diverse population (Underwood, 2006). Moderate to high alpha reliability coefficients have been reported for subscales used in both adolescent and adult samples (Idler et al., 2003; Pearce et al., 2003), with comparable values found in the present study (see individual subscales). Content validity of the BMMRS was addressed by considering many domains of religious experience, including behavioral, cognitive, social and psychological dimensions. Between-domain correlations were moderate, indicating that while related, the dimensions differ sufficiently to represent distinct aspects of religious experience (Idler et al., 2003). For the purposes of the current study, subscales composed of items tapping into relational dimensions of spirituality were chosen. The following subscales were used: Daily Spiritual Experiences, Forgiveness, Positive Religious Coping, Congregation Benefits, Congregation Problems, Private Religious Practice, and Public Religious Practice.

The Daily Spiritual Experiences subscale is composed of 6 items that are ranked on a 6-point Likert scale ranging from 'never or almost never' to 'many times a day'. Items are designed to measure personal emotional involvement and interaction with the transcendent in daily life (e.g. I feel G-d's presence; I

desire to be closer to or in unison with G-d). Reports of internal consistency for this subscale are strong ( $\alpha = .91$ ; Idler et al., 2003;  $\alpha = .88$  for the present study).

The subscale of Forgiveness contains 3 items intended to assess the extent to which spiritual and religious beliefs impact forgiveness (e.g. Because of my religious or spiritual beliefs I have forgiven those who hurt me). Items are rated on a 4-point Likert scale ranging from 'never' to 'always or almost always'. Idler et al. (2003) showed moderate reliability for the forgiveness subscale ( $\alpha = .66$ ). Reliability statistics for this study are fairly high ( $\alpha = .75$ ).

Positive Religious Coping subscale measures the degree to which individuals use religion or spirituality to deal with adverse circumstances and to seek consolation and a sense of meaning (e.g. I think about how my life is part of a larger spiritual force). There are three items rated on a 4-point Likert scale with response choices ranging from 'not at all' to 'a great deal'. This scale has demonstrated high reliability in previous research ( $\alpha = .81$ ; Idler et al., 2003;  $\alpha = .78$  in the present study).

The aim of the Congregation Benefits subscale is to measure social support as provided by a congregation or religious group (e.g. If you had a problem or were faced with a difficult situation, how much comfort would the people in your congregation be willing to give you?). The subscale is comprised of two items rated on a 4-point Likert scale, with responses ranging from 'none' to 'a great deal'. Previous research points to high reliability for this subscale ( $\alpha = .86$ ; Idler et al., 2003;  $\alpha = .82$  for the present study).

The Congregation Problems subscale is composed of two items that evaluate the amount of conflict and negative interactions within congregations or other religious groups (e.g. How often are the people in your congregation critical of you and the things you do?). Items are ranked on a 4-point Likert scale with response choices ranging from ‘never’ to ‘very often’. Moderate reliability has been reported for this subscale ( $\alpha = .64$ ; Idler et al., 2003;  $\alpha = .70$  for the present study).

The Private Religious Practice subscale measures frequency of informal, non-organizational religious behaviors and practices that typically occur alone or with family (e.g., How often do you pray privately in places other than a church, synagogue, or mosque?; Within your religious or spiritual tradition, how often do you meditate?). Three items were used and responses were rated on an 8-point Likert scale with answer choices ranging from ‘never’ to ‘more than once a day’. Moderately high reliability has been shown for this subscale ( $\alpha = .72$ ; Idler et al., 2003;  $.70$  for this study).

The Public Religious Practice subscale is composed of two items that assess involvement in a formal, public religious organization (e.g. How often do you go to religious services?). Items are scored on a 6-point Likert scale, with responses ranging from ‘never’ to ‘more than once a week’. Idler et al. (2003) found moderately high reliability for this subscale ( $\alpha = .73$ ) ( $\alpha = .76$  for this study).

### *Relational Spirituality Total*

The Relational Spirituality Total (RS Total) scale was constructed for the purposes of the present study as a composite measure of relational spirituality. Scores on each item from the three subscales that reflect qualities of relational spirituality: Daily Spiritual Experiences, Forgiveness, and Positive Religious Coping, were totaled and the mean was obtained. Internal reliability and factor structure of the RS Total scale was examined as part of the data analysis strategy for this study, and results are reported in Table 6.

### *The Mysticism Scale*

The Mysticism Scale (Hood, 1975) is a 32-item self-report measure designed to assess experiences of a numinous quality, such as a sense of unity with the external world and/or a sense of 'nothingness' (e.g. I have had an experience in which I realized the oneness of myself with all things). Experiences may be perceived as religious in nature, but this is not a criterion of the scale. Responses are scored on a 4-point Likert system, with answer choices ranging from -2 (definitely not true) to +2 (definitely true). To compute a total score, three points are added to each item and then the item scores are summed. Hood reported adequate internal reliability for the total scale, with corrected item-total correlations ranging from .29-.55. For the purposes of this study, 6 items from the full scale were used to represent mystical experience. Reliability was high for this abbreviated version in the present study ( $\alpha = .81$ ).

### *Quest Scale*

The Quest scale is a twelve-item scale designed to measure an open-ended, responsive dialogue with complex, existential questions (Batson, 1976; Batson & Ventis, 1982). Originally a 6-item measure, this twelve-item version was found to have moderate to high internal consistency ( $\alpha = .75-.81$ ; Batson & Schoenrage, 1991b;  $\alpha = .77$  for the present study). The scale has three subscales, 4 items regarding readiness to face existential questions (Readiness), four items that address self-criticism and perception of religious doubt as positive (Doubt) and four items to assess openness to religious change (Openness) (Batson & Schoenrade, 1991a,b). Participants indicate their level of agreement with statements on a 9-point Likert scale ranging from “strongly disagree” to “strongly agree.”

### *Parental Bonding Instrument (PBI)*

The PBI (Parker, Tupling, & Brown, 1979) is a 25 item self-report measure designed to assess parent-child relationships on two domains: care and overprotection. The care subscale encompasses warmth, empathy and involvement at one end of the spectrum and indifference and rejection at the other end, while overprotection embraces control, overprotection and intrusion at one pole and encouragement of independence at the other. Respondents rate their perception of each parent on 12 care items (i.e. speaks to me with a warm and friendly voice, is affectionate to me) and 13 overprotection items (i.e. lets me decide things for myself, is overprotective of me) using a Likert scale from 1 to 4, where 1 is ‘very likely’, 2 is ‘moderately likely’, 3 is ‘moderately



unlikely' and 4 is 'very unlikely', yielding a maximum total of 36 on care and 39 on overprotection. For mothers, a score of 27 or above distinguished high care from low care and a score of 13.5 or above differentiated high and low overprotection (Parker et al., 1979). Test-retest and split-half reliabilities for the instrument are both high ( $p < .001$ ) and norms have been obtained (Parker et al., 1979).

#### *Parental Transparency Scale*

The Parental Transparency Scale was developed for the purposes of this study to assess adolescent perceptions of their parents' willingness and openness to discuss and support their religiosity and spirituality, their level of comfort having those discussions, and whether their parents discuss their own beliefs and questions about religion and spirituality. Participants indicate how comfortable they feel discussing religion and spirituality with their mothers and fathers (e.g., 'How comfortable do you feel talking to your mother about religious/spiritual issues or concerns?') on a 7- point Likert scale with responses ranging from 'very uncomfortable' to 'very comfortable', and they indicate how often they have these discussion using a 6-point Likert scale ranging from 'never' to 'nearly every day'. Participants also report how interested and supportive each parent is in their religious/spiritual development (e.g., 'How interested and supportive is your father in your spiritual questioning and exploration?') and how willing their parents are to discuss questions or concerns regarding their own religious beliefs (e.g. 'How willing are your parents to

explore and question their own religious beliefs with you?’) using 7-point Likert scales. Reliability was found to be high for this scale ( $\alpha = .88$ ).

#### *Beck Depression Inventory (BDI)*

The BDI (Beck, et al., 1961) is a self-report measure comprised of 21 items intended to provide an assessment of intensity of depression. Each item reflects a different symptom/attitude category of depression and describes the behavioral manifestation of that symptom. Respondents endorse the self-statement that most accurately describes how they have been feeling for the past two weeks. Items range in severity from neutral to maximum and are assigned a corresponding numerical value from 0-3. Initial psychometric evaluations demonstrated high internal consistency and discriminant validity as well as high correspondence with clinical ratings of depression severity with a sample of psychiatric inpatients and outpatients (Beck et al., 1961). Internal consistencies are also high for nonpsychiatric populations of college students (Gould, 1982; Lightfoot & Oliver, 1985) and high school students (Teri, 1982). Beck, Steer and Garbin (1988) present a comprehensive review of the psychometric properties of the BDI, illustrating consistently high concurrent validity and strong construct validity. Although several items (past failure, punishment feelings, and loss of interest in sex) correspond weakly to DSM-IV depressive symptoms in adolescents, all items were retained for the purposes of the present study (Osman, Kopper, Barrios, Gutierrez, & Bagge, 2004).

### *Beck Anxiety Inventory (BAI)*

The BAI (Beck et al., 1988) is a 21-item self report measure designed to assess autonomic and cognitive symptoms of anxiety. Symptoms of anxiety known to be correlated with depression were intentionally excluded from the BAI in attempt to obtain a more accurate measure of anxiety. Respondents rate the severity of their symptoms on a 4-point likert scale ranging from “Not at all” to “Severely” (0-3). High internal consistency has been reported in both adult samples (Beck, Epstein, Brown, & Steer, 1988) and adolescent populations, with coefficient alpha ranging from .91 to .94 (Steer et al., 1995; Jolly et al., 1993). The BAI demonstrates moderate discriminant and convergent validity (Steer, et al., 1995; Jolly, et al. ,1993; Osman et. al., 2002).

### *Alcohol Use*

Frequency of alcohol use was assessed by a single item requesting participants to indicate how often they have used alcohol in the past 12 months. Response choices were on a 7-point scale ranging from “none” to “40 or more times”.

### *Data Analysis Strategy*

Descriptive statistics (means and standard deviations) were computed for the entire sample and for boys and girls separately. Independent samples *t*-tests were performed to identify significant differences between mean scores of boys and girls on all variables. Pearson *r* correlations were performed to investigate associations between relational spirituality variables and continuous demographic variables (age and SES), religiosity variables (Congregation

Benefits, Congregation Problems, Private Religious Activity, Public Religious Activity, Mysticism and Quest), and parenting variables (Maternal Care, Maternal Overprotection, Paternal Care, Paternal Overprotection, Parental Transparency). Associations among relational spirituality variables and both religious affiliation and ethnicity were assessed by performing One-way Anovas. To explore the internal reliability and factor structure of Relational Spirituality as an overall construct, coefficient alphas were obtained and principal component analysis was performed. Finally, a series of stepwise regression analyses was conducted to ascertain if Relational Spirituality Total contributes uniquely to the variance in depression, anxiety, and alcohol use, respectively. Potential interaction effects of gender and Relational Spirituality in the prediction of psychopathology variables were also explored. Scale scores were converted to  $z$ -scores and associated demographic variables were controlled for in all analyses.

## Chapter III

## RESULTS

*Demographic Variables*

Means and standard deviations are presented in Table 2. Females scored significantly higher than males on Relational Spirituality Total,  $t(532) = 2.86$ ,  $p < .005$ , Daily Spiritual Experiences,  $t(580) = 3.79$ ,  $p < .005$ , Positive Religious Coping,  $t(574) = 2.76$ ,  $p < .01$ , Private Religious Activity,  $t(589) = 2.93$ ,  $p < .005$ , Public Religious Activity,  $t(571) = 2.04$ ,  $p < .05$ , Paternal Overprotection,  $t(445) = 4.43$ ,  $p < .005$ , Depression,  $t(476) = 2.06$ ,  $p < .05$ , and Anxiety,  $t(445) = 2.89$ ,  $p < .005$ .

Table 2

*Mean Scores for Total Sample and Males and Females*

Spirituality Scale	Total Sample		Males		Females	
	M	SD	M	SD	M	SD
Relational Spirituality Total***	3.17	0.96	3.03	0.94	3.27	0.97
Daily Spiritual Experiences ***	3.69	1.29	3.45	1.26	3.86	1.29
Forgiveness	2.87	0.82	2.80	0.82	2.92	0.82
Positive Religious Coping ***	2.41	0.86	2.29	0.87	2.49	0.84
Congregation Benefits	3.00	0.98	2.98	0.94	3.01	1.00
Congregation Problems	3.01	0.82	3.03	0.79	2.99	0.85
Private Religious Activity***	3.88	1.91	3.61	1.92	4.07	1.88
Public Religious Activity*	3.32	1.56	3.16	1.55	3.43	1.55
Mysticism	15.43	4.93	15.69	4.96	15.24	4.94
Quest	4.92	1.32	4.79	1.36	5.00	1.29
<i>Parenting Scales</i>						
Maternal Care	26.46	7.78	26.64	7.18	26.31	8.19
Maternal Protection	14.52	7.81	13.89	7.50	14.97	8.01
Paternal Care	23.55	8.70	23.68	7.82	23.45	9.30
Paternal Protection***	12.69	7.93	10.66	7.22	13.99	8.12
Parental Transparency	4.30	1.49	4.30	1.45	4.32	1.51
<i>Psychopathology Scales</i>						
Depression *	7.83	8.12	6.95	7.39	8.45	8.56
Alcohol Use	2.39	1.82	2.49	1.89	2.31	1.76
Anxiety***	11.71	11.38	10.04	9.84	12.85	12.21

Note. \* p< .05. \*\* p< .01. \*\*\* p<.005

Note. Mean age for participants = 15.7 years

Note. Similar mean and standard deviation scores for depression found in other community samples; see Pearce, et al., 2003.

Analysis of Variance (Table 3) revealed that ethnicity was significantly associated with mean scores on Relational Spirituality Total,  $F(5, 529) = 2.66$ ,  $p < .05$ , Forgiveness,  $F(5, 563) = 2.55$ ,  $p < .05$ , Positive Religious Coping,  $F(5, 570) = 8.58$ ,  $p < .005$ , depression,  $F(5, 472) = 3.51$ ,  $p < .005$ , anxiety,  $F(5, 509) = 2.54$ ,  $p < .05$ , and alcohol use,  $F(5, 543) = 8.82$ ,  $p < .005$ . Post-hoc Bonferroni mean comparisons indicated multiple significant ( $p < .05$ ) differences between ethnic groups, such that: African Americans reported higher Relational Spirituality Total and Forgiveness than Asian Americans; African Americans and Latinos reported higher Positive Religious Coping than Caucasian and Asian Americans; Asian Americans reported higher depression than Caucasians; Caucasians reported higher alcohol use than African Americans and Asian Americans, and Latinos reported higher alcohol use than Asian Americans.

Results of analysis of variance for religious affiliation are displayed in Table 4. Significant associations were found between religious affiliation and Relational Spirituality Total,  $F(6, 523) = 30.15$ ,  $p < .005$ , Daily Spiritual Experiences,  $F(6, 570) = 29.85$ ,  $p < .005$ , Forgiveness,  $F(6, 555) = 30.89$ ,  $p < .005$ , Positive Religious Coping,  $F(6, 562) = 21.72$ ,  $p < .005$ , depression,  $F(6, 470) = 3.21$ ,  $p < .005$ , and alcohol use,  $F(6, 532) = 11.01$ ,  $p < .005$ . Post-hoc Bonferroni mean comparisons revealed multiple significant differences, including: Protestants reported higher Relational Spirituality Total than Catholics, Jews, Agnostics, Buddhists, and 'Other', with Catholics reporting higher Relational Spirituality than Jews, Agnostics, and Buddhists and Muslims

reporting higher levels than Agnostics and Buddhists. For Daily Spiritual Experiences, Protestants reported more Daily Spiritual Experiences than Catholics, Jews, Agnostics, Buddhists, and 'Other'; Catholics reported higher Daily Spiritual Experiences than Jews, Agnostics, and Buddhists; Muslims reported higher Daily Spiritual Experiences than Jews, Agnostics, and Buddhists; and Jews reported higher Daily Spiritual Experiences than Agnostics. Regarding Forgiveness, Protestants reported more Forgiveness than Catholics, Jews, Muslims, Agnostics, Buddhists, and 'Other'; Catholics reported more Forgiveness than Jews, Agnostics, and Buddhists; Muslims reported more Forgiveness than Agnostics; Buddhists reported more Forgiveness than Agnostics; and Jews reported more Forgiveness than 'Other'. For Positive Religious Coping, Protestants reported higher Positive Religious Coping than Jews, Muslims, Agnostics, Buddhists, and 'Other'; Catholics reported higher Positive Religious Coping than Jews, Agnostics, and Buddhists; and 'Other' reported higher Positive Religious Coping than Jews and Agnostics. Additionally, Buddhists reported higher depression than Protestants; Agnostics reported higher alcohol use than Catholics, Protestants, Muslims, Buddhists, and 'Other'; Jews reported higher alcohol use than Protestants and Muslims; Buddhists reported higher alcohol use than Muslims; and Catholics reported higher alcohol use than Muslims.



Table 3

*Analysis of Variance for Ethnicity, Relational Spirituality Variables and Psychopathology*

Variables	White	African-American	Asian-American	Latino	Mixed	Other	F-value
M (SD)							
<i>Spirituality Scales</i>							
Relational Spirituality Total	3.09 (1.07)	3.46 (.83)	3.00 (.91)	3.28 (.85)	3.17 (.93)	3.24 (.76)	2.66*
Daily Spiritual Experiences	3.67 (1.40)	3.93 (1.16)	3.48 (1.26)	3.74 (1.19)	3.54 (1.29)	3.80 (1.16)	1.26
Forgiveness	2.80 (.94)	3.10 (.70)	2.75 (.71)	2.98 (.69)	2.86 (.72)	2.82 (.76)	2.55*
Positive Religious Coping	2.25 (.87)	2.84 (.79)	2.22 (.80)	2.60 (.79)	2.45 (.84)	2.63 (.83)	8.58**
<i>Psychopathology Scales</i>							
Depression	6.71 (7.38)	8.47 (9.18)	9.76 (8.64)	6.89 (8.32)	7.92 (7.23)	13.00 (8.50)	3.51**
Anxiety	10.12 (9.32)	12.34 (1.34)	13.11 (1.20)	14.63 (1.52)	10.14 (6.86)	14.83 (1.24)	2.54*
Alcohol Use	2.91 (2.06)	1.94 (1.40)	1.69 (1.33)	2.58 (1.74)	2.07 (1.58)	2.22 (1.90)	8.82**

Note. \*  $p < .05$ . \*\*  $p < .01$ .

Table 4

*Analysis of Variance for Religious Affiliation, Relational Spirituality Variables and Psychopathology*

Variables	Catholic M (SD)	Protestant	Jewish	Buddhist	Agnostic	Muslim	Other	F-value
<i>Spirituality Scales</i>								
Relational Spirituality Total	3.30 (.81)	3.80 (.72)	2.71 (.84)	2.63 (.81)	2.22 (.87)	3.32 (.78)	3.13 (1.05)	30.15**
Daily Spiritual Experiences	3.74 (1.13)	4.47 (1.01)	3.19 (1.16)	2.99 (1.08)	2.41 (1.02)	4.06 (1.11)	3.64 (1.41)	29.85**
Forgiveness	3.02 (.69)	3.38 (.49)	2.42 (.83)	2.52 (.77)	2.08 (.90)	2.80 (.54)	2.86 (.82)	30.89**
Positive Religious Coping	2.65 (.78)	2.85 (.74)	1.94 (.69)	2.03 (.74)	1.81 (.77)	2.31 (.73)	2.39 (.95)	21.73**
<i>Psychopathology Scales</i>								
Depression	7.76 (8.59)	5.84 (6.51)	7.16 (7.12)	10.77 (9.27)	8.39 (9.17)	8.05 (6.10)	9.33 (9.18)	3.21**
Anxiety	12.79 (1.43)	10.83 (1.15)	10.86 (9.15)	14.67 (1.30)	13.09 (1.13)	10.47 (7.23)	10.84 (9.50)	1.24
Alcohol Use	2.33 (1.61)	2.05 (1.69)	3.13 (1.93)	2.27 (1.78)	3.67 (2.22)	1.09 (.38)	2.32 (1.73)	11.01**

Note. \*  $p < .05$ . \*\* $p < .01$

### *Correlation Matrix*

Table 5 exhibits Pearson  $r$  correlations for relational spirituality variables, other religious/spiritual variables, parenting variables, age, SES, and psychopathology. Relational Spirituality Total and Daily Spiritual Experiences were significantly positively correlated ( $p < .01$ ) with Congregation Benefits, Congregation Problems, Private Religious Activity, Public Religious Activity, and Mysticism; Forgiveness was significantly positively correlated ( $p < .01$ ) with Congregation Benefits, Private Religious Activity, and Public Religious Activity; and Positive Religious Coping was significantly positively correlated ( $p < .01$ ) with Congregation Benefits, Congregation Problems, Private Religious Activity, Public Religious Activity, Mysticism, and Quest. Although the Private and Public Religious Activity scales are intended to capture the dimension of religious practice, thought to be conceptually distinct from the relational dimension of spirituality, because of the high positive correlation between Relational Spirituality Total and both Private Religious Activity ( $r = .68$ ) and Public Religious Activity ( $r = .60$ ), these two variables were excluded from additional analyses involving Relational Spirituality Total to avoid issues of redundancy.

For parenting variables, Relational Spirituality Total, Daily Spiritual Experiences, Forgiveness, and Positive Religious Coping were all significantly positively correlated ( $p < .01$ ) with Maternal Care, Paternal Care, and Parental Transparency. No significant correlations were found between all four relational spirituality variables (Relational Spirituality Total, Daily Spiritual

Experiences, Forgiveness) and either Maternal Overprotection or Paternal Overprotection.

Regarding the continuous demographic variables, age was significantly inversely correlated with Relational Spirituality Total ( $r = -.10, p < .05$ ), Forgiveness ( $r = -.10, p < .05$ ), and Positive Religious Coping ( $r = -.14, p < .005$ ). In contrast, age was significantly positively associated with Alcohol Use ( $r = .29, p < .005$ ). Significant inverse associations were found between SES and Relational Spirituality Total ( $r = -.15, p < .005$ ), Daily Spiritual Experiences ( $r = -.12, p < .05$ ), Forgiveness ( $r = -.12, p < .05$ ), Positive Religious Coping ( $r = -.21, p < .005$ ), Depression ( $r = -.16, p < .005$ ), and Anxiety ( $r = -.13, p < .05$ ).

Table 5

*Correlation Matrix for Spirituality, Parenting, Psychopathology, Age and SES*

Variables	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Relational Spirituality Total	--																			
Daily Spiritual Experience	.95**	--																		
Forgiveness	.82**	.66**	--																	
Positive Religious Coping	.86**	.74**	.59**	--																
Congregation Benefits	.37**	.36**	.27**	.30**	--															
Congregation Problems	.13**	.11*	.05	.18**	.14**	--														
Private Religious Activity	.68**	.66**	.54**	.60**	.40**	.07	--													
Public Religious Activity	.60**	.59**	.49**	.52**	.42**	.10*	.66**	--												
Mysticism	.19**	.21**	.07	.22**	.04	.05	.04	-.04	--											
Quest	.02	.04	-.03	.09*	.01	.04	.02	-.03	.25**	--										
Maternal Care	.14**	.13**	.13**	.08**	.23**	-.15**	.13**	.08	-.22**	.02	--									
Maternal Protection	-.09	-.04	-.02	.02	-.17**	.14**	-.07	-.07	.15*	-.07	-.44**	--								
Paternal Care	.22**	.21**	.14**	.18**	.31**	-.02	.17**	.15**	-.14*	-.03	.43**	-.21**	--							
Paternal Protection	.02	-.03	.06	.07	-.18**	.19**	.01	-.01	.04	-.01	-.23**	.50**	-.49**	--						
Parental Transparency	.38**	.40**	.25**	.30**	.32**	-.01	.39**	.29**	.01	.04	.53**	-.18**	.52**	-.20**	--					
Depression	-.21**	-.22**	-.21**	-.11*	-.25**	.15**	-.12**	-.13**	.12	.05	-.40**	.29**	-.35**	.30**	-.28**	--				
Anxiety	-.04	-.04	-.04	-.01	-.12*	.18**	-.06	-.10*	.28**	.14**	-.23**	.24**	-.21**	.26**	-.03	.53**	--			
Alcohol Use	-.28**	-.24**	-.26**	-.25**	-.09*	-.05	-.21**	-.24**	.14*	.11*	.06	-.08	-.01	-.14**	-.04	.00	.03	--		
Age	-.10*	-.03	-.10*	-.14**	.00	-.06	-.07	-.10*	-.02	.12**	-.01	-.14**	.04	-.24**	.05	-.04	-.04	.29**	--	
SES	-.15**	-.12*	-.12*	-.21**	.07	-.17**	-.06	-.04	-.09	.04	.13*	-.08	.15**	-.09	.05	-.16**	-.13*	.06	.06	--

Note. \*  $p < .05$ . \*\*  $p < .01$ .

*Relational Spirituality Total*

To further examine the construct of Relational Spirituality Total (which includes all items from Daily Spiritual Experiences, Forgiveness, and Positive Religious Coping) and to examine the factor structure of this variable, principal component analysis was performed. Results, displayed in Table 6, revealed that all items loaded onto a single factor, with an eigenvalue = 6.27. Coefficient alpha for the Relational Spirituality Total scale was also computed, indicating high internal reliability ( $\alpha = .91$ ). Findings suggest that the Relational Spirituality Total scale reflects the overarching construct of relational spirituality, to which each subscale (Daily Spiritual Experiences, Forgiveness and Positive Religious Coping) emphasizes a particular quality or aspect. Given these results, Relational Spirituality Total was used as a composite measure of overall relational spirituality in all additional analyses.

Table 6

*Principal Component Analysis for Relational Spirituality Items*


---

Item	Factor 1 (Relational Spirituality
Total)	
I feel God's presence	.833
Strength and comfort in my religion	.769
I feel inner peace or harmony	.583
Desire closeness with God	.796
I feel God's love	.833
Touched by the beauty of creation	.672
I have forgiven myself	.618
I have forgiven others	.579
God forgives me	.781
My life is part of a larger force	.610
I work together with God	.711
I look to God for strength	.811

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*Note:* Total eigenvalue = 6.27, percent of total variance explained = 52.22

*Note:* coefficient alpha = .91

### *Relational Spirituality and Psychopathology*

In order to best assess which specific categories of ethnicity and religious affiliation to control for when constructing the hierarchical regression models for Relational Spirituality and psychopathology, each category was first dummy coded (i.e., Catholic = 1, Not Catholic = 0; African American = 1, Not African American = 0), yielding six variables for ethnicity and seven for religious affiliation. Multiple regression analyses were then performed for depression, anxiety, and alcohol use with gender, age, SES, and all ethnicity and religious affiliation variables as predictors. In consideration of the overall power of the model and to limit standard error, only those variables that remained significantly associated with each psychopathology variable were included as control variables in subsequent regression analyses. When all demographics were entered simultaneously in the models for depression and anxiety, none of the variables for ethnicity or religious affiliation were significant. However, for alcohol use, identifying as African-American ( $\beta = -.11, p < .01$ ), Asian ( $\beta = -.23, p < .005$ ), and Muslim ( $\beta = -.19, p < .005$ ) were all significantly inversely associated with self-reported alcohol use; therefore, all three variables were included as control variables in subsequent stepwise regression analysis with alcohol use.

### *Depression*

Results of stepwise regression analysis for Relational Spirituality Total in the prediction of depression are presented in Table 7. In step 1, demographic variables (gender, age, SES) were entered into the model as control variables.



In step 2, parenting variables correlated with Relational Spirituality Total were entered, including Maternal Care, Paternal Care, and Parental Transparency. Next, religious/spiritual variables associated with Relational Spirituality Total, including Congregation Benefits, Congregation Problems, and Mysticism were added in step 3. Finally, Relational Spirituality Total was added to the model in step 4 to examine whether relational spirituality contributed uniquely to depression in the presence of other variables found to be correlated with the construct.

Results indicated that parenting, specifically Maternal Care and Paternal Care, contributed significantly to the variance in depression scores above that accounted for by demographic variables ( $R^2 = .16$ ;  $\Delta R^2 = .14$ ,  $p < .005$ ). Maternal Care ( $\beta = -.26$ ,  $p < .005$ ) and Paternal Care ( $\beta = -.16$ ,  $p < .005$ ) were both strongly inversely associated with depression, while Parental Transparency was not significantly related to depression. The overall model remained significant with the addition of religious/spiritual variables, these variables contributed to a significant portion of the variance in depression above that accounted for by parenting variables ( $R^2 = .18$ ;  $\Delta R^2 = .03$ ,  $p < .005$ ). Individual beta values showed that Congregation Benefits ( $\beta = -.15$ ,  $p < .005$ ) was significantly negatively associated with depression and Congregation Problems ( $\beta = .10$ ,  $p < .01$ ) was significantly positively associated with depression. Mysticism was not significantly related to depression in the presence of the other predictor variables, while Maternal Care and Paternal Care remained significant predictors (see Table 7). Lastly, Relational Spirituality Total

contributed uniquely to the variance in depression above and beyond all other demographic, parenting, and spiritual/religious variables ( $R^2 = .20$ ;  $\Delta R^2 = .02$ ,  $p < .005$ ). Also worth noting is that in the final model constructed in step 4, Maternal Care ( $\beta = -.23$ ,  $p < .005$ ), Paternal Care ( $\beta = -.13$ ,  $p < .005$ ), Congregation Benefits ( $\beta = -.12$ ,  $p < .005$ ), Congregation Problems ( $\beta = .11$ ,  $p < .01$ ), and Relational Spirituality Total ( $\beta = -.14$ ,  $p < .005$ ) were all significant individual predictors of depressive symptomatology.

Table 7

*Summary of Stepwise Regression Analyses for Relational Spirituality Total and Depression*

Predictor Variable	SE B	$\beta$	R <sup>2</sup>	$\Delta R^2$
<i>Step 1</i>				
Gender	.58	-.08*	.02***	--
Age	.01	-.03		
SES	.31	-.12***		
<i>Step 2</i>				
Gender	.54	-.08*	.16***	.14***
Age	.01	-.02		
SES	.29	-.07		
Maternal Care	.51	-.26***		
Paternal Care	.51	-.16***		
Parental Transparency	.47	-.04		
<i>Step 3</i>				
Gender	.54	-.08*	.18***	.03***
Age	.01	-.02		
SES	.29	-.06		
Maternal Care	.52	-.23***		
Paternal Care	.50	-.14***		
Parental Transparency	.48	-.02		
Congregation Benefits	.32	-.15***		
Congregation Problems	.33	.10**		
Mysticism	.10	.02		
<i>Step 4</i>				
Gender	.53	-.09*	.20***	.02***
Age	.01	-.03		
SES	.29	-.08*		
Maternal Care	.51	-.23***		
Paternal Care	.50	-.13***		
Parental Transparency	.48	.01		
Congregation Benefits	.33	-.12***		
Congregation Problems	.32	.11***		
Mysticism	.10	.04		
Relational Spirituality Total	.44	-.14***		

*Note.* All scale scores were converted to Z scores.

*Note.* \*  $p < .05$ . \*\*  $p < .01$ . \*\*\*  $p < .005$

*Anxiety*

Table 8 displays results of stepwise regression analysis for Relational Spirituality Total in the prediction of anxiety. As in the model for depression, demographic variables (gender, age, SES) were entered in step 1, parenting variables in step 2, spiritual/religious variables in step 3, and Relational Spirituality Total in step 4. Results indicated that for anxiety, the addition of parenting variables to the model contributed significantly to the variance in depression beyond that predicted by demographic variables ( $R^2 = .07$ ;  $\Delta R^2 = .05$ ,  $p < .005$ ). In step 3, spiritual/religious variables predicted a significant amount of variance in depression above that accounted for by parenting and demographic variables ( $R^2 = .11$ ;  $\Delta R^2 = .04$ ,  $p < .005$ ). However, in contrast to depression, adding Relational Spirituality Total to the model in step 4 did not significantly change the value of  $R^2$ , and Relational Spirituality Total was not significantly associated with anxiety (see Table 8). In the final model, Maternal Care ( $\beta = -.13$ ,  $p < .005$ ), Paternal Care ( $\beta = -.11$ ,  $p < .05$ ), and gender ( $\beta = -.11$ ,  $p < .005$ ) were significantly inversely associated with anxiety, and Parental Transparency ( $\beta = .12$ ,  $p < .01$ ), Congregation Problems ( $\beta = .14$ ,  $p < .005$ ), and Mysticism ( $\beta = .13$ ,  $p < .005$ ) were significantly associated with anxiety in the positive direction.

Table 8

*Summary of Stepwise Regression Analyses for Relational Spirituality Total and Anxiety*

Predictor Variable	SE B	$\beta$	R <sup>2</sup>	$\Delta R^2$
<i>Step 1</i>				
Gender	.85	-.11**	.02***	--
Age	.02	-.03		
SES	.45	-.20**		
<i>Step 2</i>				
Gender	.83	-.10**	.07***	.05***
Age	.02	-.04		
SES	.44	-.07		
Maternal Care	.78	-.18***		
Paternal Care	.77	-.14***		
Parental Transparency	.72	.11**		
<i>Step 3</i>				
Gender	.81	-.11**	.11***	.04***
Age	.02	-.03		
SES	.43	-.04		
Maternal Care	.79	-.13***		
Paternal Care	.77	-.11*		
Parental Transparency	.72	.11*		
Congregation Benefits	.49	-.10*		
Congregation Problems	.49	.14***		
Mysticism	.15	.14***		
<i>Step 4</i>				
Gender	.82	-.11***	.12***	.00
Age	.02	-.03		
SES	.44	-.05		
Maternal Care	.79	-.13***		
Paternal Care	.77	-.11*		
Parental Transparency	.74	.12**		
Congregation Benefits	.50	-.08		
Congregation Problems	.50	.14***		
Mysticism	.15	.13***		
Relational Spirituality Total	.68	-.07		

*Note.* All scale scores were converted to Z scores.

*Note.* \*  $p < .05$ . \*\*  $p < .01$ . \*\*\*  $p < .005$

*Alcohol Use*

Results of stepwise regression analyses performed for alcohol use, displayed in Table 9, revealed a differing pattern of associations as compared with that for depression and anxiety. When Maternal Care, Paternal Care, and Parental Transparency were entered into the model, these variables did not contribute significantly to the variance in alcohol use beyond that accounted for by demographic variables (gender, age, SES, African-American, Asian, Muslim). In step 3, spiritual/religious variables significantly add to the variance in reported alcohol use ( $R^2 = .18$ ;  $\Delta R^2 = .02$ ,  $p < .005$ ). Individually, identifying as African American ( $\beta = -.11$ ,  $p < .01$ ), Asian-American ( $\beta = -.20$ ,  $p < .005$ ), or Muslim ( $\beta = -.16$ ,  $p < .005$ ) significantly predicted lower alcohol use, and Mysticism ( $\beta = .12$ ,  $p < .005$ ) and age ( $\beta = .30$ ,  $p < .005$ ) significantly predicted higher alcohol use. Finally, Relational Spirituality Total contributed to a significant portion of the variance in alcohol use above and beyond that accounted for by other spiritual/religious variables and demographic variables ( $R^2 = .23$ ;  $\Delta R^2 = .05$ ,  $p < .005$ ). Beta values also suggest that Relational Spirituality Total is a robust predictor of lower alcohol use ( $\beta = -.26$ ,  $p < .005$ ). Also of interest is that in the final model, identifying as African American ( $\beta = -.10$ ,  $p < .05$ ), Asian ( $\beta = -.21$ ,  $p < .005$ ), or Muslim ( $\beta = -.14$ ,  $p < .005$ ) was also associated with less alcohol use, while increasing age was associated with higher reports of alcohol use ( $\beta = .28$ ,  $p < .005$ ).

Table 9

*Summary of Stepwise Regression Analyses for Relational Spirituality Total and Alcohol Use*

Predictor Variable	SE B	$\beta$	R <sup>2</sup>	$\Delta R^2$
<i>Step 1</i>				
Gender	.13	.04	.16***	--
Age	.00	.29***		
SES	.07	.04		
African-American	.19	-.11**		
Asian	.19	-.19***		
Muslim	.31	-.16***		
<i>Step 2</i>				
Gender	.13	.04	.16***	.01
Age	.00	.30***		
SES	.07	.04		
African-American	.19	-.18**		
Asian	.19	-.16***		
Muslim	.31	-.16***		
Maternal Care	.12	.08*		
Paternal Care	.12	-.04		
Parental Transparency	.11	-.07		
<i>Step 3</i>				
Gender	.13	.04	.18***	.02***
Age	.00	.30***		
SES	.07	.05		
African-American	.19	-.11**		
Asian	.19	-.20***		
Muslim	.31	-.16***		
Maternal Care	.12	.11*		
Paternal Care	.12	-.02		
Parental Transparency	.12	-.07		
Congregation Benefits	.08	-.09		
Congregation Problems	.08	.03		
Mysticism	.02	.12***		
<i>Step 4</i>				
Gender	.13	.01	.23***	.05***
Age	.00	.28***		
SES	.07	.01		
African-American	.18	-.10*		
Asian	.19	-.21***		
Muslim	.30	-.14***		
Maternal Care	.12	.11*		
Paternal Care	.12	.00		
Parental Transparency	.11	.00		
Congregation Benefits	.08	-.02		
Congregation Problems	.08	.05		
Mysticism	.02	.15***		
Relational Spirituality Total	.11	-.26***		

*Note.* All scale scores were converted to Z scores.

*Note.* \*  $p < .05$ . \*\*  $p < .01$ . \*\*\*  $p < .005$

### *Gender Effects*

Potential interaction effects of Relational Spiritual Total and gender in the prediction of each psychopathology variable were also tested. In model 1, Relational Spirituality Total and gender were entered as predictors, and in model 2, the interaction term for Relational Spirituality Total and gender was added. For depression, when the interaction term was entered, change in  $R^2$  was significant ( $\Delta R^2 = .02, p < .005$ ). However, change in  $R^2$  was not significant when the interaction term was added to the model for anxiety ( $\Delta R^2 = .00, p < .10$ ) or alcohol use ( $\Delta R^2 = .06, p < .10$ ). Results suggest that there are significant gender differences in the prediction of depression by Relational Spirituality Total.

To further understand this finding, stepwise regression analyses were then conducted separately for females and males with Relational Spiritual Total and depression (see Tables 10a and 10b). The same model that was constructed for the entire sample was utilized for each gender separately, with demographics entered in step 1, parenting in step 2, religiosity in step 3, and Relational Spirituality in step 4. For females, Relational Spirituality Total contributed significantly to the variance in depressive symptomatology ( $R^2 = .22; \Delta R^2 = .05, p < .005$ ), and it demonstrated a strong inverse association with depression ( $\beta = -.24, p < .005$ ). In contrast, Relational Spirituality Total did not contribute significantly to change in  $R^2$  for depression in males. After all predictors were entered, Congregation Benefits was significantly associated with less depression ( $\beta = -.17, p < .05$ ), and Congregation Problems ( $\beta = .19, p < .005$ ) was



significantly associated with higher levels of depressive symptomatology. Additionally, in the presence of the spiritual and religious variables, including Relational Spirituality, Maternal Care retained its strong inverse relationship with depression for both females ( $\beta = -.27, p < .005$ ) and males ( $\beta = -.17, p < .05$ ).

Table 10a

*Summary of Stepwise Regression Analyses for Relational Spirituality Total and Depression in Females*

Predictor Variable	SE B	$\beta$	R <sup>2</sup>	$\Delta R^2$
<i>Step 1</i>				
Age	.02	-.06	.01	--
SES	.44	-.04		
<i>Step 2</i>				
Age	.01	-.05	.16***	.15***
SES	.41	.01		
Maternal Care	.66	-.28***		
Paternal Care	.66	-.15***		
Parental Transparency	.65	-.07		
<i>Step 3</i>				
Age	.01	-.05	.18***	.02*
SES	.40	.02		
Maternal Care	.66	-.26***		
Paternal Care	.65	-.13*		
Parental Transparency	.65	-.04		
Congregation Benefits	.43	-.16**		
Congregation Problems	.43	.06		
Mysticism	.14	-.01		
<i>Step 4</i>				
Age	.01	-.07	.22***	.05***
SES	.40	-.02		
Maternal Care	.64	-.27***		
Paternal Care	.63	-.11*		
Parental Transparency	.65	.02		
Congregation Benefits	.43	-.09		
Congregation Problems	.42	.06		
Mysticism	.13	.03		
Relational Spirituality Total	.60	-.24***		

*Note.* All scale scores were converted to Z scores.

*Note.* \*  $p < .05$ . \*\*  $p < .01$ . \*\*\*  $p < .005$

Table 10b

*Summary of Stewpise Regression Analyses for Relational Spirituality Total and Depression in Males*

Predictor Variable	SE B	$\beta$	R <sup>2</sup>	$\Delta R^2$
<i>Step 1</i>				
Age	.02	.01	.06***	--
SES	.42	-.23		
<i>Step 2</i>				
Age	.02	.00	.17***	.12***
SES	.40	-.19*		
Maternal Care	.87	-.21***		
Paternal Care	.84	-.18*		
Parental Transparency	.72	-.02		
<i>Step 3</i>				
Age	.01	.02	.22***	.04***
SES	.40	-.15*		
Maternal Care	.86	-.17*		
Paternal Care	.84	-.13		
Parental Transparency	.71	-.01		
Congregation Benefits	.48	-.16*		
Congregation Problems	.51	.19***		
Mysticism	.13	.08		
<i>Step 4</i>				
Age	.01	.02	.22***	.00
SES	.40	-.15*		
Maternal Care	.86	-.17*		
Paternal Care	.84	-.13		
Parental Transparency	.73	-.02		
Congregation Benefits	.50	-.17*		
Congregation Problems	.51	.19***		
Mysticism	.13	.08		
Relational Spirituality Total	.65	.02		

*Note.* All scale scores were converted to Z scores.

*Note.* \*  $p < .05$ . \*\*  $p < .01$ . \*\*\*  $p < .005$

Finally, to examine whether the gender effect present for Relational Spirituality Total and depression was a consequence of females scoring significantly higher on depression than males, a separate category for highly depressed adolescent males was created (BDI score >12 used as the cutoff), and stepwise regression analysis was repeated for this group. As shown in Table 10c, results indicated that even in the subgroup of males reporting higher levels of depression, Relational Spirituality did not contribute significantly to the variation in depressive symptomatology ( $\Delta R^2 = .00, p > .05$ ).

Table 10c

*Summary of Stepwise Regression Analyses for Relational Spirituality and Depression in Highly Depressed Males*

Criterion Variable	R <sup>2</sup> Model 1 <sup>a</sup>	R <sup>2</sup> Model 2 <sup>b</sup>	$\Delta R^2$ (Model 1-2)	R <sup>2</sup> Model 3 <sup>c</sup>	$\Delta R^2$ (Model 2-3)	R <sup>2</sup> Model 4 <sup>d</sup>	$\Delta R^2$ (Model 3-4)
Depression	.17*	.33*	.16	.39*	.07	.39*	.00

*Note.* Highly depressed = BDI score > 12, N = 39.

*Note.* \* p < .05. \*\* p < .01. \*\*\* p < .005

a Predictors: Age, SES. b Predictors: Age, SES, maternal care, paternal care, parental transparency. c Predictors: Age, SES, maternal care, paternal care, parental transparency, congregation benefits, congregation problems, mysticism. d Predictors: Age, SES, maternal care, paternal care, parental transparency, congregation benefits, congregation problems, mysticism, relational spirituality total.

## Chapter IV

### DISCUSSION

The aim of the current study was to gain a more in-depth and multifaceted understanding of the construct of relational spirituality by (1) exploring its pattern of correlation with demographic, parenting, and other religious/spiritual variables in a large, ethnically and religiously diverse sample of adolescents, and (2) examining its correlations with some of the more highly prevalent forms of psychopathology in the presence of demographic, parenting, and other spiritual/religious variables found to be associated with it. A secondary goal was to investigate the presence of gender differences in the association between Relational Spirituality and depression, anxiety, and alcohol use, respectively.

#### *Correlates of Relational Spirituality*

While the subscales of Daily Spiritual Experiences, Positive Religious Coping, and Forgiveness are all intended to represent distinct dimensions of a spiritual life grounded in relationship, results assessing the factor structure of Relational Spirituality Total revealed that all items from these three subscales load onto a single factor, thus lending support to the notion of a larger conceptual domain, Relational Spirituality, which gives rise to Daily Spiritual Experiences, Positive Religious Coping, and Forgiveness.

Results indicated that levels of Relational Spirituality vary to some extent by religious affiliation and ethnicity. Though not well studied, previous findings have tended to show that African-American adolescents rank highest

on spirituality and religiosity measures, followed by Hispanic, Caucasian, and Asian-American teens. In the current study, African-Americans were only significantly higher than Asian-Americans on Relational Spirituality. The difference between African-American and Asian-American adolescents on Relational Spirituality may be attributable to differences in religious affiliation, suggesting that the degree to which adolescents embrace Relational Spirituality may be relatively stable across ethnicity.

Studies examining differences in spirituality by religious affiliation are even less conclusive, but in general, findings suggest that Protestants rank highest on measures of closeness to God and personal devotion, followed by Catholics and then Jews. Results of the present study indicated that Protestants reported higher Relational Spirituality Total than Catholics, Jews, Agnostics, Buddhists, and 'Other', with Catholics reporting higher Relational Spirituality than Jews, Agnostics, and Buddhists and Muslims reporting higher levels than Agnostics and Buddhists. In comparison with earlier investigations, the present study included data from several religious groups (i.e., Buddhist, Muslim, Agnostic) that have been absent from previous research, thus representing an attempt to gain a broader, more comprehensive picture of Relational Spirituality. Results imply that fostering the development of Relational Spirituality is particularly important in Christianity, particularly in Protestant denominations. Though beyond the scope of the present study, the concept of Relational Spirituality may be less compatible with Eastern religious traditions compared with Western religious systems and values. For Buddhists or other

potential non-theists, it is possible that the construct simply has less conceptual relevance.

Consistent with previous findings on associations between spirituality and religiosity and age (Regenerus, Smith, & Fritsch, 2003; Wallace et al., 2003), Relational Spirituality demonstrated a small, inverse association with age. In part, this might be a reflection of the positive correlation between substance use and age and that higher levels of substance use are linked with lower levels of Relational Spirituality. The waning of Relational Spirituality with age could also reflect developmental shifts that accompany adolescence, such as heightened academic, social, or extra-curricular pressures which might compete with spiritual life. Or, viewed from within the adolescent faith individuation process (Marcia, 1980), the apparent dip in level of Relational Spirituality may represent the momentary struggle of clarifying spiritual experience in moratorium before a personal faith commitment is solidified. Finally, Relational Spirituality was inversely associated with SES, indicating that adolescents in higher socio-economic levels reported lower Relational Spirituality. Findings are consistent with those of Pearce et al. (2003), which demonstrated that lower SES was associated with several religious dimensions.

With respect to other religious and spiritual variables, Relational Spirituality was significantly positively correlated with Congregation Benefits, Congregation Problems, Private Religious Activity, Public Religious Activity, and Mysticism. Relational Spirituality was very highly correlated with Private and Public activity, suggesting that while religious activity is intended to

represent a unique dimension of spirituality/religiosity, there is a large degree of conceptual overlap between religious activity and Relational Spirituality. One interpretation of this finding is that prayer and church attendance facilitate the experience of Relational Spirituality, and Relational Spirituality provides an impetus for participating in these religious/spiritual activities more often.

Spiritual practice has long been thought to function as a conduit for enlightenment, and religious practices such as prayer aspire to open channels of communication and relatedness between a deity and oneself (Crocker, 1984; Ellens, 1977; Hood, 1993; Spilka, 2005). Future research on spirituality in adolescents might consider examining more specifically the pathways that inform this relationship. In contrast to religious activity, religious social support and mysticism, while associated with Relational Spirituality, appear to represent more separate dimensions of spirituality/religiosity. Additionally, the Quest Scale was not correlated with Relational Spirituality, signifying that the process of doubting and questioning religious beliefs and existential issues is not a part of Relational Spirituality. Adolescents who experience a strong sense of Relational Spirituality may or may not engage in the process of contemplating religious and existential questions.

For parenting variables, Relational Spirituality was positive correlated with Maternal Care, Paternal Care, and Parental Transparency. No significant relationship was found between Relational Spirituality and either Maternal or Paternal Overprotection. That higher levels of maternal and paternal care are linked with a stronger relational connection to a higher power underscores the



pivotal role love and acceptance from parents appears to play in spiritual development. This finding is also in line with previous research showing that parental warmth and emotional closeness are positively correlated with adolescent religiosity (Ozorak, 1989; Potvin & Lee, 1982). Considering that a child's primary relationship is with parental figures, experiences of love and nurturance with parents may establish a foundation for a similar relationship at the spiritual level with G-d. Furthermore, findings on parental spiritual transparency highlight the link between engaging in discussions about religious and spiritual beliefs with parents and experiencing a sense of Relational Spirituality. The idea that participating in open-ended conversations about spirituality with parents is related to the development and internalization of adolescents' religious beliefs is also supported throughout the literature (Dudley & Wisbey, 2000; Flor & Knap, 2001; Kelley, Athan, & Miller, 2007). However, since the data is correlational, it is also possible that adolescents already higher on Relational Spirituality are more predisposed to initiate and/or sustain interest in spiritual discourse with parents. Regardless of the directionality of the relationships, parental relationship quality (as measured by care and affection and transparency around spiritual/religious topics) is clearly related to the experience of Relational Spirituality in adolescents.

#### *Spirituality, Depression, and Gender*

Relational Spirituality Total significantly contributed to the variance in depression scores after accounting for the contribution of demographic variables, maternal and paternal care, parental transparency, positive and

negative religious social support, and mysticism, suggesting that Relational Spirituality is a robust protective factor against depression. Furthermore, as with previous results exploring associations between relational spirituality (i.e., Daily Spiritual Experiences, Forgiveness, Positive Religious Coping) and depression (Desrosiers & Miller, 2007), protective qualities of Relational Spirituality differed according to gender. For adolescent females but not males, Relational Spirituality Total remained a powerful predictor of depressive symptomatology. Moreover, females as compared with males scored significantly higher on both Relational Spirituality Total and depression.

The current findings are consistent with previous research showing that women, as compared with men, generally conceptualize spirituality and religion more in terms of relationship and connection (Ozorak, 1996; Miller, Davies, & Greenwald, 2000). Ozorak (1996) emphasizes that women embrace the emotional and intuitive elements of religion rather than those derived from logical reasoning and understanding. Also, female representations of G-d are more likely to involve the relationships of healer, mother, father, and friend than male representations (Nelson, Cheek, & Paul, 1985). Related findings specifically on adolescents show that girls experience G-d's nearness more often than boys and that this closeness is expressed most often during intense emotional states such as loneliness or sorrow (Tamminen, 1994).

Findings on gender differences in relational spirituality might further be interpreted in light of theoretical and empirical research on gender differences in socio-moral development. Gilligan has proposed that relational connection is

particularly important for females in both social coping (Brown & Gilligan, 1992) and in moral reasoning and ethical decision making (Gilligan, 1982). Females have been found to define themselves in terms of relationships with others and to make moral decisions based on care and concern for others, while men strive to form identities based on autonomy and separation from others and espouse adherence to abstract principles independent of context in ethical decision making. From these findings, Gilligan (1982) proposed that the cultivation of intimacy and relationship is the heart of the socio-moral developmental path towards fulfillment for women. Related studies support Gilligan's model in that girls report higher levels of interpersonally oriented traits than boys as well as a preference for close emotional communication and responsiveness within relationships (Aube, Fichman, Saltaris, & Koestner, 2000; Cyranowski, Frank, Young, & Shear, 2000; Lapsley, Fitzgerald, Rice, & Jackson, 1989). To the extent that girls tend to hold an interpersonal stance in navigating the socio-moral world, it seems to make sense that this stance would expand to embrace spiritual understanding.

With respect to the association between depression and low levels of relational spirituality in girls, Gilligan's theoretical paradigm may be further extended. Gilligan (1982) identified patterns of disconnection as a paramount psychological struggle in females, often associated with depression. Empirical research supports Gilligan's theory in showing alienation from relationship to be associated with depression (Aube et. al., 2000; Jack, 1991; Thompson, 1995).

Taken at a spiritual level, the current findings suggest that disruptions in relational spirituality may be associated with depression in adolescent girls.

*Spirituality, Depression, and Adolescent Boys*

In contrast to females, dimensions of religious social support were strong predictors of depression in adolescent males; higher scores on Congregation Problems were associated with higher levels of depression, and higher scores on Congregation Benefits were associated with lower levels of depression. No association was found between Relational Spirituality Total and depression in males. Findings suggest that boys who feel support and comfort and minimal conflict or criticism from their congregation or religious group are less depressed. Considering that boys have been found to conceptualize G-d in a more legalistic manner, as an enforcer of human morality (Tamminen, 1994), it stands to reason that boys may be more susceptible to depression when experiencing judgment or disapproval from their congregation than girls. Again, drawing from the work of Gilligan (1982), if adolescent males are more likely to individuate through separation and independence, and if the failure to achieve individuation has depressogenic effects, then the sense of connection inherent in Relational Spirituality would not be protective against depression for boys.

Another potential explanation for the differential relationship of Relational Spirituality and depression by gender is that, due to gender role expectations, adolescent males who display depressive symptoms may generate more negative reactions from others than females, leading to decreases in social

support for males but not females (Hammen & Peters, 1977, 1978; Johnson, 1991). From this perspective, experiencing the social support of a religious group consisting of helpful and caring others would be more protective against depression for adolescent males than experiencing the more individual, personalized sense of inner-connection with a higher power.

### *Parenting and Depression*

In both male and female adolescents, Maternal Care remained significantly inversely related to depression after accounting for the contribution of Relational Spirituality. Prior research has shown Maternal Care to be negatively correlated with depression in adolescents and young adults, indicating that adolescents who perceive their mothers as emotionally cold and distant display more symptoms of depression (Parker et al., 1979; Parker, 1983; Rey, 1995). Similarly, the dimension of parental emotional warmth/rejection has been shown to account for a unique proportion of the variance in depressive symptoms in adolescent offspring (Greenberger & Chen, 1996; Muris, Meester, Schouten & Hoge, 2004; Sund & Wichstrom, 2002).

Gender differences in effects of maternal warmth and support have also been noted, with significant differences in trajectories of depressive symptoms as a function of high or low maternal warmth surfacing for girls but not for boys (Ge et al., 1994). Though higher reports of maternal love and affection were associated with less depression in both male and female adolescents in the present study, the strength of the association was much greater for females as compared with males.

Results of the present study suggest that a maternal relationship characterized by warmth and love is highly protective against depression in adolescents. However, it is important to also consider the potential influence of depressed mood on parental appraisals, in that feelings of depression could create a tendency to evaluate parents more negatively. Furthermore, symptoms of depression may impede the adolescent's ability to maintain supportive, loving relationships with parents (Needham, 2008; Puig-Antich, Lukens, Davies, & Goetz, 1985; Johnson, 1991). Depressed adolescents may disengage from relationships and isolate themselves, thus limiting the degree of warmth and love they experience from important others. Manifest symptoms of depression may also make others more likely to reject or avoid the depressed person. While there is evidence to show that perceptions of parents are not affected by depressed mood, (Parker, 1981; Gotlib, Mount, Cordy, & Whiffen, 1988), depressed adolescents may withdraw from experiences of maternal closeness and affection or trigger the withdrawal of these experiences from parental figures, rather than feeling depressed because their mothers were initially cold and rejecting.

### *Spirituality and Anxiety*

In contrast to depression, Relational Spirituality was not associated with levels of anxiety in adolescents. However, aspects of spirituality tapping into experiences in a spiritual or religious community were significantly related to anxiety, with higher scores on Congregation Problems predicting higher levels of anxiety. As previously reported by Desrosiers and Miller (2008), these results are consistent with the existing literature indicating that quality of involvement in a religious or spiritual community plays a significant role in protecting against anxiety in adolescents (Harris, Choneman, & Carrera, 2002). Studies of adults have also shown inverse relations between a range of dimensions of social religiosity (degree of church attendance and extent of interaction with a religious community) and anxiety, lending further support to the current finding (Kendler et al., 2003). As adolescence is a period in which participation and inclusion in a peer group is particularly important for mental health (Mackrell & Lavender, 2004; Reisman, 1985; Steinhahausen & Metzke, 2001; Ueno, 2005; Ystgaard, Tambs, & Dalgard, 1999), it is possible that for adolescents, being embedded in a congregation buffers against experiences of anxiety that may arise more in isolation or in the absence of a supportive group connected by a shared value system. Similarly, as adolescents are beginning to formulate their own morals, values, and sense of self, they may be particularly susceptible to harshness or judgment from a congregation, experiences which may provoke intense anxiety and self-recrimination.

In addition to negative experiences in a religious community, mysticism was also associated with higher levels of anxiety. Though few studies have examined the relationship between mysticism and mental health variables, there is modest support for the positive association found for mysticism and anxiety. In a large study of American and Iranian university students, Hood (2001) found that introvertive experiences of mysticism, or experiences that reflect a loss of the self in a greater *Unity*, were associated with increased somatization, depression and obsessive-compulsiveness in both samples. Although mysticism was not negatively correlated with anxiety, the somatization scale may capture important aspects of the physiological experience of anxiety. Also, in a previous study by Hood (1975), mysticism was positively correlated with two MMPI scales: Hysteria (Hy) and Hypochondrias (Hs), both of which provide a measure of abnormal concern with bodily processes and intense experiential states that undoubtedly include elements of anxiety.

Similarly, the Mysticism Scale has been shown to be positively related to Trait Arousability, a measure of positive and/or negative emotional sensitivity (Mehrabian, Stefl, & Mullen, 1997). The relationship between higher reports of mysticism and higher reports of anxiety can be interpreted from different angles. For example, because mystical experiences typically lack concrete explanations, they may produce heightened anxiety in adolescents. In turn, this anxiety may be amplified if the adolescent lacks an accepting and supportive social network in which to verbalize and process the experience, even if it remains incomprehensible. It is also possible that adolescents who



experience more anxiety, who are more sensitive to their bodily sensations and inner states, may be more predisposed to mystical experiences.

### *Parenting and Anxiety*

In addition to the relationship between anxiety and both religious social support and mysticism, parenting style also emerged as an important predictor of anxious symptomatology, with Maternal Care and Paternal Care exhibiting significant negative correlations with it, and Parental Transparency exhibiting a positive correlation with it. The findings on the relationship between parental care and anxiety are consistent with an extant body of literature showing that lower scores on Maternal Care are associated with higher levels of anxiety (Parker, 1979; Parker, 1981b; Chambers, Power, Loucks, & Swanson, 2000; Silove, Parker, Hadzi-Pavlovic, Manicavasagar, & Blaszczynski, 1991; Heider, Matschinger, Bernert, Alonso, Brugha, et. al, 2008; Brown & Whiteside; 2008). In that parental care is related to characteristics like responsiveness, warmth, and consistency, findings on Maternal Care are also compatible with the literature on attachment showing that secure attachment is associated with fewer symptoms of anxiety in children and adolescents (van Brakel, Murs, Bogels, & Thomassen, 2006; Brumariu & Kerns, 2008; Viana & Rabian, 2008; Irons & Gilbert, 2005; Muris & Meesters, 2002).

While low Paternal Care has also been implicated in the expression of anxiety in a few studies (Heider et al., 2008), the association found for Maternal Care is much stronger, as was found in the present study. This finding suggests that while paternal love and affection may be protective against anxiety in some

cases, the presence of Maternal Care is far more vital in warding off symptoms of anxiety.

The association between consistently unresponsive and emotionally rejecting parenting and the development of childhood and adolescent distress can be further elucidated by drawing on both attachment and behavioral research. Adolescents who have experienced low parental care may learn that their actions cannot control or influence critical environmental stimuli, leading to feelings of anxiety (Chorpita & Barlow, 1998). Prior studies demonstrate that a diminished sense of control in the immediate context triggers immediate feelings of anxiety (Barlow, 1991; Beck & Emery, 1985; Sanderson, Rapee, & Barlow, 1989), but perhaps more notably, a history of lack of control may operate as a risk factor for chronic anxiety (Schneewind, 1995).

Another potential explanation is that a consistently warm, loving relationship with a mother (or father) promotes the internal regulation of affect in the child, thus facilitating the capacity to modulate anxiety and self-soothe. Beebe and Lachman (2002) suggest that beginning in infancy, children perceive predictable relations between their behavior and environmental stimuli. If the environment fails to provide expectable responses, the child's ability to regulate his/her emotional states will be affected, including anxiety and physiological arousal. However it is important to keep in mind that attachment is a reciprocal process, meaning that if a child is born with a more anxious temperament, the mother may become more distant and less empathic as a reaction, a pattern that may continue into adolescence.

While the positive relationship between anxiety and parental transparency around spirituality may seem counterintuitive, research supporting the association between intolerance for uncertainty and anxiety may provide some insight into this finding. According to the cognitive model of excessive worry developed by Dugas, Gagnon, Ladouceur, and Freeston (1998), intolerance for uncertainty, defined as a tendency to find uncertain situations stressful and upsetting, is a primary factor in the development and maintenance of worrying above and beyond demographic and other worry-related cognitive variables (Laugesen, Dugas, & Bukowski, 2003; Lachance, Ladouceur, & Freeston, 1997). In terms of the current study, engaging in open-ended discussions about spiritual and religious questions with parents is a process likely to elicit or heighten feelings of uncertainty. If the adolescent is unable to tolerate experiences of ambiguity or uncertainty, worry and anxiety may ensue.

#### *Why Depression but not Anxiety?*

Considering the high rates of comorbidity between depression and anxiety and that the two were highly (positively) correlated in the current study, the question regarding why Relational Spirituality demonstrates protective qualities against depression but not anxiety must be addressed. The challenge of discriminating between anxiety and depression has garnered substantial attention from clinicians and researchers over the years. Clark and Watson (1991) presented a theory to account for both the commonalities and points of departure between depressive and anxiety disorders: the tripartite model of anxiety and depression. In this model, anxiety and depression share a common,

nonspecific factor that encompasses general affective distress, termed negative affect. Regarding differentiation, anxiety and depression are distinguished by two specific factors: physiological hyperarousal, specific to anxiety, and anhedonia (low positive affect), specific to depression. Empirical support for the application of this model with both children and adults has been widely documented throughout the literature (Chorpita, 2002; Brown, Chorpita, & Barlow, 1998; Chorpita, Albano, & Barlow, 1998; Joiner, Catanzaro, & Laurent, 1996; Lonigan, Hooe, David, & Kistner, 1999).

With respect to the current study, the tripartite model of depression and anxiety provides a basis to suggest that Relational Spirituality is associated more specifically with anhedonia, or a lack of positive affect, as opposed to physiological arousal levels. Though not specifically tested, given that Relational Spirituality was uniquely related to depression in adolescent females, an absence of a personal, internalized connection with G-d may decrease positive affect, which then manifests in the expression of depressive symptoms in girls. Conversely, anhedonia may hinder an adolescent girl's motivation to seek out and/or sustain an emotionally experienced relationship with a higher power.

In addition to the somatic component of anxiety disorders, anxiety has been further discriminated from depression because it centers on a perceived inability to predict or control aspects of the environment, which often generates feelings of helplessness (Barlow, 2000). From a conceptual standpoint, it is unlikely that a relational connection to a higher power would improve an

adolescent's sense of control or attenuate physiological hyperarousal.

Conversely, participating in a religious group united by a single doctrine and shared social mores might enhance feeling that life is predictable and under control, which may help decrease somatic symptoms of anxiety.

### *Spirituality and Alcohol Use*

In line with previous results reported by Desrosiers and Miller (2008), Relational Spirituality was strongly inversely associated with amount of alcohol use in adolescents and contributed to the variance in reported use above and beyond that accounted for by demographics, parental care, religious social support, and mysticism. These findings are consistent with previous research on adolescents showing an inverse association between substance use and more general dimensions of personal spirituality (Leigh, Bowen, & Marlatt, 2005; Miller, Davies, & Greenwald, 2000; Ritt-Olson et al., 2004; Walker et al., 2007). Taken with previous research, the findings might be used to generate hypotheses on the etiology or phenomenology of substance use in adolescents. Rather than institutional aspects of religion, such as church attendance and congregational support, results suggest that a more personal, internalized, dyadic relationship with G-d is more salient in preventing alcohol use in adolescents. As relational spirituality encompasses a more proximal, experiential sense of a higher power in daily life, one possible explanation for higher alcohol use in those adolescents exhibiting lower levels of relational spirituality is that alcohol replaces the search for spiritual fulfillment,

functioning to satisfy a spiritual void experienced intrapersonally and/or interpersonally.

That alcohol use may be a substitute for spiritual nourishment resonates as consistent with treatment outcome research on adults in Alcoholics Anonymous (AA), in that recovery has been associated with increases in personal spirituality (Matthew, Georgi, Wilson, & Mathew, 1996; Corrington, 1989). Consistently, research has shown recovery for adult alcoholics to be associated with higher endorsements of spirituality, including spiritual growth, spiritual practice and spiritual connectedness, all of which are associated with better post-treatment outcomes (Piedmont, 2004; Sterling et al., 2006) and longer periods of recovery (Carroll, 1993; Carter, 1998).

In light of the present findings as well as the literature on AA, it seems that a sense of relational spirituality, rather than participation in a congregation or religious social group, is vital in protecting against onset of alcohol use and abuse. At its core, AA upholds that surrender to a higher power, turning to G-d to cope, forgiving self and others, and seeking to improve conscious contact with G-d are essential for healing and recovery (AA, 2007). Considering that these aspects of recovery in AA are reflected in the relational dimensions of Daily Spiritual Experiences, Forgiveness, and Positive Religious Coping, the absence of a relational spirituality may also increase vulnerability for developing alcohol use disorders in youth. Extending this idea further, if a lack of relational spirituality creates a heightened risk for using alcohol, it is possible that alcohol abuse may best be understood etiologically as a *spiritual* disorder.

*Mysticism and Alcohol Use*

Although adolescents with higher levels of Relational Spirituality reported lower levels of alcohol use, those with higher scores on Mysticism reported higher levels of alcohol use. This finding supports the conclusion that mystical experience is a discreet aspect of spiritual/religious life that, while correlated with Relational Spirituality, functions different in relation to alcohol use (and anxiety). Sorenson and Cutter (1982) found that drinking to relax and drinking to be less concerned with what others think were associated with having had a mystical experience. The authors proposed that the relationship between drinking to show less concern with what others think and mysticism suggests that inner-directed but socially aware individuals who have had mystical experiences may drink to cope with the discrepancy of their values and beliefs with those of the larger society. Considering that alcohol use was not correlated with either anxiety or depression in this study, it appears that these adolescents might have consumed alcohol as a relatively non-deviant mode of coping with social strains generated by mystical experience rather than as a maladaptive means for coping with psychopathology. From a different perspective, alcohol may serve as a conduit to induce mystical experience, either intentionally or unintentionally. A plethora of both empirical research and ethnographic studies show that psychoactive substances have long been used to elicit religious or mystical experience (for a review, see Hood, 2005), and conversely, mystical experience may be triggered by drug use. In a culture that prohibits use of “psychedelic” drugs, adolescents may choose alcohol as a

more socially acceptable alternative to produce an altered state of consciousness, which may facilitate mystical experience.

### *Relational Spirituality: Implications for Treatment*

#### *Depression*

Drawing from present results, a dearth of relational spirituality may be concomitant with depression in adolescent girls, suggesting that therapeutic approaches which foster relational spirituality may be beneficial in treating depressive symptomatology in girls. A range of treatment models have been developed and presented in current American Psychological Association publications that directly address and support relational spirituality. In their edited volume, Sperry and Shafranske (2005) provide exposition on a range of fundamentally spiritual approaches to treatment, many of which are anchored in widely used modalities (cognitive–behavioral, interpersonal, psychodynamic). Len Sperry (2005) has presented *integrative spiritually oriented psychotherapy* through which “the clinician functions as both psychotherapist and spiritual guide” and the “psychological and spiritual dimensions of human experience are considered to be related, with the spiritual having primacy.”

#### *Spiritual*

awareness psychotherapy (Miller, 2005a) assumes within its ontological frame a “fundamentally living, guiding Universe, with which we interact,” and holds as the primary treatment goal validation and augmentation of the client’s inchoate sense of relational spirituality. Recovery from depression and the pathway to wellness in spiritual awareness psychotherapy extend beyond alleviation of



symptoms to the reconnection with the Creator in a vital sense of personal guidance.

Given the strong interpersonal orientation of girls, interpersonal psychotherapy conducted from a spiritual perspective (IPT-S) might be useful in addressing the suffering associated with loss or disappointment in relationships (Miller, 2005b). From within IPT-S, all relationships are viewed as spiritually significant and purposeful opportunities for spiritual growth. Relational conflict or infractions by friends, family members, or strangers spawn spiritual development through understanding, forgiveness, or compassion. In addition to IPT-S, another intervention that might be helpful for some adolescent girls is spiritual awareness psychotherapy. Relational spirituality per se is the specific primary focus of spiritual awareness psychotherapy (Miller, 2005a), which encourages an ongoing awareness and dialogue with God in daily living. The treatment model adopts a fundamentally spiritual frame in that (a) the primary goal of treatment is fostering the development of a way of living guided by a personal relationship with the Divine, (b) the therapist provides interest, support, and validation of the client's innate and often inchoate sense of the Divine in daily living, and (c) the specific direction and ultimate goals of treatment are trusted to emerge through the client's discoveries in relationship to G-d.

#### *Alcohol Use*

Given that higher levels of Relational Spirituality were associated with lower levels of alcohol use in adolescent boys and girls, effectiveness of

interventions targeting substance abuse in teens might be enhanced by supporting the development of a personal connection to G-D throughout the therapeutic process. As individuals in recovery from alcohol abuse report greater levels of personal spirituality than those continuing to relapse (Jarusiewicz, 2000; Matthew et al., 1996), one intervention that may cultivate the experience of Relational Spirituality is AA. However, though studies have shown that increased engagement in AA practices and beliefs and higher rates of attendance at AA meetings are significantly associated with length of sobriety in both adults (Tonigan, Miller, Connors, 2000; Connors, Tonigan, & Miller, 2001; Oakes, Allen, & Ciarrocchi, 2000) and adolescents (Kelly & Myers, 2007), studies on adolescents were conducted predominantly in inpatient settings. Furthermore, AA attendance rates for adolescents are quite low overall (Kelly, Yeterian, & Myers, 2008; Kelley & Myers, 2007) signifying that adolescents may experience many barriers to participation, such as low prevalence of similar age participants and low motivation to change. As such, individual psychotherapy or adolescent group therapy incorporating a focus on nurturing Relational Spirituality may be possible alternatives to AA meetings.

In addition to spiritual awareness psychotherapy (Miller, 2005a) and integrative spiritually oriented psychotherapy (Sperry, 2005), which provide a guide for the integration of spirituality into a broad treatment approach, other integrative models have also been proposed more specifically for treating substance use disorders. For example, in William Miller's edited work (1999), Tonigan, Toscova, and Connors present a chapter for clinicians on spirituality

and the twelve-step programs. Similarly, Pita (2004) proposed a model for substance abuse treatment that integrates cognitive-behavioral, motivational interviewing, and twelve step approaches. As motivational interviewing has been shown to improve treatment engagement, retention, and outcome for adolescent substance abusers in several studies (Aubrey, 1998; Marlatt, Baer, Kivlahan, Daniel, Dimeff, et al., 1998; McCambridge, & Strang, 2004; Stein, Colby, Barnett, Monti, Golembeske, et al., 2006), incorporating a spiritual perspective with motivational interviewing techniques may further enhance treatment adherence and recovery for many adolescents. While all of these resources recommend useful strategies for integrating spirituality and psychotherapy, clinicians working with adolescent substance abusers might consider a more specific emphasis on the relational dimension of spirituality for optimal treatment outcomes.

#### *Limitations and Conclusions*

This study addresses some criticisms of previous investigations, namely: 1) the need for a relatively large sample to represent a broader range of religious and ethnic groups and, 2) to conduct more fine-grained analyses of distinct dimensions of spirituality and their correlates. However, some standard limitations in methodology are to be noted. First, due to the cross-sectional nature of the data, no claims can be made regarding causality. For instance, spirituality may prevent initiation of alcohol use, or adolescents with a strong sense of spirituality may experience a lessening or loss of spirituality with increasing levels of drinking. Likewise, the onset of depression in adolescent

girls may disturb or diminish a previously strong relational connection, which, if restored, may then mitigate depressive symptoms; or treatment of depression may revive this connection. Additionally, the use of survey rather than multiple measures of personal experience allows for self-presentation bias, and the sample, while highly diverse, was not epidemiologically derived and therefore not generalizable. The over-sampling of religious and ethnic groups typically under-studied in other large-scale investigations also hinders generalizability of findings. Moreover, the data collection method of ascertaining subjects predominately through secular and religious institutions in which participants elect to participate of their own volition may have over-included adolescents more likely to endorse higher levels of spirituality and lower levels of psychopathology. Finally, the combination of internet and pencil-and-paper surveys holds the potential to confound results, but no significant differences were found in the patterns of results based on method of reporting, and the benefits of internet research are generally thought to outweigh the limitations (e.g., Gosling, Vazire, Srivastava, & John, 2004; Kraut, Olsen, Banaji, Bruckman, Cohen, & Cooper, 2004).

In sum, Relational Spirituality significantly contributed to the variance in depressive symptoms in girls and alcohol use in both genders above and beyond all other variables correlated with it. Findings suggest that Relational Spirituality may be strongly associated with depression in girls and alcohol use in boys and girls. However, while Relational Spirituality demonstrated significant, inverse associations in both of these cases, Maternal Care remained

an important contributor to variability in both level of depression and extent of alcohol use. This finding underscores the vital link between these disorders and maternal love in adolescents, in which maternal love may prevent onset of symptomatology, or depression and alcohol use may reduce experiences of maternal affection.

With regard to anxiety, Relational Spirituality was not associated with symptom levels. Instead, anxiety was associated with the quality of interpersonal relationships within a religious community and with mystical experience. When viewed against previous research, results of this study suggest that from a spiritual perspective, specific dimensions of spirituality have the potential to discriminate between different psychological disorders. As a corollary, treatment approaches which integrate spirituality may be effective only for particular types of psychopathology in adolescents and that gender differences must be taken into account during this critical time period.

Future research might explore relational spirituality in clinical samples or in a range of ethnic or religious subgroups. In further extension of this idea, clinical trials comparing spiritually oriented/integrated treatments with secular treatments, such as group IPT-S versus supportive therapy for depressed adolescent girls, might help clinicians more systematically select optimal interventions for treating adolescent disorders. Epidemiologically derived longitudinal studies might also help illuminate more precisely the relationships of variables correlated with Relational Spirituality, such as whether more devout spiritual practice (i.e. prayer, meditation, reading scriptures) increases a sense of

relational connection to G-d, which then prevents psychological dis-ease in adolescents. As well, specific empirical investigation of underlying mechanisms such as absorption, internality or openness to experience might further shed light on these preliminary findings. For example, as proposed by Miller and Gur (2002), a capacity for absorption might be nourished and cultivated into a source of resilience through a deepening of Relational Spirituality, or, in the absence of such nurturance and fulfillment might develop into a risk factor for depression or substance abuse.

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## APPENDIX 1: Preliminary Information and Assent

You are invited to participate in a research study on the developmental process of spirituality among adolescents. Our purpose is to identify the way that spirituality and the religious life impact and influence your developmental process by exploring the factors that tend to either promote or inhibit spiritual growth. The types of questions that you will be asked pertain to attitudes, social behavior, cultural beliefs and practices that organize and motivate your spiritual way of life. Personal devotion is explored, as is relational support, coping strategies, frequency and type of religious behavior, and the ways peers and adults influence your spiritual orientation or expression.

Your participation will take approximately 30 - 45 minutes during which the survey will be conducted. You will receive a \$10.00 gift certificate from Borders Bookstore as payment for your participation.

A potential risk involved in this study is that you may regard a question as personal and decide that you do not feel comfortable endorsing. If this is the case, you will be encouraged to skip over it and you will be asked if you would like to continue. If you do not feel comfortable continuing then the survey will come to an end. You are free to skip over any questions and end the survey process at any time. No other risks have been identified. A potential benefit involved in the study is the opportunity to identify and consider your own personal beliefs and concerns pertaining to spirituality.

All participants will be assigned a subject number 001, 002, etc. Data will be transferred to the lab computer and marked with the subject number

only. The lab computer will be accessible to the principal investigator only. Similarly, contact information and hard copies of data will be stored in a locked cabinet accessible to principal investigator only. All names and material that might violate anonymity will be modified.

The results of the study will be used for educational purposes to inform other adolescents of the similar experiences you share with one another. We will account for adolescent's experiences as they actually exist and hopefully utilize this knowledge to foster spiritual growth among adolescents. The results might also be published in an academic journal, or a contemporary book. Material will be presented at research meetings and national conferences.



## PARTICIPANT'S RIGHTS

The Adolescent Project: The Developmental Process of Spirituality Among Adolescents

Principal Investigator: Lisa Miller, Ph.D. (212) 678-8102

- I have read and discussed the Research Description with the researcher. I have had the opportunity to ask questions about the purposes and procedures regarding this study.
- My participation in research is voluntary. I may refuse to participate or withdraw from participation at any time without jeopardy to future medical care, employment, student status or other entitlements.
- The researcher may withdraw me from the research at his/her professional discretion.
- If, during the course of the study, significant new information that has been developed becomes available which may relate to my willingness to continue to participate, the investigator will provide this information to me.
- Any information derived from the research project that personally identifies me will not be voluntarily released or disclosed without my separate consent, except as specifically required by law.
- If at any time I have any questions regarding the research or my participation, I can contact the investigator, who will answer my questions. The investigator's phone number is (212) 678-8102.
- If at any time I have comments, or concerns regarding the conduct of the research or questions about my rights as a research subject, I should contact the Teachers College, Columbia University Institutional Review Board /IRB. The phone number for the IRB is (212) 678-4105. Or, I can write to the IRB at Teachers College, Columbia University, 525 W. 120<sup>th</sup> Street, New York, NY, 10027, Box 151.
- I should receive a copy of the Research Description and this Participant's Rights document.
- If video and/or audio taping is part of this research, I ( ) consent to be audio/video taped. I ( ) do NOT consent to being video/audio taped. The written, video and/or audio taped materials will be viewed only by the principal investigator and members of the research team.
- Written, video and/or audio taped materials ( ) may be viewed in an educational setting outside the research ( ) may NOT be viewed in an educational setting outside the research.
- My signature means that I agree to participate in this study.

Participant's signature: \_\_\_\_\_ Date: \_\_\_\_/\_\_\_\_/\_\_\_\_

Name: \_\_\_\_\_

**Assent Form for Minors (8-17 years-old)**

I \_\_\_\_\_ (child's name) agree to participate in the study entitled:

\_\_\_\_\_.

The purpose and nature of the study has been fully explained to me by \_\_\_\_\_ (investigator's name). I understand what is being asked of me, and should I have any questions, I know that I can contact \_\_\_\_\_ (investigator) at any time. I also understand that I can to quit the study any time I want to.

Name of Participant: \_\_\_\_\_

Signature of Participant: \_\_\_\_\_

Witness: \_\_\_\_\_

Date: \_\_\_\_\_

**Investigator's Verification of Explanation**

I certify that I have carefully explained the purpose and nature of this research to \_\_\_\_\_ (participant's name) in age-appropriate language. He/She has had the opportunity to discuss it with me in detail. I have answered all his/her questions and he/she provided the affirmative agreement (i.e. assent) to participate in this research.

Investigator's Signature: \_\_\_\_\_

Date: \_\_\_\_\_

## APPENDIX 2: Fetzer Brief Multidimensional Measure of

## Religiousness/Spirituality

1. I feel God's presence.
  1. Many times a day
  2. Every day
  3. Most days
  4. Some days
  5. Once in a while
  6. Never or almost never
  
2. I find strength and comfort in my religion.
  1. Many times a day
  2. Every day
  3. Most days
  4. Some days
  5. Once in a while
  6. Never or almost never
  
3. I feel deep inner peace or harmony.
  1. Many times a day
  2. Every day
  3. Most days
  4. Some days
  5. Once in a while
  6. Never or almost never
  
4. I desire to be closer to or in unison with God.
  1. Many times a day
  2. Every day
  3. Most days
  4. Some days
  5. Once in a while
  6. Never or almost never
  
5. I feel God's love for me, directly, or through others.
  1. Many times a day
  2. Every day
  3. Most days
  4. Some days
  5. Once in a while
  6. Never or almost never

6. I am spiritually touched by the beauty of creation.
  1. Many times a day
  2. Every day
  3. Most days
  4. Some days
  5. Once in a while
  6. Never or almost never
  
7. The events in my life unfold according to a divine or greater plan.
  - a. Strongly agree
  - b. Agree
  - c. Disagree
  - d. Strongly disagree
  
8. I have a sense of mission or calling in my own life.
  - a. Strongly agree
  - b. Agree
  - c. Disagree
  - d. Strongly disagree
  
9. I believe in a God who watches over me.
  - a. Strongly agree
  - b. Agree
  - c. Disagree
  - d. Strongly disagree
  
10. I feel a deep sense of responsibility for reducing pain and suffering in the world.
  - a. Strongly agree
  - b. Agree
  - c. Disagree
  - d. Strongly disagree
  
11. Because of my religious or spiritual beliefs I have forgiven myself for things that I have done wrong.
  - a. Always or almost always
  - b. Often
  - c. Seldom
  - d. Never
  
12. Because of my religious or spiritual beliefs I have forgiven those who hurt me.
  - a. Always or almost always
  - b. Often
  - c. Seldom
  - d. Never

13. Because of my religious or spiritual beliefs I know that God forgives me.
  - a. Always or almost always
  - b. Often
  - c. Seldom
  - d. Never
14. How often do you pray privately in places other than at church, synagogue, or mosque?
  1. More than once a day
  2. Once a day
  3. A few times a week
  4. Once a week
  5. A few times a month
  6. Once a month
  7. Less than once a month
  8. Never
15. Within your religious or spiritual tradition, how often do you meditate?
  1. More than once a day
  2. Once a day
  3. A few times a week
  4. Once a week
  5. A few times a month
  6. Once a month
  7. Less than once a month
  8. Never
16. How often do you watch or listen to religious programs on TV or radio?
  1. More than once a day
  2. Once a day
  3. A few times a week
  4. Once a week
  5. A few times a month
  6. Once a month
  7. Less than once a month
  8. Never
17. How often do you read the Bible or other religious literature?
  1. More than once a day
  2. Once a day
  3. A few times a week
  4. Once a week
  5. A few times a month
  6. Once a month
  7. Less than once a month
  8. Never

18. How often are prayers or grace said before or after meals in your home?
1. At all meals
  2. Once a day
  3. At least once a week
  4. Only on special occasions
  5. Never

Think about how you try to understand and deal with major problems in your life. To what extent is each of the following involved in the way you cope?

19. I think about how my life is part of a larger spiritual force.
1. A great deal
  2. Quite a bit
  3. Somewhat
  4. Not at all
20. I work together with God as partners.
1. A great deal
  2. Quite a bit
  3. Somewhat
  4. Not at all
21. I look to God for strength, support, and guidance.
1. A great deal
  2. Quite a bit
  3. Somewhat
  4. Not at all
22. I feel God is punishing me for my sins or lack of spirituality.
1. A great deal
  2. Quite a bit
  3. Somewhat
  4. Not at all
23. I wonder whether God has abandoned me.
1. A great deal
  2. Quite a bit
  3. Somewhat
  4. Not at all
24. I try to make sense of the situation and decide what to do without relying on God.
1. A great deal
  2. Quite a bit
  3. Somewhat

4. Not at all

25. To what extent is your religion involved in understanding or dealing with stressful situations in any way?

1. Very involved
2. Somewhat involved
3. Not very involved
4. Not involved at all

These questions are designed to find out how much help the people in your congregation, or religious community, would provide if you need it in the future.

26. If you were ill, how much would the people in your congregation help you out?

1. A great deal
2. Some
3. A little
4. None

27. If you had a problem or were faced with a difficult situation, how much comfort would the people in your congregation be willing to give you?

1. A great deal
2. Some
3. A little
4. None

Sometimes the contact we have with others is not always pleasant.

28. How often do the people in your congregation make demands of you?

1. Very often
2. Fairly often
3. Once in a while
4. Never

29. How often are the people in your congregation critical of you and the things you do?

1. Very often
2. Fairly often
3. Once in a while
4. Never

30. Did you ever have a religious or spiritual experience that changed your life?

1. No
2. Yes

IF YES: How old were you when this experience occurred? \_\_\_\_\_

31. Have you ever had a significant gain in your faith?

1. No
2. Yes

IF YES: How old were you when this experience occurred? \_\_\_\_\_

32. Have you ever had a significant loss in your faith?

1. No
2. Yes

IF YES: How old were you when this experience occurred? \_\_\_\_\_

33. I try hard to carry my religious beliefs over into all my other dealings in life.

1. Strongly Agree
2. Agree
3. Disagree
4. Strongly Disagree

34. During the last year about how much was the average monthly

contribution of your household to your congregation or to religious causes? \_\_\_\_\_

35. In an average week, how many hours do you spend in activities on behalf of your church or activities that you do for religious or spiritual reasons? \_\_\_\_\_

36. How often do you go to religious services?

1. More than once a week
2. Every week or more often
3. Once or twice a month
4. Every month or so
5. Once or twice a year
6. Never

37. Besides religious services, how often do you take part in other activities at a place of worship?

1. More than once a week
2. Every week or more often
3. Once or twice a month
4. Every month or so
5. Once or twice a year
6. Never



38. What is your current religious preference? \_\_\_\_\_

- What specific denomination is that? \_\_\_\_\_

39. To what extent do you consider yourself a religious person?

1. Very religious
2. Moderately religious
3. Slightly religious
4. Not religious at all

40. To what extent do you consider yourself a spiritual person?

1. Very spiritual
2. Moderately spiritual
3. Slightly spiritual
4. Not spiritual at all

## APPENDIX 3: Relational Spirituality Total Scale Items

1. I feel God's presence.
  1. Many times a day
  2. Every day
  3. Most days
  4. Some days
  5. Once in a while
  6. Never or almost never
  
2. I find strength and comfort in my religion.
  1. Many times a day
  2. Every day
  3. Most days
  4. Some days
  5. Once in a while
  6. Never or almost never
  
3. I feel deep inner peace or harmony.
  1. Many times a day
  2. Every day
  3. Most days
  4. Some days
  5. Once in a while
  6. Never or almost never
  
4. I desire to be closer to or in unison with God.
  1. Many times a day
  2. Every day
  3. Most days
  4. Some days
  5. Once in a while
  6. Never or almost never
  
5. I feel God's love for me, directly, or through others.
  1. Many times a day
  2. Every day
  3. Most days
  4. Some days
  5. Once in a while
  6. Never or almost never
  
6. I am spiritually touched by the beauty of creation.
  1. Many times a day
  2. Every day

3. Most days
  4. Some days
  5. Once in a while
  6. Never or almost never
7. Because of my religious or spiritual beliefs I have forgiven myself for things that I have done wrong.
- a. Always or almost always
  - b. Often
  - c. Seldom
  - d. Never
8. Because of my religious or spiritual beliefs I have forgiven those who hurt me.
- a. Always or almost always
  - b. Often
  - c. Seldom
  - d. Never
9. Because of my religious or spiritual beliefs I know that God forgives me.
- a. Always or almost always
  - b. Often
  - c. Seldom
  - d. Never
10. I think about how my life is part of a larger spiritual force.
1. A great deal
  2. Quite a bit
  3. Somewhat
  4. Not at all
11. I work together with God as partners.
1. A great deal
  2. Quite a bit
  3. Somewhat
  4. Not at all
21. I look to God for strength, support, and guidance.
1. A great deal
  2. Quite a bit
  3. Somewhat
  4. Not at all

## APPENDIX 4: Mysticism Scale

+2: This description is definitely true of my own experience or experiences.

+1: This description is probably true of my own experience or experiences

-1: This description is probably not true of my own experience(s).

-2: This description is definitely not true of my own experience(s).

? : I cannot decide.

\_\_\_ 1. I have had an experience in which I had no sense of time or space.

\_\_\_ 2. I have had an experience in which I realized the oneness of myself with  
all  
things.

\_\_\_ 3. I have had an experience in which a new view of reality was revealed to  
me.

\_\_\_ 4. I have had an experience which I knew to be sacred.

\_\_\_ 5. I have had an experience that is impossible to communicate.

\_\_\_ 6. I have had an experience in which all things seemed to be conscious.

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## APPENDIX 5: Quest Scale

1. As I grow and change, I expect my religion also to grow and change.  
 1 2 3 4 5 6 7 8 9  
 Strongly Disagree Strongly Agree
2. I am constantly questioning my religious beliefs.  
 1 2 3 4 5 6 7 8 9  
 Strongly Disagree Strongly Agree
3. It might be said that I value my religious doubts and uncertainties.  
 1 2 3 4 5 6 7 8 9  
 Strongly Disagree Strongly Agree
4. I was not very interested in religion until I began to ask questions about the meaning and purpose of my life.  
 1 2 3 4 5 6 7 8 9  
 Strongly Disagree Strongly Agree
5. For me, doubting is an important part of what it means to be religious.  
 1 2 3 4 5 6 7 8 9  
 Strongly Disagree Strongly Agree
6. I do not expect my religious convictions to change in the next few years.  
 1 2 3 4 5 6 7 8 9  
 Strongly Disagree Strongly Agree
7. I find religious doubts upsetting.  
 1 2 3 4 5 6 7 8 9  
 Strongly Disagree Strongly Agree
8. I have been driven to ask religious questions out of a growing awareness of the tensions in my world and in my relation to my world.  
 1 2 3 4 5 6 7 8 9  
 Strongly Disagree Strongly Agree

9. My life experiences have led me to rethink my religious convictions.  
1 2 3 4 5 6 7 8 9  
Strongly Disagree Strongly Agree
10. There are many religious issues on which my views are still changing.  
1 2 3 4 5 6 7 8 9  
Strongly Disagree Strongly Agree
11. God wasn't very important to me until I began to ask questions about the meaning of my own life.  
1 2 3 4 5 6 7 8 9  
Strongly Disagree Strongly Agree
12. Questions are far more central to my religious experience than are answers.  
1 2 3 4 5 6 7 8 9  
Strongly Disagree Strongly Agree

## APPENDIX 6: Parental Bonding Instrument

This form lists various attitudes and behaviors of parents and caregivers.

As you remember your MOTHER (or the person most like your mother) over the years, please circle the most appropriate number next to each question.

**If you do not have a mother or mother figure in your life please check here \_\_\_\_\_**

**MY MOTHER (or the person most like my mother)**

	Very Likely	Moderately Likely	Moderately Unlikely	Very Unlikely
1. Speaks to me with a warm and friendly voice	1	2	3	4
2. Does not help me as much as I need	1	2	3	4
3. Lets me do things I like doing	1	2	3	4
4. Seems emotionally cold to me	1	2	3	4
5. Appears to understand my problems and worries	1	2	3	4
6. Is affectionate to me	1	2	3	4
7. Likes me to make my own decisions	1	2	3	4
8. Does not want me to grow up	1	2	3	4
9. Tries to control everything I do	1	2	3	4
10. Invades my privacy	1	2	3	4
11. Enjoys talking things over with me	1	2	3	4
12. Frequently smiles at me	1	2	3	4
13. Tends to baby me	1	2	3	4
14. Does not seem to understand what I need or want	1	2	3	4
15. Lets me decide things for myself	1	2	3	4

	<u>Very Likely</u>	<u>Moderately Likely</u>	<u>Moderately Unlikely</u>	<u>Very Unlikely</u>
<u>6. Makes me feel I am not wanted</u>	1	2	3	4
<u>17. Can make me feel better when I am upset</u>	1	2	3	4
<u>18. Does not talk with me very much</u>	1	2	3	4
<u>19. Tries to make me dependent on her</u>	1	2	3	4
<u>20. Feels I can not look after myself unless she is around</u>	1	2	3	4
<u>21. Gives me as much freedom as I want</u>	1	2	3	4
<u>22. Lets me go out as often as I want</u>	1	2	3	4
<u>23. Is overprotective of me</u>	1	2	3	4
<u>24. Does not praise me</u>	1	2	3	4
<u>25. Lets me dress in anyway I please</u>	1	2	3	4

**The person I just described is:**

1. My natural, biological mother
2. My adopted mother
3. My step-mother
4. My foster mother
5. Someone else (please give name and relationship to you)

\_\_\_\_\_

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As you remember your FATHER (or the person most like your father) over the years, please circle the most appropriate number next to each question

**If you do not have a father or father figure in your life please check here \_\_\_\_\_**

**MY FATHER (or the person most like my father)**

	Very Likely	Moderately Likely	Moderately Unlikely	Very Unlikely
1. Speaks to me with a warm and friendly voice	1	2	3	4
2. Does not help me as much as I need	1	2	3	4
3. Lets me do things I like doing	1	2	3	4
4. Seems emotionally cold to me	1	2	3	4
5. Appears to understand my problems and worries	1	2	3	4
6. Is affectionate to me	1	2	3	4
7. Likes me to make my own decisions	1	2	3	4
8. Does not want me to grow up	1	2	3	4
9. Tries to control everything I do	1	2	3	4
10. Invades my privacy	1	2	3	4
11. Enjoys talking things over with me	1	2	3	4
12. Frequently smiles at me	1	2	3	4
13. Tends to baby me	1	2	3	4
14. Does not seem to understand what I need or want	1	2	3	4
15. Lets me decide things for myself	1	2	3	4

	<u>Very Likely</u>	<u>Moderately Likely</u>	<u>Moderately Unlikely</u>	<u>Very Unlikely</u>
<u>6. Makes me feel I am not wanted</u>	1	2	3	4
<u>17. Can make me feel better when I am upset</u>	1	2	3	4
<u>18. Does not talk with me very much</u>	1	2	3	4
<u>19. Tries to make me dependent on her</u>	1	2	3	4
<u>20. Feels I can not look after myself unless she is around</u>	1	2	3	4
<u>21. Gives me as much freedom as I want</u>	1	2	3	4
<u>22. Lets me go out as often as I want</u>	1	2	3	4
<u>23. Is overprotective of me</u>	1	2	3	4
<u>24. Does not praise me</u>	1	2	3	4
<u>25. Lets me dress in anyway I please</u>	1	2	3	4

**The person I just described is:**

1. My natural, biological father
2. My adopted father
3. My step-father
4. My foster father
5. Someone else (please give name and relationship to you) \_\_\_\_\_

## APPENDIX 7: Parental Transparency Scale

1. How **comfortable** do you feel talking to your mother about religious/spiritual issues or concerns?
- |               |   |   |   |   |   |             |  |
|---------------|---|---|---|---|---|-------------|--|
| 1             | 2 | 3 | 4 | 5 | 6 | 7           |  |
| Very          |   |   |   |   |   | Very        |  |
| Uncomfortable |   |   |   |   |   | Comfortable |  |
2. How **often** do you talk about religious/spiritual issues with your mom?
1. Nearly every day
  2. At least once a week
  3. Once or twice a month
  4. Several times a year
  5. Once or twice a year
  6. Never
3. How **comfortable** do you feel talking to your father about religious/spiritual issues or concerns?
- |               |   |   |   |   |   |             |  |
|---------------|---|---|---|---|---|-------------|--|
| 1             | 2 | 3 | 4 | 5 | 6 | 7           |  |
| Very          |   |   |   |   |   | Very        |  |
| Uncomfortable |   |   |   |   |   | Comfortable |  |
4. How **often** do you talk about religious/spiritual issues with your father?
1. Nearly every day
  2. At least once a week
  3. Once or twice a month
  4. Several times a year
  5. Once or twice a year
  6. Never
5. How interested and supportive is your mother in **your** spiritual questioning or exploration?
- |              |   |   |   |   |   |            |    |
|--------------|---|---|---|---|---|------------|----|
| 1            | 2 | 3 | 4 | 5 | 6 | 7          | NA |
| Completely   |   |   |   |   |   | Very       |    |
| Uninterested |   |   |   |   |   | Interested |    |
6. How interested and supportive is your father in **your** spiritual questioning or exploration?
- |              |   |   |   |   |   |            |    |
|--------------|---|---|---|---|---|------------|----|
| 1            | 2 | 3 | 4 | 5 | 6 | 7          | NA |
| Completely   |   |   |   |   |   | Very       |    |
| Uninterested |   |   |   |   |   | Interested |    |

7. How willing are your parents to explore and question their *own* religious beliefs

with you?

1

2

3

4

5

6

7

Very

Very

Unwilling

Willing