The Longitudinal Profiles of Child and Parent Religiousness and Spirituality: Their Relations with Child Adjustment

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Dissertation submitted to the faculty of the Virginia Polytechnic Institute and State University in partial fulfillment of the requirements for the degree of

Doctor of Philosophy
In
Psychology

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May 7, 2013
Blacksburg, Virginia

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Abstract

Prior research has documented many relations between child religiousness/spirituality (R/S) and outcomes including externalizing symptomatology, internalizing symptomatology, substance use, and sexual behaviors. Yet no previous studies have examined child R/S and parent R/S using a person-centered approach. The current study used longitudinal data collected 2 years apart (N = 357 Time 1, N = 220 Time 2) in the examination of child and parent R/S. Four questions were raised in the project. First, are there identifiable subgroups of individuals characterized by unique multidimensional patterns of religious experiences? Second, if there are identifiable subgroups, do these subgroups change over time? Third, how do these experiences related to outcomes such as delinquency, substance use, and sexual behaviors? Fourth, what is the correspondence between parent and child R/S profiles? The use of person-centered techniques to examine R/S was supported, finding three profiles of both parent and child R/S at Time 2 that were differentially related to several outcomes. Implications and suggestions for future research are provided.

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Chapter 1 – Introduction

In recent years the scientific study of religion has seen a dramatic increase in both the amount and quality of research examining many different types of religiousness (Emmons & Paloutzian, 2003; Rosmarin, Pargament & Robb, 2010). While research has made much progress, there are still theoretical issues that might hinder scientific advances. Definitions of religiousness and spirituality (R/S), both theoretical and operational, are contradictory and greatly influence results (Miller & Kelley, 2005). Additionally, many extant studies might lack sound measurement and theory, as suggested by the large volume of studies that used a single item measuring R/S (Wong, Rew, & Slaikeu, 2010).

Also problematic is the prevalence of contradictory findings in relations as diverse as those between R/S and personality (Simpson, Newman, & Fuqua, 2007; Saroglou 2002), physical and mental health (Hill & Pargament, 2003; McCullough & Larson, 1999), and delinquency (Chadwich & Topp, 1993; Hirschi & Stark, 1969), for example. These results might be due to measurement issues, including a lack of theoretical models as well as a failure to take into account multiple aspects of R/S.

There has been considerable debate among scholars regarding the conceptualization and measurement of R/S, especially in light of the more recent trend towards labeling non-traditional religiousness as spirituality (Emmons & Paloutzian, 2003; Hill & Pargament, 2003; Zinnbauer et al., 1997). Various definitions of religiousness and spirituality exist, mainly emphasizing the differences between the two even though some scholars admit that perhaps the similarities are as important as the differences (Emmons & Paloutzian, 2003; Hill & Pargament, 2008; Zinnbauer, Pargament, & Scott, 1999). Researchers in general agree upon viewing R/S as complex, multifaceted constructs, for which strong theoretical definitions have not been created (Hill et al., 2001; Benson, 2004 for a review).

This being said, it is important to keep in mind that definitions of religiousness and spirituality should be sensitive to the views of various faith traditions. The current paper borrows McCullough and Willoughby's (2009) definition of religion defined as "cognition, affect, and behavior, that arise from awareness of, or perceived interaction with, supernatural

entities that are presumed to play an important role in human affairs." References to general trends in R/S in the current paper will be applicable to only those faith traditions containing discussed constructs.

There have been several common ways of using R/S variables as is evident in the literature. First, R/S has often been in the examination of community-level data, such as county- or state-wide attendance. Since the early parts of the scientific study of R/S, researchers have used data of this kind to examine the longstanding question of whether or not R/S (and in particular, traditional religiousness) is related to decreased delinquency (Hirschi & Stark, 1969). At this time, larger longitudinal datasets were less common, as were more nuanced and psychometrically sound measurements of R/S. This type of inquiry has been fruitful and has helped better understand children's and family's ecological systems (Bronfenbrenner, 1977), but reveals little about experiences of individuals.

The second way R/S has been used is as an individual predictor in multiple regression models that involve multiple variables of R/S simultaneously predicting an outcome. Single-item measures of religiousness are common (Rew & Wong, 2006), compromising the complex, multi-faceted nature of R/S, leaving the potential for researchers to miss out on meaningful differences between aspects. For example, Burris, Sauer and Carlson (2011) found that religious commitment was as a protective factor against underage alcohol use, while spiritual transcendence was a risk factor. Additionally, interaction effects are often not examined, which assumes that the effect of R/S is homogeneous across levels of other factors (Lanza, Rhoades, Greenberg, Cox & The Family Life Project Key Investigators, 2011). It has been seen that interactions can occur even between two R/S variables (Sloane & Potvin, 1986). Similarly problematic is the assumption that dimensions act in additive and subtractive manners (Klemmack, Roff, Parker, Koenig, Sawyer & Allman, 2007), meaning that a one unit increase or decrease in any one aspect of R/S is equivalent to another. Finally, correlations between dimensions of R/S are typically high (McCullough & Larson, 1999), leaving multicollinearity as a potential problem in models involving multiple aspects of R/S.

The final way R/S has been used is in the creation of composite or latent variables using manifest indicators with multiple dimensions of R/S. Structural latent factors of R/S may be useful to represent underlying latent traits but is limited in that it is not being able to consider possible interactions between R/S dimensions, considering only additive effects. Potentially the

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most problematic part of latent variable analyses is the assumption that there is one underlying R/S dimension common to all R/S measurements. The existential feeling of a connection with a higher power might be profoundly different than the physical action of going to a church on Sunday because it is believed one is "supposed to." If the goal of the scientific study of religion is to discover what aspects of religiousness relate to attitudes/behavior/cognition, the use of more specific variables might serve better than using composites or global latent factors. Although R/S variables are typically highly correlated, these effects might occur not because they are the result of the same latent R/S construct, but simply because those who are more likely to engage in one type of religious behavior are also more likely to engage in another. Additionally, the inclusion of atheists/irreligious might artificially inflate the correlations that might be lowered when examined only amongst the religious/spiritual.

Religiousness is currently thought of as a combination of affective, behavioral, and cognitive states. While researchers have difficulty finding common ground in their definitions of R/S, there is no shortage of measures including service attendance, prayer, importance of religion, intrinsic and extrinsic religiousness, religion as quest, spiritual transcendence, daily spiritual experiences, and religious coping, to name a few. Despite the prevalence of measures, research reveals that these measures differ in their effects, as some dimensions can protect against maladjustment more than others, and some (such as fundamentalism) can even be detrimental towards individuals' social development (Pargament, 2002).

What is currently proposed is that considering multiple dimensions of religiousness is essential when examining the associations between R/S and adjustment outcomes because they represent diverse fundamental issues about the our world and our relationship with higher powers, which, while undoubtedly influenced by our social and religious context, are profoundly personal and individualized. It is proposed that the use of a person-centered research approach in the study of religiousness can shed new light into how religiousness functions both socially and personally. Person-centered research takes into account the composition of variables within individuals as opposed to relative standing of individuals on a continuum (Bem, 1983; Caspi & Silva, 1995).

Person-centered techniques, such as latent growth mixture modeling and latent class/profile analysis, have contributed greatly to our understanding in a variety of fields, including the psychology of R/S. The proposition that religiousness was potentially viable for

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use in person-centered research using cluster analysis or latent class analyses was made some time ago (Hagenaars & Halman, 1989), and although uncommon, these techniques have been used more recently. Using a person-centered approach, Good, Willoughby and Busseri (2011) examined the development of spirituality/religiousness from 11th to 12th grade in a group of 756 Canadians using cluster analysis. Students were given 6 different spirituality/religiousness measures in both 11th and 12th grade, and changes in cluster membership were tracked. Results indicated that a five-cluster solution was the best descriptor of the data with the groups "aspiritual/irreligious" (low on all six variables), "disconnected wonderers" (those higher in wondering but low in other aspects of religiousness), "high institutional and personal" (higher than average in all variables other than meditation), "primarily personal" (higher than average in spiritual wondering and prayer frequency but low in other aspects), and "meditators" (higher than average in meditation but no other variables).

Individuals were relatively stable between 11th and 12th grades, however, the "high institutional and personal" cluster did lose more members to other groups than by chance. This would be taken as a decline in religiousness over the years in many studies relying on attendance as the sole measure of religiousness. In contrast, this study indicates that while some students declined in religiousness, on average they did not become completely irreligious, and instead took on a more personal religiousness outside of organized contexts. Additionally, this study is important because it supports the notion that individuals' religiousness is multifaceted, and that single-item measures likely leave a large amount of important variance undetected.

Other studies have used person-centered analyses to find which aspects of R/S are important in the determination of attitudes. Owen and Videras (2007) used latent class analysis in the prediction of pro-environmental beliefs and behaviors using 10 dichotomous items on religious beliefs (belief in God, belief in devil, belief in afterlife, etc.). In their sample of just under 13,000 individuals (mean age = 42.53, SD = 16.98), 188 different response patterns were identified, but 10 classes emerged. Three classes with the most pro-environmental behavior shared high probabilities of believing in the soul while having lower beliefs in hell and the devil, indicating that perhaps more spiritual aspects of religiousness are related to this behavior.

Although a person-centered approach using latent profile analysis (LPA) by itself would have advantages over traditional statistical analytic approaches, it is also important to consider the developmental time point in individual's growth, which has been often ignored by scholars

(Good & Willoughby, 2008; King & Furrow, 2004). Differences between age groups in R/S have been seen, indicating that younger children are more religious and their religiousness declines when entering adulthood (McCullough, Enders, Brion & Jain, 2005), and that older adults are more religious than younger people (Barry, Nelson, Davarya & Shirene, 2010). Empirical evidence has been lacking in the exploration of differences in religiousness profiles over the lifespan. With this being said, in this proposed study R/S profiles will be examined separately for children and adults. Exact hypotheses regarding the number and types of profiles are difficult, given the paucity of previous findings in the literature. As will be seen in the following sections, however, extant literature can help identify measures of R/S that might be most theoretically relevant to person-centered research.

While there is a large volume of literature on the relations between various aspects of R/S and adjustment outcomes, few studies have taken into account the multidimensional nature of R/S. The current review is mainly concerned with studies that have documented the effects of multidimensional R/S measures. Although this study will use internalizing problem behaviors, externalizing problem behaviors, sexual behaviors, and substance use as outcomes, some studies reviewed here are not directly concerned with these outcomes but they are included because they examined multiple dimensions of R/S relating to adjustment outcomes.

1.1 - Effects of R/S on Adolescents

Delinquency

Perhaps the most thoroughly examined influence of religion has been in the realm of delinquency. Much of the founding work in the scientific study of R/S has addressed the effects of R/S on delinquent behavior (Hill & Pargament, 2008). The hellfire effect and religious ecology models (Stark, Kent & Doyle, 1982), which state the effect of R/S is dependant upon the proportion of religious individuals in a community, is historically one of the most examined in the field of R/S. Scholars have also found that context is particularly important when examining the effects of R/S on delinquency (see Bader & Fink, 2010, for a review). Findings have consistently demonstrated a negative association between areas with a higher percentage of children who attend services and delinquency. Lee (2006) found that communities with higher religious participation experienced less delinquent behavior, including serious delinquency such

as violent crime. While research investigating these models does not point to specific aspects of R/S that matter for the individual, they can suggest that in general, individuals who attend services and are active in R/S groups are less likely to be delinquent.

Of particular relevance to the current investigation is the work of Pearce and Haynie (2004), who examined congruency between mother and child religiousness and the effects of R/S on delinquency in over 1,000 adolescents grades 7-12 using Add Health data. In this study, religiousness was a two-item composite of religious attendance and importance of religion. Results indicated that while mother and child religiousness independently negatively predict delinquency, the effect of child religiousness became nonsignificant when both were estimated simultaneously. Additionally important was the finding that the interaction of mother and child religiousness was predictive of delinquency. Specifically, it was seen that when parents and children were both higher in religiousness, delinquency was lowest, followed by when both parent and child were similarly nonreligious. The most at-risk group in this sample was parent-child dyads with high discrepancy in religiousness – when either the mother was high and child was low or child high and mother low.

While Pearce and Haynie's (2004) study examined congruence between mother and child R/S, Sloane and Potvin (1986) examined the relationship between religiousness and delinquency (12 items, such as skipping school, substance use, property damage, etc.), using two measures of religiousness in a sample of over 1,100 13-18 year olds. In addition to religious attendance, an additional measure "how much of an influence would you say religion has on the way you choose to spend your time each day?" was collected (conceptually analogous to religious salience in other studies). Data came from interviews with over 1,100 adolescents from ages 13-18 in a nationally representative sample. A moderate relationship between religiousness and delinquency was found when using attendance as the measure of religiousness, and the relationship was slightly stronger when using religious salience. However, adolescents who were both high in attendance and salience were less likely to be delinquent than those who were low in both attendance and salience. This finding might suggest an interaction effect, which can be examined using person-centered techniques such as LPA.

Substance use

Substance use is another area of health that has been related to R/S, with R/S typically found to be related to lower use of a variety of substances, including alcohol consumption,

tobacco use, and illicit substances (Hill, Burdette, Weiss, & Chitwood, 2009). Mason and Windle (2002) explored how two dimensions of R/S (salience and attendance) related to alcohol use decisions, alcohol problems, and frequency of alcohol use in a group of over 1,100 middle school students. While the effects of religious salience became nonsignificant when considering peer alcohol use, the effects of attendance remained even after accounting for peer use. Nonnemaker, McNeely and Blum (2003) reported similar findings in a group of religiously affiliated adolescents. Public religiosity (service and other religious activities) was more protective against regular substance use than was private religiosity (importance of religion and frequency of prayer). While R/S might act as a protective factor in some cases, at least one study found spiritual transcendence to be a risk factor for alcohol use in a group of 344 18-20 year old college students (Burris, Sauer & Carolson, 2011).

Bartkowski and Xu's (2007) findings supported those of prior research. In an examination of adolescent drug use and four aspects of faith-based social capital in a nationally representative sample of high school seniors, these researchers hypothesized that the four aspects of faith-based social capital, exposure to religious norms (affiliation), internalization of social norms (salience), integration within congregational networks (attendance), and trust in religion (theistic trust) would be related to lower substance use. The results provided partial support showing that denominational affiliation protected against drug use for liberal Protestants (e.g., Episcopal, Unitarian) compared to those unaffiliated with a faith tradition, while religious salience was negatively related to alcohol and marijuana use (regardless of denomination). Furthermore, frequency of attendance was negatively related to all types of drug use, supporting their hypothesis that integration within congregational networks would be the strongest predictor of lower levels of substance use. Sinha, Cnaan and Gelles (2007) used three measures – child rated importance of religion and parent reports of congregational and youth group attendance – in order to examine 10 types of risk behaviors. Attendance (composite of both congregational and youth group) and importance of religion were related to smoking, attendance was related to alcohol use, and all three measures were related to sexual activity, above and beyond demographic covariates. Interestingly, effects on sexual behaviors were different across races, in that Black teens reported being the most religiously and sexually active, pointing to the importance of racial considerations in R/S investigations. Taken together, these results point to the importance of examining multiple dimensions of R/S in substance use research.

Sexual behaviors

The examination of R/S variables in relation to sexual behaviors is a natural one, as sexual morality is a major emphasis of most religions. Research has shown a negative relationship between R/S and sexual behaviors, but this relationship is highly dependant upon the type of R/S measured. In a review of literature on R/S and health outcomes, Cotton, Zebracki, Rosenthal, Tsevat and Drotar (2006) confirmed that R/S is typically related to lower sexual behaviors. Similarly, Rostosky, Wilcox, Comer Wright and Randall (2004) reviewed longitudinal studies between 1980 and 2001, and found religiousness is related to sexual debut. Additionally, Zaleski, Levey-Thors and Schiaffino (1998) found that students who were higher in private religiosity (sum score of religious identification, Bible reading, religious experience, prayer and communion) were less likely to engage in risky sexual behavior.

Nonnemaker, et al., (2003) found that both public and private religiosity were negatively related to ever having sex, but the two domains had different effects on birth control and pregnancy. Private religiosity was related to more effective birth control at first sex, while public religiosity was related to lower levels of pregnancy. Adamczyk and Felson (2006) found support of the social nature of religiousness showing that friends' religiosity had a strong impact on sexual behavior, while Bader and Finke (2010) found differences in the relationship between moral behaviors and attitudes. In their review, evidence was found for a strong link between religiousness to moral attitudes and behavior (including sex and delinquency). In contrast, a complex relationship between religion and moral behavior was found, indicating that religion does seem to relate to lower levels of sexual activity, whereas there is less clear evidence in regards to delinquency.

Interestingly, in one study looking at parent-child conversations about sex, it was found that parents who attend church weekly reported fewer conversations about birth control than those who attending less often, although not conversations about sex in general (Regnerus, 2005). This effect might be driven by decreases in approval of birth control, but could potentially increase unsafe sexual behaviors. It is also plausible that the direction of causality is in the opposite direction – such that sexual behaviors would impact later R/S, however was not seen in at least case. Meier (2003) found that there was no impact on later R/S (using a composite of importance, attendance, prayer and youth group participation) following first sex in a group 15-16 year olds.

Anxiety and depression

Researchers have indicated that in general, higher personal R/S is related to lower depression and anxiety (McCullough & Larson, 1999). Multidimensional measures of R/S have been used, pointing towards personal aspects of R/S being more related to mental health than physical health (Hackney & Sanders, 2003). Schnittker (2001) took three R/S variables into account in a longitudinal study examining religiousness and depression in a group of over almost 3,000 participants in the U.S. In this study, religious salience (importance of religious beliefs) was found to have a U-shaped relationship to depression, in which those high and low in salience were more likely to be depressed. More interesting was the finding that religious salience and spiritual help-seeking (frequency of seeking spiritual comfort or support) were protective against the effects of multiple stressful life events on depression, while religious involvement (frequency attending religious services) was not protective.

Meta-analyses of the R/S-mental health connection show a positive relationship between traditional measures of R/S (e.g. attendance and prayer, as opposed to struggle) and mental health. For example, Sawatzky, Ratner, and Chiu (2005) conducted a meta-analysis of the effects of spirituality on a variety of quality of life measures (including studies measuring self-reported quality of life, satisfaction with life, subjective well-being, or measures that combined dimensions such as physical and social quality of life), which are known to be related to depression (Lane et al., 2001). Using 62 effect sizes from 51 studies, a moderate relationship between spirituality and quality of life was found ($r = .34$). However, this relationship varied depending on differing operational definitions of spirituality and quality of life impacted the relationship. Hackney and Sanders (2003) completed a meta-analysis on religion and mental health using 34 studies. The main strength of this meta-analysis is that each R/S variable used into one of three categories: Institutional (social and behavioral aspects; worship attendance, extrinsic religiousness, ritual prayer, etc.), ideological (beliefs involved in religious activity; ideology, attitudes, fundamentalism, etc.), and personal devotion (personal, internalized devotion; intrinsic religiousness, attachment to God, etc). Mental health variables were categorized as psychological distress, life satisfaction, or self-actualization. Results indicated that in terms of overall effect sizes, personal devotion had the largest effect on overall mental

health, whereas religiousness as a whole was most related to self-actualization. This again supports the notion that the effects of R/S are domain-based and can have differential effects on outcomes based on how religiousness is conceptualized.

The link between R/S and mental and physical health were addressed by Lawler-Row and Elliott (2009) in a group of older adults (mean age= 63.4, range 50-95). Amongst church members, existential well-being (a subscale of spiritual well-being) was related to physical symptoms, psychological well-being, and depression, while prayer and church attendance were less consistently related to depression. When taking into account existential well-being, healthy behaviors, and social support, neither prayer nor attendance was related to physical symptoms, psychological well-being, or subjective well-being. In contrast, prayer (not attendance) was negatively related to depression. Hill and Pargament (2003), in a review of religion and health, found several religiousness variables to be related to mental and physical health. Closeness to God was related to lower depression, lower loneliness, higher self-esteem, and greater relational maturity. A secure relationship with God was related to higher self-rated health and more positive adjustment following a variety of stressful events (natural disasters, medical illness, etc.). While the current investigation focuses internalizing symptomatology rather than psychological well-being or other measures of mental health, these studies highlight the importance of taking into account multiple measures of R/S, as well as the specification of which types of mental health are being studied.

Ellison and Levin (1998), in a literature review on religion and health, explored the relation between religion and physical health, morbidity, and mortality, as well as the relation between religion and mental health. Ellison and Levin conclude that there is convincing evidence that religious denomination and involvement are moderately related to health, and include participants from various racial, ethnic, religious, age and gender groups. In addition to the positive effects of religion on physical health, Ellison and Levin also report positive effects of religion on mental health (e.g., depression, anxiety, less psychological distress, lower chances of onset of major depressive episode). In contrast to the theory put forth by this paper, there is evidence that religious attendance is one of the most consistently positive correlates with psychological health. However, in addition to attendance, personal piety, devotion, and subjective religious identity were also reportedly linked to mental health.

1.2 - Effects of Parent and Family R/S

It should come as no surprise in research has assumed that R/S is primarily a product of socialization, in particular from parents and the family. Indeed, many studies have found that the effects of R/S are due to organizational and social aspects. Parenting styles themselves have been related to R/S development in children (Luft & Sorell, 1987) as well as a variety of parenting variables (see Mahoney, Pargament, Tarakeshwar, & Swank, 2008)

While it is indisputable that parents play a role in their children's R/S development, to our knowledge no work has examined how children's R/S influences parents' R/S. Examination of reciprocity in parent/child relationships has been emphasized in the developmental psychology literature (e.g., Bronfenbrenner, 1977), but has not been prevalent in extant literature on R/S. There is reason to believe that child religiousness can influence parents, though. For example, Regnerus and Burdette (2006) found that growth in adolescent religious salience was related to better family relations above and beyond behavioral changes in adolescence such as substance use.

The influence of family and parent R/S on child R/S and R/S development has been well documented, showing both similarity between parent and child R/S and that parents act as socializing agents (Berry, et al., 2010). Brelsford and Mahoney (2008) found that greater spiritual disclosure in adolescents ages 18-20 was related to better relationship satisfaction, better communication, and less verbal aggression, even when taking into account general R/S (spirituality, attendance, prayer, salience). Hardy, White, Zhang and Ruchty (2011) found that family religiousness (average of 14 activities such as prayer, attendance, meditation, etc.) was related to child religiousness (average of same 14 items and 2 additional items of scripture study and reflection/meditation), but that this relationship was moderated by parenting styles such that harsher parenting styles are related to lower similarity, while positive styles were related to higher similarity.

Bartkowski, Xu and Levin (2008) found that parents' service attendance, religious homogamy of parents (measured through difference in attendance between spouses), and the family's religious environment (number of conversations about R/S parent and partner had with children) played a role in children's prosocial behavior – but not always positively. Mother and father attendance were linked to teacher-rated self-control, but when parents were not religiously homogeneous, and mothers attend more frequently than fathers, there was lower self-control. In

the case of parent-rating of children's social interactions, both father and mother attendance was related to better interactions, while frequency of discussing religion also lead to better interaction and frequency of arguing about religion lead to worse interactions. Interestingly, when using teacher-report of externalizing behavior as the dependent variable, it was seen that mother and father attendance, as well as mothers attending more frequently than fathers, were related to decreased externalizing behaviors. These interactions between parents and children can in turn affect children's R/S, as attachment to parents has been seen to be related to attachment to God (McDonald, Beck, Allison & Norworthy, 2005).

There is evidence that the effects of R/S are dependant upon family structure. Using data from the Child and Young Adult Sample of 1979 Longitudinal Survey of Youth, Petts (2009) found three trajectories of delinquent behavior were found: low-level delinquents, early adolescent-limited delinquent behavior, and late adolescent limited delinquent behavior. It was found that three aspects of R/S (family R/S environment – whether children attend with their parents and if the mother feels it is very important to provide religious training for her child, difference in mother/child affiliation, and child report of religious participation) did not influence patterns of delinquency, but the addition of interaction terms with two family characteristics (affection and single-parent status) were significant. These interaction terms indicated that in families with higher parental affection, two-parent households, and families that were traditional (not stepfamilies), those who were more active religiously were less delinquent.

Stokes and Regnerus (2009) found that religious discord was related to poorer family relations, specifically when parents were more religious than children. Interestingly, difference in religious salience was a more powerful predictor than differences in attendance or affiliation, potentially due to the fact that decreased religious salience would lead children to decreased interest in attendance. Additionally, in homes where parents were much less religious than children, a smaller percentage of parents (28%) reported weekly service attendance, suggesting that attending services might uniquely socialize children in situations where their parents view religiousness as important but who do not attend. With this being said, it should also be noted that only 11% of children rated religion as much less important than their parent.

More recently, both genetic and environmental factors have been found to account for R/S. D'Onofrio, Eaves, Murrelle, Maes and Spilka (1999) found that genetic influences in attendance were minimal, but genetic effects on attitudes were moderate. Bradshaw and Ellison

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(2008) found genetic influences of eight dimensions of R/S to be between 19%-65%, while nonshared environmental influences ranged between 28%-55% and shared environmental influences were between 4%-53%. Although this sample consisted of adults ages 25-74, and genetic influences typically increase over the lifespan, these results suggest that parental influences, both genetically and environmentally, can greatly influence children's R/S.

Similarly, Koenig, McGue, Krueger and Bouchard (2005) found that retrospective reports of monozygotic and dizygotic childhood religiousness (sum of nine religiousness items) were similar, but later in life the difference in correlation was larger (MZ = .62, DZ = .42), indicating that genetic factors were weaker in adolescence than adulthood. Of particular interest was the finding that internal R/S (help through prayer, scripture reading, deciding moral actions, friends with similar beliefs, and importance of faith) were more genetically influenced than was external R/S (attendance, discussion of religious teaching, holiday observance and youth group membership) for retrospective reports, but not current reports.

Taken together, these results point towards parent R/S having a substantial impact on child R/S and child outcomes. Behavioral genetic studies also point towards a significant genetic component in R/S. Additionally, parent R/S has been related to higher prosocial behavior, less delinquency, and better family relations. It has also been seen that the gender of parents can differentially affect children's R/S. For example, among a sample of 68 Protestant families, mothers were found to influence R/S experience and practice, while fathers influenced attendance (Clark, Worthington & Danser, 1988).

1.3 - Parent Profile

Surprisingly, little research has been done in the examination of adult profiles of religiousness. While there is extensive literature on the relations between R/S and outcomes in adulthood, these are mainly focused on single-item or single-scale analyses of R/S. To our knowledge, there are only a few studies that examine typologies of R/S using adult populations.

In an examination of 216 inpatients, Riley, Perna, Tate, Forchheimer, Anderson and Luera (1998) found three types of spiritual well-being – religious (69%), existential (14%), and nonspiritual (17%). Individuals in the existential cluster were just as likely to endorse that their life had purpose and that they were fulfilled, but were less likely to endorse items such as "I find comfort in my faith" and items specifically mentioning God. Those labeled as religious

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responded favorably to both "religious" items and "existential", while those labeled as nonspiritual were less likely to endorse statements of faith and belief in God as well as statements stating that life had purpose.

Using data from the General Social Survey, Shahabi et al. (2002) divided participants into four groups (religious and spiritual, religious only, spiritual only, or neither) based on their response to two questions asking their perception of how spiritual and how religious they were. The religious and spiritual group was again the largest (52%), followed by neither spiritual nor religious (29%), spiritual only (10%), and the religious only (9%). This study and Riley et al. (1998) give us a sense for the proportion of respondents likely to respond as religious, spiritual, or neither, but do not delve into the nuances of R/S experience.

Critical to the current investigation are the findings by Klemmack et al. (2007) and Park, Lee, Sun, Klemmack, Roff and Koenig (2011). Klemmack et al. (2007) examined religiousness in older adults using cluster analysis. Using three measures of religiousness (attendance, prayer, intrinsic), six clusters were identified, labeled as "strongly religious" (53%), "moderately religious" (8%), "privately practicing moderate attenders" (16%), "privately practicing nonattenders" (12%), "intrinsically involved only" (6%), and "minimally religious" (2%). Similarly, Park et al., (2011) found four clusters of R/S using measures of attendance, prayer, positive coping, and spirituality. Results revealed a less complex pattern, finding highly (23%), moderately (28%), somewhat (33%), and minimally (16%) religious groups, in which each successive group was lower in each of the four R/S types.

In sum, although extant research cannot predict the number or types of R/S profiles, the literature does suggest that in the current study the majority of adults will be religious and spiritual. Additionally, the primary difference in typologies of religiousness is expected to be seen in terms of attendance.

1.4 - Child Profile

Adolescence particularly might be a turbulent time for R/S. Adolescents have been seen to be explorers spiritually, and more likely to convert (Good & Willoughby, 2008). Relatively little is known about the makeup of children's' and adolescents' religiousness. Generally, it has been seen that adolescents decline in religiousness and particularly participation in R/S related activities (Koenig, McGue & Iacono, 2008), but little is known about interindividual differences in religiousness.

There have been challenges in studying change in adolescent R/S. First, domains of R/S examined tend to differ among studies, and often when multiple domains are measured they are simply summed as opposed to considering the relative strengths of each. For example, Koenig, et al., (2008) summed 9 religiousness items (e.g. including attendance, prayer, readings) to create one total score, making it difficult for us to understand what particular aspect of R/S – if any one – is most responsible for the effects. Second, researchers have examined R/S at a variety of ages, often overlooking potentially meaningful differences among age groups. Third, while cross-cultural research is critical to our understanding of R/S in all its forms and R/S has been seen to be a social phenomenon, researchers could draw false implications that may be insensitive to significant differences across different cultural groups.

While there are still gaps in our understanding of adolescent R/S, an emerging literature has begun to provide a solid foundation. Good and Willoughby (2006) examined the intersection of church attendance and spirituality in a group of Canadian high school students (mean age = 15.6). Approximately 66% of students were either high or low in attendance and spirituality, however five additional groups (who were moderate in either attendance or spirituality) were found as well (moderate attendance and spirituality, moderate spirituality and low attendance, high attendance and moderate spirituality, moderate attendance and no spirituality, moderate attendance and high spirituality). The largest individual group was high spirituality and no attendance (39.7%), followed by high spirituality and high attendance (16.4%). These estimates might not be as directly generalizable to adolescent samples in the United States, as it has been seen that as a whole Canada is lower in importance of religion than the U.S. (Diener, Tay & Myers, 2011).

Perhaps more relevant to the current investigation, Good and Willoughby (2011) found five clusters of R/S in high school students using six measures of R/S (religious activity involvement, enjoyment of religious activities, wonder, spiritual transcendence, prayer, meditation). Clusters were aspiritual/irreligious (low in all six measures; 14% grade all, 13% grade 12), "disconnected wonderers" (low involvement, low prayer, low meditation, higher wonder; 36% grade 11, 45% grade 12), "high institutional and personal" (high on all except average in meditation; 17% grade 11, 8% grade 12), "primarily personal" (above average wondering and spirituality, high prayer, low in others; 24% grade 11, 26% grade 12), and "meditators" (frequent meditation, near mean on all others; 9% grade 11, 8% grade 12).

As previously mentioned, the lack of person-centered research on child R/S, as well as the many differing measures used in studies, complicates the prediction of how typologies of R/S might be seen in research with different populations and with different measures.

1.5 - Research Questions

1. Are there identifiable subgroups of individuals characterized by unique multidimensional patterns of R/S experiences?
   a. Parents
   b. Children
2. Do individuals change subgroup membership over time?
   a. Parents
   b. Children
      i. Are older children (adolescents) more differentiated than younger children (adolescents)?
3. How does R/S experience relate to child adjustment outcomes including internalizing and externalizing symptomatology, substance use, and sexual behaviors?
4. What is the correspondence between parents and children?
   a. Time 1
   b. Time 2
   c. Across times

Chapter 2 – Method

2.1 - Participants

Participants were part of a convenience sample as part of a longitudinal study on youths' healthy development. Data at time 1 were collected on 357 primary caregiver/child dyads. Children ranged in age from 10-17 (M = 13.02, SD = 1.91). Children were 192 male, 165 female, with a racial composition of 84% White, 11.2% Black, 3.1% Latino/Hispanic, and 2% responding as "Other". Primary caregivers were 310 females and 47 males between the ages of 25-69 (M = 43.40, SD = 6.95). Primary caregivers were 299 mothers, 47 fathers, 10 grandmothers, and 1 foster parent. Racial composition of primary caregivers was 88% White, 8.7% Black, 2.2% Latino/Hispanic, and 1.1% "Other". Family income ranged from between no income to more than $200,000 per year, with a mean income between $35,000-$49,000.

Returning for Time 2 were 220 primary caregiver/child dyads. Participants were eligible to return if the child had not yet begun college. Dyads returned approximately 2 years (M = 2.45, SD = .28) years after the completion of Time 1. Children were 121 male, 99 female, with ages ranging from 12-18 (M = 15.14, SD = 1.52). The racial composition was 87.7% White, 9.1% Black, 1.4% Latino/Hispanic, and 1.8% responding as "Other". Primary caregivers were 188 female and 32 males between the ages of 28 and 71 (M = 28.4, SD = 6.4). Primary caregivers were 177 mothers, 32 fathers, 7 grandmother, and 4 other caregivers. Racial composition of primary caregivers was 90.5% White, 6.8% Black, 2.8% Latino/Hispanic, and .9% "Other". Of the 137 who did not return for the second wave, 79 were unable to be reached, 32 were not invited back because they aged out (over 18 and finished high school), 12 moved away, 8 were to busy, 6 children were not interested, and 1 child died. Family income again ranged from between no income to more than $200,000 per year, with a mean income between $35,000-$49,000.

2.2 - Procedure

For Time 1, participants were recruited through phone lists, word of mouth, and fliers placed around Southwestern Virginia. Time 2 participants were contacted via letters and through phone calls using information from Time 1. In both waves, primary caregiver and child were interviewed separately but at the same time by trained research assistants. Both participants received monetary compensation at both waves.

2.3 - Measures

Demographic Information

Demographic information was collected from the parent at both waves. Parents reported their own and their child's age and race. Parents also reported their family income. Demographic information will be included in the analyses as covariates when significantly correlated with outcomes (internalizing, externalizing, substance use, and sexual behaviors).

Religiousness

Religiousness was measured using 13 items adapted from Fetzer Institute and National Institute on Aging Working Group (1999) and Jessor and Jessor's (1977) Value on Religion scale. In addition to a question regarding denomination, the scale contains three subscales: organizational religiousness (two items), private practices religiousness (three items), and personal religiousness (four items). Organizational religiousness is on a 6-point scale, asking two items measuring respondents' participation in formal religious activities. Private practices is measured on an 8-point scale and asks about informal religious practices, such as prayer. Personal religiousness is a 4-point scale and asks about importance of faith. In order to have subscales on the same metric, organizational religiousness scores were multiplied by 1.33 and personal religiousness was multiplied by 2. Alphas for children's measure time 1 for organizational, private practices, and personal religiousness were .70, .77, and .88, respectively, and for children's measure time 2 were .78, .85, and .90, respectively. For parents, alphas for time 1 were .66, .68, and .91, respectively, and for time 2 were .84, .82, and .93, respectively.

Internalizing and externalizing symptomatology

Internalizing and externalizing symptoms were assessed using the Child Behavior Checklist (CBCL) and Youth Self Report (YSR; Achenbach & Rescorla, 2001). The CBCL contains 118 items assessing caregiver perceptions, and the YSR contains 102 items assessing child perceptions of children's behavioral problems. Problem behaviors are rated on a 3-point scale ranging from 0 = "not true" to 2 = "very true". The internalizing subscale includes withdrawn, anxious/depressed, and somatic complaint subscales, and the externalizing subscale includes aggressive and delinquent behavior subscales.

Substance Use and Sexual Behaviors

Alcohol, cigarette, and marijuana use were measured in Time 1 and 2 using questions adapted from substance use questionnaires by Chassin, Rogosch & Barrera (1991), Centers for

Disease Control and Prevention (2009), and Hussong and Hicks (2003). This asked adolescents about their current and previous use of cigarettes, alcohol, and marijuana. For each substance, participants were asking if they had ever used it, risk of using it, and what is most common about the use of the drug. The current study will use alcohol use in the past 30 days, a measure with responses 0 = "Never", 1 = "Less than once a week", 2 = "Once a week or more". Cigarette and marijuana use will be used, asking what is most true of adolescent behaviors. The question is has responses 0 = "Never", 1 = "Once or twice", 2 = "Four or five times", 3 = "A few times a month", 4 = "A few times a week" and 5 = "Smoke every day". Data were collected online in order to help assure anonymity. Due to the skewed nature of the variables, as well as the low frequency of substance use, variables will be coded 0 = "Never used" and 1 = "Ever used". Change scores can be computed for alcohol and cigarette use, but not for marijuana use as this question was not included for all Time 1 participants.

Sexual behaviors were measured in Time 2 only, and asked adolescents if they ever had sexual intercourse (yes or no), how old their were at first intercourse (0 = "Never", 1 = "8 years old or younger", 2 = "9-10 years old", 3 = "11-12 years old", 4 = "13-14 years old", 5 = "15-16 years old", and 6 = "17 years old or older"), with how many people they had sexual intercourse (0 = "None", 1 = "Two people", 2 = "Three people", 3 = "Four people", 4 = "Five people", and 6 = "6 or more people"), and if they used a condom at last sexual intercourse (0 = "I never had sexual intercourse", 1 = "Yes", 2 = "No"). Due to infrequent sexual behavior, the question that will be used in the current investigation is whether adolescents ever had sexual intercourse (0 = "no", 1 = "yes").

2.4 - Data Analytic Strategy

Research Question 1: Are there identifiable subgroups of individuals characterized by unique multidimensional patters of R/S experiences?

Profiles of within-individual religiousness were estimated using latent profile analysis (LPA) in MPlus (Muthen & Muthen, 2009) independently for both Time 1 and Time 2. LPA is used to recognize sets of mutually exclusive and exhaustive latent classes (or profiles) using continuous indicator variables. Members in each class are similar in responses to sets of manifest indicators.

All analyses used organizational religiousness, personal religiousness, and private practices. The optimum number of profiles in LPA were determined by fitting models with 1 to 10 profiles. Fit of profiles were compared using several information criteria including the Akaike information criterion (AIC), Bayesian information criterion (BIC), sample-size independent BIC (SABIC), entropy R^2 and bootstrap likelihood ratio test (BLRT). Additionally, solution stability was checked to assure the maximum likelihood solution is replicated, using multiple sets of random starting variables.

Research Question 2: Do individuals change subgroup membership over time?

Change in subgroup membership between Time 1 and Time 2 would have been examined using the selected model from research question 1 using latent transition analysis in M Plus; however, our results indicated unidimensionality at Time 1, so we could not check for changes over time.

Research Question 3: How does R/S relate to of internalizing, externalizing, sexual behaviors, and substance use?

The association between R/S and change in outcomes (internalizing and externalizing symptomatology, substance use and sexual behaviors) was explored using the posterior probabilities estimated in selected LPAs. Individuals were classified based on their group membership, and differences among groups on outcome variables were tested using ANCOVAs.

Research Question 4: What is the correspondence between parents and children?

Correspondence between parent and child R/S was explored using loglinear modeling with latent variables; however due to small cell sizes, differences in expected proportions were tested with chi-square tests. Models selected in research question 1 were used, and parent/child similarity was tested at both times.

Chapter 3 – Results

Research Question 1: Are there identifiable subgroups of individuals characterized by unique multidimensional patters of R/S experiences?

Time 1 Data

Child time 1 religiousness. Descriptive statistics can be found in Table 1. O'Connor's (2000) MAP test was used to determine the number of factors in each scale for each participant. The MAP test is a technique to identify the proper number of factors on a given scale, and is preferable to rules such as the "eigenvalues-greater-than-one" and techniques such as the use of scree plots (O'Connor, 2000). The MAP test extracts increasing numbers of components and selects the ideal number from the lowest average squared partial correlation. This test also has an advantage over parallel analysis as parallel analysis extract eigenvalues from random sets of data while the MAP test uses the study dataset. For children at time 1, the MAP test indicated that a one-factor solution fit best. For exploratory purposes, two items not theorized to belong to any of the three hypothesized factors (Questions 2 and 9) were then included. The MAP test again suggested a one-factor solution, as did the PCA (see Table 2). Due to the fact that the proposed three-factor religiousness scale was unidimensional and that LPA is appropriate for use only with multidimensional measures, LPAs were not conducted on the traditional religiousness scale. Instead, additional measures of religiousness were explored in order to understand their dimensionality.

In addition to the traditional religiousness scale, Ryan, Rigby and Young's (1993) religious self-regulation questionnaire was collected at Time 1 but for 106 participants as opposed to the original 357. Because of the large amount of SRQ data missing from the time 1 sample (70.31%), data could not be imputed. Instead, the truncated sample of 106 who had all Time 1 religiousness items was analyzed. The MAP test revealed a two-factor solution to fit best. While the MAP test, as well as theory, pointed to a two-factor solution, the solution indicated in the EFAs was not structured as theorized. Instead of two distinct identification and introjection subscales, the two subscales were (1) disapproval – SRQ items 7 and 12 ("A reason I think praying by myself is important is because if I don't, God will disapprove of me" and "An important reason why I attend religious gatherings (a place of worship or worship service) is because others would disapprove of me if I didn't," respectively) and (2) all other items.

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When the 12 SRQ items were added to the traditional religiousness items, the MAP indicated that a one solution factor was best. PCA supported this, as all items loaded above .45, except SRQ 7 and 9 (see Table 3). Because of unidimensionality, LPA was not run for children at Time 1.

Parent time 1 religiousness. Parents' traditional religiousness data at time 1 were analyzed in the same fashion as children's. O'Connor's (2000) MAP test indicated that a one solution factor fit best. PCA supported this for both the traditional religiousness scale as well as when the two non-theorized items were added, as all items loaded above .62 (see Table 4). Due to unidimensionality, LPAs could not be run. Additionally, multiple imputation was again inappropriate due to the large amount of missing data. Analyses were then run for the 106 participants with all Time 1 data. The MAP test indicated that the combined measures fit best as three-factors. PCA identified three factors: traditional religiousness, introjection, and identification. These factors fit as hypothesized (see Table 5) with the exception of traditional religiousness item 10 (loaded on identification), 8 (did not load), 12 (loaded on identification), SRQ 2 (did not load), and SRQ 11 (loaded on traditional). Additionally, the SRQ loaded on both traditional religiousness and identification.

Factor scores were saved for each of the three factors, and LPAs were run with those scores. Due to the BIC and substantive interpretability, the three-profile solution was selected as best fitting (See Table 6 and Figure 1). The three profiles consisted of high religiousness, medium religiousness, and low religiousness. The first profile, high religiousness (70.1%), consisted of parents above average in traditional religiousness, average in identification, but lower than average in introjection. Those in the medium religiousness profile (21.1%) were slightly lower than average in traditional religiousness, slightly above average in introjection, and average in identification. The low religiousness profile (8.7%) consisted of those much lower than average in traditional religiousness and identification but much higher than average in introjection.

Time 2 Data

Child time 2 religiousness. Due to the unidimensionality at Time 1, analyses were completed in a similar fashion. A MAP test conducted on traditional religiousness, SRQ, and GCA items indicated that a six-factor solution fit best. PCA indicated that these factors consisted of (1) identification/importance, (2) introjection, (3) God monitoring (belief in being

watched by a spiritual force), (4) attendance/social support, (5) private practices (reading religious literature, prayer before meals), and (6) deterministic monitoring (belief that a spiritual force will determine fate after death; see Table 7). Factor scores were than saved and used to run LPAs.

LPAs showed that a three-profile solution fit best, as that profile had the lowest BIC and the LMRT indicated the three-factor solution fit (see Table 8). Additionally, the four-factor solution added a profile with only 9% of the sample that was simply higher than class 3 in all measures. Means, standard errors, and significance of parameters can be found in Table 9. The first profile, the Introjectors, was the largest group (47.6%), and was above average in identification/importance, introjeciton, and deterministic monitoring, while lower than average in monitoring and private practices. The God monitoring score should be interpreted as reverse-scored, as the rotated PCA solution caused negative loadings for higher God monitoring scores. Of the three groups, the Introjectors scored the highest in introjection and the lowest in private practices at approximately ½ standard deviation lower than average. The second of the three profiles, the High Religiousness group, was the second largest group (28.4%). The High Religiousness group scored more than ½ a standard deviation above average on identification/importance, social support/attendance, and more than a full standard deviation above average in private practices, while scoring lowest in God monitoring. This group was the highest of the three in identification/importance, God monitoring, social support/attendance, and private practices. The third group, the Low Religiousness group, was the smallest group (24.0%), and was lower than both other groups in all categories except for activities – more than ½ a standard deviation below the mean in introjection and deterministic monitoring and more than one standard deviation below the mean in identification/importance and social support/attendance. Posterior probabilities were saved in order to test group differences for Research Question 4.

Parent time 2 religiousness. Analyses were conducted as was done for Parent's Time 1 data. A MAP test that included all items for traditional religiousness, spiritual transcendence, SRQ, and Quest indicated that a 13-factor solution was best. PCA revealed the thirteen factors to be comprised of (1) traditional religiousness/identification, (2) connectedness (feelings that all life is interconnected, emotional bonds with all people), (3) viewing religious doubts as positive, (4) social support/attendance, (5) meditative experience (meditation to reach a higher plane of

consciousness), (6) introjection, (7) universal order (there is a higher meaning to life), (8) willingness to face existential questions, (9) connection to the dead, (10) generativity (feeling of being a bridge between family's past and future), (11) openness to religious change, (12) transcendent meditation (desires of body do not prevent meditation), and (13) private practices (see Table 20).

LPA analyses indicated that a three-profile solution fit best (see Table 21). Means, standard errors, and significance of parameters can be found in Table 22. The first profile was labeled Non-Religious (15.3%). This group scored almost two standard deviations below the mean in traditional religiousness/identification, a full standard deviation below the mean in social support/attendance, and was below the average in all measures with the exception of viewing doubts as positive and openness to religious change, where they were at the average. The second group was labeled Traditionally Religious (44.7%). Members of this group were highest in traditional religiousness/identification, social support/attendance, meditative experiences, introjection, universal order, transcendent meditation, and private practices, while they were lowest in openness to religious change and viewing religious doubts as positive. The final group was labeled the Questing (40.0%). Those in this group scored highest in viewing religious doubts as positive, willingness to face existential questions, connection to the dead, and openness to religious change, while scoring lowest in private practices. Posterior probabilities were saved in order to test group differences for Research Question 4.

Research Question 2: Do individuals change subgroup membership over time?

There was no way to analyze change in subgroup membership because religiousness at Time 1 was unidimensional.

Research Question 3: How does R/S relate to of internalizing, externalizing, sexual behaviors, and substance use?

Children's Profiles

In order to examine the relations of profile membership and outcome variables, ANCOVAs were run using group membership as a factor, the outcome as the dependent variable, and age, gender, race, and family income as covariates. ANCOVAs revealed significant differences between groups in internalizing and externalizing symptomatology (see Tables 10 and 11, respectively) and marijuana use (see Tables 12), but no significant differences

in alcohol use, cigarette use, or sexual behaviors (see Tables 13-15, respectively). Gender and race were significant covariates in the prediction of externalizing symptomatology, while age was a significant covariate in the prediction of alcohol use, cigarette use, and sexual behaviors.

Group means across study variables can be found in Table 29. Bonferroni post-hoc tests indicated that the High Religiousness group scored significantly lower than the Introjectors group in internalizing symptomatology ($p < .001$) and marijuana use ($p = .03$). Additionally, the High Religiousness group scored lower in externalizing symptomatology than both the Introjectors ($p = .03$) and Low Religiousness groups ($p = .006$).

Parents' Profiles

ANCOVAs revealed significant differences between groups' externalizing symptomatology but no other study variables (see Tables 19-24, respectively). Race was a significant covariate in the prediction of externalizing symptomatology and marijuana use, whereas age was a significant covariate in the prediction of sexual behaviors and alcohol use. Group means across study variables for parents' groups can also be found in Table 27. Bonferroni Post-hoc tests indicated that the Traditionally Religious group had children who were significantly lower in externalizing symptomatology than did the Questing group ($p = .008$).

Research Question 4: What is the correspondence between parents and children?

Cross-tabs of parent and child profile membership can be found in Table 36, and visual representation can be found in Figure 4. Loglinear modeling examining the correspondence between parent and child groups could not be utilized due to one of the nine cells being empty, as no children in the high religiousness group had a parent in the non-religiousness group. Loglinear modeling with latent variables is a technique that allows for the characterization of associations among discrete latent variables by using contingency table data (Bray, Lanza, & Collins, 2010). Consequently, a chi-square test with z-score comparisons was utilized. Results of chi-square tests can be found in Table 34. Overall, the chi-square test was significant ($\chi^2 = 52.368, p < .001$). For each row, different subscripts indicate a significant difference in expected proportions. Parents in the Nonreligious group were more likely to have children in the Low-Religiousness group than either of the other groups and were less likely to have children in the High Religiousness group. Parents in the Traditionally Religious group were more likely to have children in the High Religiousness group than either the Low Religiousness group ($p < .05$) or the Introjector group ($p < .05$), whereas they were less likely to have children in the Low

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Religiousness group than in either of the other groups ($p < .05$). Parents in the Questing group were less likely than those in either the High or Low Religiousness groups to have children in the High Religiousness group ($p < .05$).

Chapter 4 – Discussion

The current investigation was fueled by four research questions. The first question, "are identifiable subgroups of individuals characterized by unique multidimensional patterns of R/S experiences", arose from questions surrounding the definitions and measurement of R/S variables (Emmons & Paloutzian, 2003; Hill & Pargament, 2003; Miller & Kelly, 2005; Wong, et al., 2010). Researchers agree that R/S is complex and multifaceted with weak theoretical definitions (Benson, 2004; Hill et al., 2001). It was proposed that person-centered techniques could help clarify the understanding of R/S, as these techniques take into account the composition of variables within individuals, as opposed to their standing on continua (Bem, 1983).

Our results answer the first question both "yes" and "no." Surprisingly, child R/S at Time 1 was found to be unidimensional, despite the fact that a total of five hypothesized sub-scales were used in the analyses. Not only does extant literature point to differential effects of diverse R/S variables (Allport & Ross, 1967; Burris, et al., 2011; Sloane & Potvin, 1986), but also there is a strong sentiment that R/S is multidimensional (Benson, 2004). There are several potential reasons why this unidimensionality occurred. First, the multidimensionality of R/S might not have been captured in the five Time 1 subscales, all of which captured more traditional forms of religious behaviors (i.e., attendance, prayer, importance, identification, and introjection). No measures encapsulating spirituality, a construct found to be increasingly important in the United States (Emmons & Paloutzian, 2003; Funk & Smith, 2012; Zinnbauer et al., 1997), were accounted for at Time 1, leaving out potentially important variance. Second, this could point to a critical developmental characteristic of religiousness during adolescence. The average age difference between Time 1 and Time 2 was 2.4 years (SD = 1.72), covering the typical bridge to high school. Perhaps in this critical developmental transition there was also a transition in R/S development such that private practices, a subscale measured at both Time 1 and Time 2, became the main differentiating factor between the two more religious profiles. The notion of a critical developmental shift is also supported by the differentiation in PCA. Specifically, for the same five subscales used at both Time 1 and Time 2 (organizational religiousness, private practices, personal religiousness, introjection, identification), PCA indicated a single dimension at Time 1 but four-dimensions at Time 2.

Despite the lack of multidimensionality at Time 1, Time 2 data provided clear support for the use of person-centered techniques in assessing R/S. Children's data indicated that R/S measures consisted of six factors, and children were classified in one of three profiles based on those six factors. Several interesting trends emerged. First, trends in scores for the Introjectors and High Religiousness groups were similar, with the exception of scores on attendance/social support and private practices, where the high religiousness group scored significantly higher. Also of note was that those in the Low Religiousness and Introjectors group scored similarly and significantly below average in private practices. Both findings point towards private practices as a large point of differentiation in child religiousness.

It is possible that those children who fully internalize their beliefs are also the ones who are praying and reading scriptures more frequently, and this dimension differentiates the groups more than importance (religious salience), God monitoring, or deterministic monitoring, on all of which the Introjectors score significantly above the average. While religious self-regulation (SRQ; Ryan, et al., 1993) is an attempt to identify religious internalization, the finding might suggest – in combination with its unidimensionality at Time 1 – that private behavioral aspects such as prayer might be a better way to measure internalization of beliefs in children. Perhaps this behavioral measure captures some aspects of religious internalization without the need for participants to answer questions that are less likely to be answered completely honestly. While to the author's knowledge there has been no work to show bias, it could be argued that researchers are more likely to receive honest answers on questions regarding frequency of prayer and scripture reading than they are to on questions that attempt to find if participants' religious beliefs are based on other-approval pressures (e.g., "One reason I think it's important to actively share my faith with others is because I want other believers to approve of me").

Parents' data also provided support for the usefulness of a person-centered approach at Time 2. The addition of the spiritual transcendence and quest scales provided several insights into the religious make-up of our adult sample. First, while the Non-Religious group did not score significantly above the average in any one dimension, they were significantly higher than the Traditionally Religious group in viewing religious doubts as positive and scored similarly in connection to the dead, generativity, and openness to religious change. This indicates that while

non-religious individuals tend to not attend services or participate in traditionally religious activities, there are aspects of R/S that they find at least as important as those who are traditionally religious.

Second, the Questing group only scored above-average in two domains: willingness to face existential questions and openness to religious change, while scoring below average in only private practices. While this group might not be considered "spiritual but not religious" due to their average scores in all other variables, these individuals represent a more open R/S make-up. Third, the percentage of those classified as Non-Religious (15.3%) is only slightly lower than what would be expected of national samples (19.6%; Funk & Smith, 2012). Finally, differences in parent and child R/S profiles might in part suggest meaningful developmental changes in R/S. However, definitive conclusions are difficult to make due to the differences in measures used for parents and children.

The second research question, "do individuals change subgroup membership over time", was asked due to the growing concern about developmental trajectories of child and adolescent R/S (McCullough, Enders, Brion & Jain, 2005). Relatively little work has been done in the examination of child and adolescent R/S, particularly using person-centered techniques. While a general decline in R/S has been seen in adolescence, the decline in R/S has been seen largely viewed as a decline in traditional religiousness, with adolescents declining in institutional measures but remaining relatively stable in other areas (Good & Willoughby, 2008; Koenig, et al., 2008).

Despite the presence of longitudinal data, planned analyses to examine changes in subgroup membership over time could not be completed due to the unidimensionality of children's data at Time 1. While this was unexpected, it is noteworthy that the factors that created multidimensionality at Time 2 were also measured at Time 1 – specifically, the traditional religiousness measure that included private practices and the measure of religious self-regulation. As previously stated, this might indicate an interesting developmental phenomenon in which children became more differentiated in their religiousness. Despite having a slightly older sample (*M* age 16.42 Time 1, 17.36 Time 2), Good and Willoughby (2010) found two groups similar to our findings: an aspiritual/irreligious group and a primary personal group. The aspiritual/irreligious group in Good and Willoughby's analyses was smaller (14% Time 1, 13% Time 2) than in our sample (24%). Their primary personal group (high in

prayer and spiritual transcendence) is similar to the High Religiousness group in the current study, although with lower attendance. Moreover, 24% of their sample belonged to this group (26% in their second wave), aligning with the current study (24%).

The third research question, "how does R/S relate to internalizing and externalizing symptomatology, substance use and sexual behaviors," extends in the long line of research examining the effects of religiousness on distal outcomes (see McCullough & Willoughby, 2009, for a review). R/S has been generally seen to have a positive effect on anxiety and depression (McCullough & Larson, 1999), externalizing behaviors such as delinquency (Pearce & Haynie, 2004; Sloane & Potvin, 1986), substance use (Hill, et al., 2009), and sexual behaviors (Adamczyk & Felson, 2006; Nonnemaker, et al., 2003). Despite the abundance of research on these topics, the current investigation was the first of the author's knowledge to use person-centered techniques to relate R/S to adolescent adjustment outcomes. While Time 1 data could not be utilized in the intended manner, several interesting trends emerged when looking at the relationship between Time 2 profiles and outcomes. In particular there were significant differences between High Religiousness children and Introjectors in internalizing symptomatology and marijuana use, and between High Religiousness children and both Introjectors and Low Religiousness children in externalizing symptomatology. Of particular interest is the finding that there are differences in internalizing symptomatology and marijuana use, not between High Religiousness and Low Religiousness children, but between High Religiousness and Introjectors – groups that were similar in most domains except private practices. This effect is one that would not have been seen by traditional variable-centered techniques, as they would place individuals in these three groups on a continuum that highlights differences between individuals scoring high and low more so than those high and medium. The result that High Religiousness children reported significant lower levels of marijuana use than Introjectors was surprising because public religiousness has been seen to be more related to substance use than private religiousness (Mason & Windle, 2002; Nonnemaker, et al., 2003), yet that was the domain that differentiated the two groups in terms of marijuana use.

This finding has several implications for mental health professionals. It has been found that effects of religiousness are modest, typically related to positive development, and remain even after controlling for demographic variables (Smith & Denton, 2005). Our results indicate that the effects of R/S on outcomes might be more complex; a linear relationship between level

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of R/S and marijuana use and internalizing and externalizing symptomatology was not evident. Instead, those who are in the "middle" religiousness group – the Introjectors – had the worst outcomes. The Introjector group might consist of those who have not fully internalized their R/S beliefs, and instead represent a group who adhere to social norms. Considering that the majority of adolescents in the United States have a religious affiliation (Funk & Smith, 2012), believe in God, and attend religious services at least twice a month (Denton, Pearce, & Smith, 2008), it is not surprising that the Introjector group is the majority in the current sample. Those who look to understand individuals' R/S beliefs should be careful to note how well integrated these beliefs are to their lives, and understand that simply acknowledging R/S belief does not necessarily bestow its protective effects. In fact, those who have not fully internalized might even be more vulnerable than those low in R/S.

Additionally surprising was the finding that parent profiles did not relate to outcomes with the exception of externalizing symptomatology. Evidence from throughout the psychology and sociology of religion has indicated the critical role of the religious environment for children's outcomes (Barry, et al., 2010; Hirschi & Stark, 1969; Kim-Spoon, Longo & McCullough, 2012a; Kim-Spoon, Longo & McCullough, 2012b; Pearce & Haynie, 2004; Petts, 2009). Findings in the current study could be explained by not taking into account other parenting variables. Hardy, et al., (2011) revealed that the relationship between family religiousness and child religiousness was moderated by parenting styles. Similarly, Bartkowski, et al., (2008) found that the effects of R/S on child self-control depended on the similarity of parents' R/S, and that parents low in R/S homogeneity had children who exhibited lower levels of self-control. The critical role of parent-adolescent relationship quality was also seen to moderate the relationship between parents' personal religiousness and adolescent internalizing symptomatology (Kim-Spoon, et al., 2012b). Taken together, these findings suggest that parenting styles and parent-child relationship quality might be critical mediating or moderating factors that would explain parent R/S profiles and adolescent adjustment outcomes.

The fourth research question, "what is the correspondence between parents and children," was an effort to better understand the dynamic family system. Research has examined the interplay between parenting and child religiousness in a variety of ways: the impact of parenting behaviors on child religiousness (Mahoney, et al., 2008; Regnerus, 2006), the effects of parent religiousness predicting child outcomes (Bartkowski, et al., 2007), as well as the interplay of

parent-child religiousness (Berry, et al,, 2010; Hardy, et al., 2011; Kim-Spoon, Farley, Holmes, & Longo, under review; Pearce & Haynie, 2004; Petts, 2009; Regnerus, 2005). However, no study to our knowledge has used person-centered techniques to examine the correspondence between parent and child R/S. Our data indicated there was a clear relationship between parent and child profile membership in three main ways.

First, we found that Nonreligious parents were more likely to have Low Religiousness children and less likely to have High Religiousness children. Second, parents in the Traditional Religiousness group were more likely to have High Religiousness children and less likely to have Low Religiousness children. Third, Questing parents were less likely to have children in the High Religiousness group, but equally as likely to have Intojectors or Low Religiousness children. Additionally noteworthy is the finding that no children in the High Religiousness group had parents in the Non-Religious group. These results expand past work exploring the role of parenting and parental R/S in the development of child R/S, and benefited from using person-centered techniques. These first two findings support work establishing similarity in R/S between parents and children; however, work examining parent-child similarity is typically conducted through correlational work that does not allow for the types of non-linear relations in the present study. Of particular interest was our third finding, indicated that Questing parents, the group highest in areas conceptually analogous to spirituality, are less likely to have children in the High Religiousness group. This group's lack of a more traditional form of R/S might make it more difficult for children to internalizing religious teachings. Those children of Questing parents who do become religious might find themselves in the Introjector group as opposed to the High Religiousness group due to their parents' lack of participation in private practices such as prayer. Furthermore, results indicate that researchers should consider the use of scales of R/S that are age-appropriate for parents and children. To our knowledge, no work has examined whether meanings of R/S questions are interpreted similarly for parents and children. Because of the many changes occurring throughout adolescence, it is possible that the meaning and/or interpretations of R/S questionnaires could be different at various ages. Although some of the same scales were used in the current study, LPAs allowed for a comparison of R/S that described both children and parents in such a way that fit their own unique religious experiences.

Surprisingly, there were no relations between the child Introjector group and any parent profile. ANCOVAs revealed that the Introjector group was significantly higher than the High Religiousness in both internalizing symptomatology and marijuana use. The finding suggests preventive interventions focusing on the Introjectors. An understanding of potential antecedents and familial associations to membership in this group might allow for more nuanced guidelines to curtail these behaviors.

4.1 - Limitations and Future Directions

There are several issues that limit the impact of these findings. First, this sample was primarily Christian, White, and was from Southwestern Virginia. Person-centered techniques are by their nature sensitive to differences in group composition. The use of different samples both in terms of religious demographics and in terms of racial/ethnic distribution could potentially yield results different from our own. Examinations using person-centered techniques have shown differences in profile/class membership across countries (e.g., Canada; Good & Willoughby, 2010), and replication with diverse samples should be completed. Second, the relations between parent and child profile membership and adolescent outcomes were cross-sectional due to unidimensionality at Time 1. Future studies would benefit from the inclusion of diverse measures of R/S over time in order to better appreciate direction of effects.

Future studies would benefit from including person-centered techniques such as latent profile analysis. As was evident with Time 1 data, dimensions of R/S that are proposed to be multidimensional might not be as multidimensional as thought. The use of person-centered techniques would help the field in several ways. First, while it has been proposed that the field has moved out of the "measurement paradigm" (Emmons & Paloutzian, 2003), there is still considerable debate about how to properly measure R/S. This is especially true with the increasing emphasis on spirituality and non-traditional forms of religiousness. By moving to the use of techniques that can optimally utilize multidimensional aspects of R/S, the field can better understand the R/S makeup of samples. Second, the use of these techniques has advantages over more traditional techniques for a variety of practical reasons, which include (1) there is no assumption that one R/S variable is homogenous across levels of other R/S variables, (2) there is no assumption that variables act in additive and subtractive manners, and (3) correlations between R/S variables are typically high, which can cause multicollinearity and compromise model fit in structural equation models.

Additionally, future studies would be well-served return to a more basic framework to explore precisely what it means for adolescents to be religious and/or spiritual – from their perspective. The majority of measures of R/S were developed either for use in adult populations (e.g., religion as quest), or are simply frequencies of religious activities such as attendance and prayer. We have little understanding of what children and adolescents think it means to be religious, and what aspects of their spiritual experience are important to them.

4.2 - Conclusion

The psychology of religion and spirituality in the United States has been undergoing a major transformation in an attempt to better represent contemporary R/S – especially spirituality – due to large changes in the R/S of the population. The shift to a more individualized spirituality, particularly in younger populations (Funk & Smith, 2012; Good & Willoughby, 2006), is forcing researchers to reexamine some of the basic questions in the field and to reevaluate precisely what religion is. Here we find support for the use of person-centered techniques as a way to help identify various R/S configurations. Using diverse R/S measures, we found three theoretically meaningful profiles of both parent and child R/S that allowed for the discovery of findings not possible through traditional variable-centered techniques. It is our belief that person-centered approaches would be beneficial for the advancement of the R/S field by expanding our understanding of the development of R/S and how developmental patterns of R/S influence on physical and psychological well-being.

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Table 1

Descriptive Statistics for Study Dependent Variables

	Minimum	Maximum	Mean	Standard Deviation
YSR Internalizing	27	75	50.68	9.58
YSR Externalizing	29	73	49.51	8.45
Cigarette Use	1	9	1.20	1.01
Alcohol Use	1	9	1.28	0.86
Marijuana Use	1	9	1.34	1.32
Sexual Behaviors	0	9	0.24	0.92

Table 2

Results of Principle Components Analysis for Time 1 Traditional Religiousness

Rel 2	.795
Rel 3	.764
Rel 4	.589
Rel 5	.817
Rel 6	.544
Rel 7	.684
Rel 8	.624
Rel 9	.881
Rel 10	.749
Rel 11	.753
Rel 12	.782
Rel 13	.822

Note. Rel = traditional religiousness questionnaire item.

Table 3

Results of Principle Components Analysis for Time 1 Religiousness Variables

Rel 2	.795
Rel 3	.764
Rel 4	.589
Rel 5	.817
Rel 6	.544
Rel 7	.684
Rel 8	.624
Rel 9	.881
Rel 10	.749
Rel 11	.753
Rel 12	.782
Rel 13	.822
SRQ 1	.869
SRQ 2	.678
SRQ 3	.505
SRQ 4	.826
SRQ 5	.548
SRQ 6	.807
SRQ 7	.248
SRQ 8	.821
SRQ 9	.844
SRQ 10	.537
SRQ 11	.827
SRQ 12	.234

Note. Rel = traditional religiousness questionnaire item, SRQ = religious self-regulation item.

Table 4

Results of Principle Components Analysis for Time 1 Traditional Religiousness

Rel 2	.778
Rel 3	.813
Rel 4	.701
Rel 5	.798
Rel 6	.620
Rel 7	.774
Rel 8	.646
Rel 9	.894
Rel 10	.698
Rel 11	.879
Rel 12	.839
Rel 13	.874

Note. Rel = traditional religiousness questionnaire item.

Table 5

Results of Principle Components Analysis for Time 1 Religiousness Variables

Rel 2	**.690**	.058	-.034
Rel 3	**.872**	.113	.093
Rel 4	**.825**	-.087	.149
Rel 5	.308	-.004	**-.584**
Rel 6	**.641**	-.187	-.100
Rel 7	**.737**	-.061	-.042
Rel 8	.363	.354	-.071
Rel 9	**.621**	.017	-.370
Rel 10	.030	.140	**-.710**
Rel 11	**.571**	.182	-.355
Rel 12	.303	.115	**-.598**
Rel 13	**.669**	.092	-.229
SRQ 1	**.477**	.166	**-.439**
SRQ 2	.130	.294	-.341
SRQ 3	-.132	**.693**	-.074
SRQ 4	-.139	-.011	**-.937**
SRQ 5	.002	**.665**	-.058
SRQ 6	.027	-.126	**-.894**
SRQ 7	-.103	**.637**	-.091
SRQ 8	.052	-.028	**-.886**
SRQ 9	-.001	-.007	**-.905**
SRQ 10	.299	**.667**	.146
SRQ 11	**.573**	.066	-.254
SRQ 12	-.035	**.636**	.109

Note. Rel = traditional religiousness questionnaire item, SRQ = religious self-regulation item. Items in bold load > .4.

Table 6

Fit Statistics for Latent Profile Analysis for Parents' Time 1 Religiousness Variables

	2	3	4	5	6	7	8	9	10
loglikelihood	-400.49	-388.97	-382.15	-375.88	-371.34	-366.49	-361.30	-357.89	-351.48
AIC	820.98	805.95	800.29	795.78	794.67	792.97	790.61	791.78	786.95
BIC	847.43	**842.97**	847.89	853.95	863.43	872.30	880.52	892.27	898.02
SABIC	815.84	798.74	791.03	784.46	781.29	777.53	773.11	772.22	765.34
LMRT	0.00	**0.21**	0.50	0.03	0.70	0.26	0.49	0.06	0.10
BLRT	0.00	0.00	0.01	0.06	0.21	0.21	0.09	error	error

Note. LL = Logliklihood, AIC = Akaike Information Criteria, BIC = Bayesian Information Criteria, SABIC = Sample-Size Adjusted Bayesian Information Criteria, LMRT = Lo-Mendell-Rubin Adjusted Likelihood Ratio Test, BLRT = Bootstrapped Likelihood Ratio Test.

Table 7

Results of Principle Components Analysis for Children's Time 2 Religiousness Variables.

	Traditional/ Identification	Introjection	Monitoring	Social	Activities	Deterministic Monitoring
Rel 2	**.474**	.012	-.164	.227	.209	.038
Rel 3	.116	.110	-.132	**.592**	.214	-.104
Rel 4	-.047	-.083	-.060	**.698**	.274	.095
Rel 5	**.419**	-.028	-.293	.243	.223	-.057
Rel 6	.120	-.034	-.111	.091	**.702**	-.073
Rel 7	.208	-.114	-.062	.303	**.590**	.052
Rel 8	.171	.079	-.261	.129	**.494**	-.191
Rel 9	**.595**	.041	-.246	.150	.116	-.010
Rel 10	**.636**	.136	-.260	.021	-.074	-.006
Rel 11	**.803**	.089	-.030	.098	-.034	-.112
Rel 12	**.643**	.166	-.238	.081	-.016	-.106
Rel 13	**.731**	.094	-.104	.077	.026	-.090
Rel 14	**.736**	.102	-.226	.025	-.056	-.084
Rel 15	.106	.076	-.005	**.842**	-.136	.040
Rel 16	.011	.029	.051	**.845**	.089	.034
Rel 17	.149	.087	.028	**.824**	-.090	.044
SRQ 1	**.685**	.011	-.090	.115	.114	.113
SRQ 2	.241	**.420**	-.040	-.095	.252	.371
SRQ 3	.333	**.595**	.122	-.204	.129	.224
SRQ 4	**.780**	-.044	-.038	.032	.169	.082
SRQ 5	.104	**.614**	-.196	.002	-.032	-.021
SRQ 6	**.785**	.011	.002	.035	.049	.138
SRQ 7	-.142	**.740**	.070	.046	.102	.155
SRQ 8	**.843**	-.132	.048	.073	.111	.124
SRQ 9	**.894**	-.125	.091	.065	.008	.166
SRQ 10	.159	**.650**	-.070	.163	-.205	-.155
SRQ 11	**.448**	-.008	.003	.371	.250	.061
SRQ 12	-.149	**.804**	-.012	.081	-.056	-.040
GCA 1	.079	-.031	**-.873**	.000	.054	-.026
GCA 6	.212	.001	**-.798**	.018	-.021	-.022
GCA 7	-.048	.115	**-.744**	-.030	.209	.112
GCA 10	-.036	.017	**-.867**	.106	.074	-.050
GCA 13	-.033	.058	**-.883**	.013	.113	.021

GCA 16	.132	.129	-.197	.186	-.108	**.581**
GCA 17	.205	.036	**-.519**	.172	-.083	.156
GCA 18	.084	.167	-.284	.081	.065	**.537**
GCA 19	.068	.088	-.159	.280	-.168	**.634**
GCA 20	.069	-.124	**-.622**	.188	-.164	.203
GCA 21	.028	-.065	**-.436**	.031	-.134	**.440**
GCA 22	.063	.200	**-.606**	-.012	.166	.110
GCA 23	-.233	.062	**.525**	.056	.117	-.083

Note. Rel = traditional religiousness questionnaire item, SRQ = religious self-regulation item, GCA = God monitoring item. Items in bold load > .4.

Table 8

Results for Latent Profile Analyses for Children at Time 2.

	1	2	3	4	5	6	7	8	9
LL	-1773.32	-1609.50	-1576.98	-1559.97	-1544.60	-1525.57	-1058.96	-1495.45	-1479.33
AIC	3570.64	3257.00	3205.97	3185.94	3169.21	3145.14	3125.91	3112.90	3094.65
BIC	3610.75	3320.51	**3292.87**	3296.24	3302.90	3302.23	3306.40	3316.79	3321.93
SABIC	3572.73	3260.31	3210.49	3191.68	3176.16	3153.31	3135.30	3123.51	3106.47
LMRT	N/A	0.00	0.01	**0.37**	0.07	0.06	0.17	0.06	0.09
BLRT	N/A	0.00	0.00	0.00	0.00	0.06	0.00	0.00	0.00

Note. LL = Logliklihood, AIC = Akaike Information Criteria, BIC = Bayesian Information Criteria, SABIC = Sample-Size Adjusted Bayesian Information Criteria, LMRT = Lo-Mendell-Rubin Adjusted Likelihood Ratio Test, BLRT = Bootstrapped Likelihood Ratio Test.

Table 9

Means, Standard Errors, and Significance of Parameters

	High Religiousness			Introjectors			Low Religiousness		
	Mean	S.E.	Sig.	Mean	S.E.	Sig.	Mean	S.E.	Sig.
Identification	0.74	0.07	0.00*	0.26	0.08	0.00*	-1.38	0.09	0.00*
Introjection	0.07	0.19	0.70	0.29	0.10	0.00*	-0.66	0.11	0.00*
Monitoring	-0.61	0.08	0.00*	-0.31	0.08	0.00*	1.34	0.11	0.00*
Social	0.65	0.07	0.00*	0.17	0.09	0.07	-1.10	0.15	0.00*
Practices	1.20	0.15	0.00*	-0.53	0.10	0.00*	-0.36	0.08	0.00*
Deterministic	0.07	0.18	0.69	0.30	0.09	0.00*	-0.67	0.12	0.00*

Note. Identification = Identification/Importance; Monitoring = God Monitoring; Social = Social Support/Attendance; Practices = Private Practices; Deterministic = Deterministic Monitoring.

Table 20

Results of Principle Components Analysis for Parents' Time 2 Religiousness Variables.

	Traditional/ Identification	Connectedness	Viewing Religious Doubts as Positive	Social Support/Attendance	Meditative Experience	Introjection	Universal Order	Willingness to Face Existential Questions	Connection to the Dad	Generativity	Openness to Religious Change	Transcendent Meditation	Private Practices
Rel 2	**.615**	-.067	.012	.155	.004	.026	.138	.043	-.065	-.017	-.074	-.100	.172
Rel 3	.385	-.004	.107	**.561**	.096	-.011	-.040	-.062	-.118	-.014	-.045	-.104	.185
Rel 4	.274	.008	.073	**.574**	.026	-.152	-.087	-.001	-.082	.141	.057	-.052	.298
Rel 5	**.773**	-.109	.044	.014	.014	-.021	.049	.047	.076	-.017	.060	-.027	.119
Rel 6	.099	-.010	-.193	.193	.079	.105	-.055	.121	.095	.104	.146	.102	**.627**
Rel 7	**.446**	-.055	-.028	.179	.176	-.031	-.040	.051	-.117	.127	.060	-.183	**.407**
Rel 8	.377	-.030	-.058	.045	.024	.222	-.008	.029	.004	.109	.084	-.096	**.435**
Rel 9	**.721**	-.039	.086	.176	-.067	.089	.098	.044	-.024	-.106	-.044	.029	.106
Rel 10	**.880**	-.090	.060	.013	-.191	-.060	.143	-.146	.083	-.119	.038	-.111	-.027
Rel 11	**.742**	.023	-.086	.130	-.143	.090	.071	.046	.084	-.043	-.018	.003	.060
Rel 12	**.835**	-.016	.009	.084	-.056	.024	.125	.007	.036	-.101	-.016	.058	-.059
Rel 13	**.754**	-.104	.026	.128	-.164	.065	.084	.083	.028	-.042	.039	.058	.068
Rel 14	**.881**	-.023	.055	.086	-.085	-.003	.100	-.023	.040	-.092	.015	.009	-.039
Rel 15	.306	.010	.046	**.778**	-.021	-.042	.008	-.031	.025	.003	-.049	.016	-.032
Rel 16	.063	-.130	-.016	**.808**	.127	-.008	.038	.028	-.017	.009	-.043	.029	-.042
Rel 17	.283	.015	.019	**.782**	-.020	-.113	.024	-.010	.064	-.001	.014	.035	.022
STQ1	.287	.237	.028	-.065	**.605**	-.019	-.068	-.008	-.028	-.17	-.037	.040	.134

													1
STQ2	-.026	.029	.145	-.039	**.662**	-.030	.091	-.092	.085	-.163	-.248	.081	.171
STQ3	.011	.259	.161	.021	.294	-.039	.142	-.133	.102	.074	-.185	.188	.232
STQ4	**.546**	-.019	.047	-.008	.219	-.085	.215	-.119	-.076	.099	.004	.303	-.074
STQ5	-.196	.234	-.120	-.078	**-.434**	-.117	-.162	.078	-.206	.063	-.207	.065	.015
STQ6	-.143	-.031	-.024	.099	**.779**	.058	-.021	.031	.057	.028	.096	.199	.000
STQ7	.360	.029	-.085	.022	.373	-.029	.130	.064	-.142	.080	-.099	.376	.016
STQ8	-.033	.030	-.112	.094	**.851**	-.040	-.162	.065	-.051	-.078	.140	-.039	.004
STQ9	.032	-.123	-.005	.001	.199	.124	.113	.105	.112	.038	.011	**.687**	-.003
STQ10	-.123	**.824**	.004	.004	-.031	-.034	.187	-.011	.134	-.003	.025	-.052	.028
STQ11	-.119	**.818**	.090	-.038	-.016	.023	.127	-.023	.070	.033	-.006	-.064	.009
STQ12	.026	**.726**	.024	-.078	.202	.003	.156	-.009	-.022	-.189	-.003	-.070	-.035
STQ13	-.021	**.727**	.037	-.046	.043	.023	-.032	.042	-.086	.217	.007	.020	.096
STQ14	.161	.166	.022	-.086	-.077	.143	**.769**	.001	-.147	.186	.154	.091	-.091
STQ15	.139	.044	-.092	.099	.000	-.086	**.745**	-.018	.051	-.059	-.056	.117	-.091
STQ16	.250	.089	-.101	-.041	-.129	.006	**.806**	.047	-.075	.037	.135	.054	.040
STQ17	.048	.254	-.110	-.022	.055	-.093	**.569**	.150	-.095	.219	-.083	-.340	.076
STQ18	-.126	**.559**	-.055	-.005	.130	-.053	.359	.068	.039	.177	.064	-.046	-.069
STQ19	.079	.130	-.105	-.017	.038	-.056	-.026	.037	**.826**	.076	.012	-.039	.046
STQ20	.125	.146	.066	.032	-.166	-.052	.008	-.103	.037	**.765**	.121	.079	.156
STQ21	-.186	.159	-.007	.084	-.042	.121	.196	-.091	.185	**.629**	-.100	-.110	.046
STQ22	.075	-.069	.070	.040	.022	.060	.101	.024	.175	**.556**	-.200	**.559**	-.144
STQ23	.054	.015	-.051	-.036	.023	-.023	-.158	.062	**.856**	.187	.107	.105	.086
STQ24	.053	**.686**	.104	.037	-.187	-.036	-.309	-.049	.018	.101	-.166	.072	-.119
SRQ 1	**.536**	-.001	-.096	.231	-.022	.191	.048	-.021	-.024	-.011	-.053	.097	.153

SRQ 2	.160	.170	-.099	.127	-.093	**.533**	-.063	-.046	.080	-.054	-.047	.256	.145
SRQ 3	-.076	-.014	-.011	.197	-.039	**.655**	.039	.042	.000	.010	-.173	.192	-.280
SRQ 4	**.864**	.047	-.100	-.145	.129	.028	-.106	-.004	-.038	.094	-.067	.001	.033
SRQ 5	.114	-.046	-.004	-.191	-.016	**.738**	-.037	-.067	-.031	-.040	.099	.066	.135
SRQ 6	**.937**	.027	.009	-.103	.017	-.050	.053	.024	-.049	-.010	-.082	-.017	-.129
SRQ 7	.041	-.097	.238	-.320	-.026	**.774**	.065	-.024	.058	-.062	-.059	-.021	.165
SRQ 8	**.941**	-.018	-.021	-.159	.118	-.076	-.139	-.010	.063	.135	-.066	.007	-.062
SRQ 9	**.958**	-.032	-.020	-.131	.109	-.084	-.084	-.009	.090	.075	-.068	.013	.110
SRQ 10	.169	.072	-.079	-.021	.013	**.586**	-.080	.018	-.117	.195	.014	-.030	.107
SRQ 11	**.597**	.099	-.021	.335	-.019	.081	-.141	-.029	-.013	.111	-.002	-.057	.106
SRQ 12	-.161	-.188	.014	.074	.136	**.576**	.065	-.090	-.096	.148	-.111	-.252	-.364
Quest 1	-.051	-.007	.032	-.017	.052	-.078	-.017	**.927**	.022	-.127	-.053	.085	.100
Quest 2	.068	.028	.163	.059	.023	.037	-.050	**.679**	.244	-.006	.084	.035	-.009
Quest 3	.030	-.066	.249	-.146	.032	.026	.015	.314	.029	.116	**.462**	.089	-.079
Quest 4	.028	-.011	.135	-.026	-.069	-.029	.172	**.854**	-.080	-.099	-.036	.041	.088
Quest 5	-.051	-.028	**.787**	-.062	-.043	.000	-.087	.175	-.008	.056	-.036	.042	.004
Quest 6	-.102	-.083	**.830**	.098	-.125	-.066	.030	.124	-.056	.076	-.108	.059	-.027
Quest 7	-.292	-.301	.192	-.098	-.121	-.345	.099	-.122	.009	.373	.015	.066	.219
Quest 8	.053	.110	**.819**	-.027	.081	.091	-.158	-.003	-.096	.033	-.050	-.070	-.043
Quest 9	.315	.100	**.458**	.101	.132	.020	-.012	-.070	-.030	.076	.188	.146	-.143
Quest 10	-.092	.163	**.560**	.131	.072	.053	-.078	.060	-.033	.017	.395	-.043	-.098
Quest 11	-.135	-.053	.032	-.025	.063	-.114	.124	-.138	.078	-.039	**.864**	.078	.231
Quest 12	.077	.170	**.580**	.049	-.016	.008	.017	-.044	.032	-.124	.349	-.195	-.102

Note. Rel = traditional religiousness questionnaire item, STQ = Spiritual Transcendence Scale item, SRQ = religious self-regulation item, Quest = Religion as Quest item. Items in bold load > .4.

Table 21

Results for Latent Profile Analyses for Parents at Time 2.

	1	2	3	4	5	6	7	8	9
	-	-	-	-	-	-		-	
LL	4063.55	3940.89	3896.59	3866.17	3839.64	3815.46	-378.53	3774.34	
AIC	8179.10	7961.80	7901.18	7868.34	7843.29	7822.91	7795.06	7796.68	
BIC	8267.46	8097.71	**8084.68**	8099.41	8121.94	8149.13	8168.85	8218.05	
SABIC	8185.06	7970.94	7913.56	7883.92	7862.08	7844.91	7820.26	7825.09	
LMRT	N/A	0.00	**0.38**	0.69	0.36	0.00	0.23	0.78	
BLRT	N/A	0.00	0.00	0.00	0.00	0.00	0.00	0.05	

Note. LL = Logliklihood, AIC = Akaike Information Criteria, BIC = Bayesian Information Criteria, SABIC = Sample-Size Adjusted Bayesian Information Criteria, LMRT = Lo-Mendell-Rubin Adjusted Likelihood Ratio Test, BLRT = Bootstrapped Likelihood Ratio Test. Best fitting indicies are in bold.

Table 22

Means, Standard Errors, and Significance of Parameters For Parents' Profiles

	Traditionally Religious			Questing			Non-Religious		
	Mean	S.E.	Sig.	Mean	S.E.	Sig.	Mean	S.E.	Sig.
Trad. Rel.	0.66	0.07	0.00*	0.01	0.24	0.96	-1.96	0.13	0.00*
Connectedness	-0.13	0.14	0.36	0.14	0.18	0.42	0.00	0.18	0.98
Doubts	-0.38	0.10	0.00*	0.41	0.34	0.22	0.05	0.22	0.83
Social	0.41	0.12	0.00*	-0.09	0.33	0.79	-0.97	0.14	0.00*
Meditation	0.22	0.18	0.22	0.01	0.16	0.94	-0.68	0.23	0.00*
Introjection	0.44	0.12	0.00*	-0.23	0.34	0.50	-0.69	0.11	0.00*
Order	0.29	0.25	0.25	-0.04	0.17	0.83	-0.76	0.21	0.00*
Questions	-0.26	0.30	0.39	0.41	0.17	0.01*	-0.32	0.15	0.03*
Connection	-0.11	0.13	0.41	0.25	0.14	0.08	-0.34	0.19	0.07
Generativity	0.05	0.14	0.71	-0.01	0.19	0.95	-0.12	0.21	0.56
Openness	-0.31	0.25	0.21	0.33	0.11	0.00*	0.05	0.20	0.80
Transcendent	0.21	0.18	0.23	-0.07	0.28	0.81	-0.45	0.15	0.00*
Practices	0.65	0.47	0.17	-0.65	0.08	0.00*	-0.20	0.15	0.19

Note. Trad. Rel. = Traditional Religiousness; Doubts = Viewing Religious Doubts as Positive; Social = Social Support/Attendance; Meditation = Meditative Experience; Order = Universal Order; Questions = Willingness to Face Existential Questions; Connection = Connection to the Dead; Openness = Openness to Religious Change; Transcendent = Transcendent Meditation; Practices = Private Practices.

Table 23

ANCOVA Predicting Internalizing Symptomatology using Children's Profile Membership

	SS	df	F	*p*
Intercept	4482.22	6	51.06	0.000
Gender	27.32	1	0.31	0.578
Age	3.29	1	0.04	0.847
Race	7.74	1	0.09	0.767
Income	57.17	1	0.65	0.421
Profile	1190.45	2	6.78	0.001

Table 24
ANCOVA Predicting Externalizing
Symptomatology using Children's Profile
Membership

	SS	df	F	*p*
Intercept	5520.60	6	84.50	0.000
Gender	306.95	1	4.70	0.003
Age	16.14	1	0.25	0.620
Race	392.44	1	6.01	0.015
Income	212.24	1	3.25	0.073
Profile	712.20	2	5.45	0.005

Table 25

ANCOVA Predicting Marijuana Use Using Children's Profile Membership

	SS	df	F	*p*
Intercept	0.97	1	1.66	0.200
Gender	0.16	1	0.26	0.608
Age	0.86	1	1.47	0.227
Race	0.22	1	0.37	0.543
Income	0.70	1	1.20	0.275
Profile	4.14	2	3.53	0.031

Table 26

ANCOVA Predicting Alcohol Use Using
Children's Profile Membership

	SS	df	F	*p*
Intercept	0.30	1	0.92	0.339
Gender	0.01	1	0.04	0.847
Age	5.82	1	17.94	0.000
Race	0.14	1	0.43	0.512
Income	0.00	1	0.00	0.972
Profile	1.80	2	2.78	0.064

Table 27

ANCOVA Predicting Cigarette Use Using
Children's Profile Membership

	SS	df	F	*p*
Intercept	0.03	1	0.03	0.863
Gender	1.36	1	1.31	0.254
Age	4.06	1	3.90	0.050
Race	0.21	1	0.21	0.651
Income	1.39	1	1.33	0.249
Profile	4.05	2	1.95	0.146

Table 28

ANCOVA Predicting Sexual Behaviors Using Children's Profile Membership

	SS	df	F	*p*
Intercept	1.63	1	14.14	0.000
Gender	0.01	1	0.05	0.833
Age	3.71	1	32.11	0.000
Race	0.26	1	2.29	0.132
Income	0.27	1	2.38	0.125
Profile	0.02	2	0.10	0.907

Table 29

Means of Groups on Study Variables

		Internalizing	Externalizing	Sexual Behaviors	Alcohol Use	Cigarette Use	Marijuan Use
Children	Low Religiousness	49.90	50.65	0.19	1.37	1.00	1.
	High Religiousness	47.23	46.51	0.14	1.05	1.12	0.
	Introjectors	52.73	50.56	0.15	1.21	1.32	1.
Parents	Non-Religious	48.97	49.44	0.19	1.34	1.38	1.
	Trad. Religious	50.49	47.72	0.20	1.16	1.18	1.
	Questing	51.41	51.58	0.31	1.35	1.16	1.

Note. Trad. Religious = Traditionally Religious Group

Table 30
ANCOVA Predicting Internalizing
Symptomatology Using Parent's Profile
Membership

	SS	df	F	*p*
Intercept	4468.78	1	48.13	0.000
Gender	27.74	1	0.30	0.585
Age	2.92	1	0.03	0.859
Race	25.46	1	0.27	0.601
Income	36.16	1	0.39	0.533
Profile	119.21	2	0.64	0.527

Table 31
ANCOVA Predicting Externalizing
Symptomatology Using Parent's Profile
Membership

	SS	df	F	*p*
Intercept	5599.59	1	85.77	0.000
Gender	211.70	1	3.24	0.073
Age	27.91	1	0.43	0.514
Race	478.39	1	7.33	0.007
Income	152.02	1	2.33	0.129
Profile	360.77	2	5.53	0.005

Table 32

ANCOVA Predicting Marijuana Use Using
Parent's Profile Membership

	SS	df	F	*p*
Intercept	0.01	1	0.00	0.947
Gender	0.06	1	0.04	0.845
Age	0.92	1	0.59	0.442
Race	28.18	1	18.11	0.000
Income	2.37	1	1.52	0.218
Profile	1.04	2	0.33	0.717

Table 33

ANCOVA Predicting Alcohol Use Using
Parent's Profile Membership

	SS	df	F	*p*
Intercept	1.43	1	2.08	0.150
Gender	0.90	1	1.31	0.253
Age	9.25	1	13.51	0.000
Race	0.16	1	0.23	0.634
Income	0.11	1	0.17	0.683
Profile	1.17	2	0.85	0.428

Table 34

ANCOVA Predicting Cigarette Use Using Parent's Profile Membership

	SS	df	F	*p*
Intercept	0.481	1	0.467	0.495
Gender	0.723	1	0.702	0.403
Age	2.265	1	2.198	0.140
Race	0.073	1	0.071	0.790
Income	1.315	1	1.277	0.260
Profile	0.938	2	0.455	0.635

Table 35

ANCOVA Predicting Sexaul Behaviors Using
Parent's Profile Membership

	SS	df	F	*p*
Intercept	3.67	1	4.41	0.037
Gender	2.41	1	2.89	0.090
Age	4.57	1	5.49	0.020
Race	0.14	1	0.17	0.680
Income	0.33	1	0.40	0.527
Profile	1.05	2	0.63	0.534

Table 36

Crosstabs of Parent and Child Group Membership

			Children		
			High Religiousness	Introjectors	Low Religiousness
Parents	Trad. Rel	Observed	45^A	43^B	6^C
		Expected	27.1	47.0	19.9
	Questing	Observed	12^A	43^B	20^B
		Expected	21.6	37.5	15.9
	Nonreligious	Observed	0^A	16^B	13^C
		Expected	8.3	6.2	14.5

Note. Trad. Rel. = Traditionally Religious. Different superscript letters in rows indicates significant differences. $\chi^2 = 52.368$, $p < .001$).

Figure 1
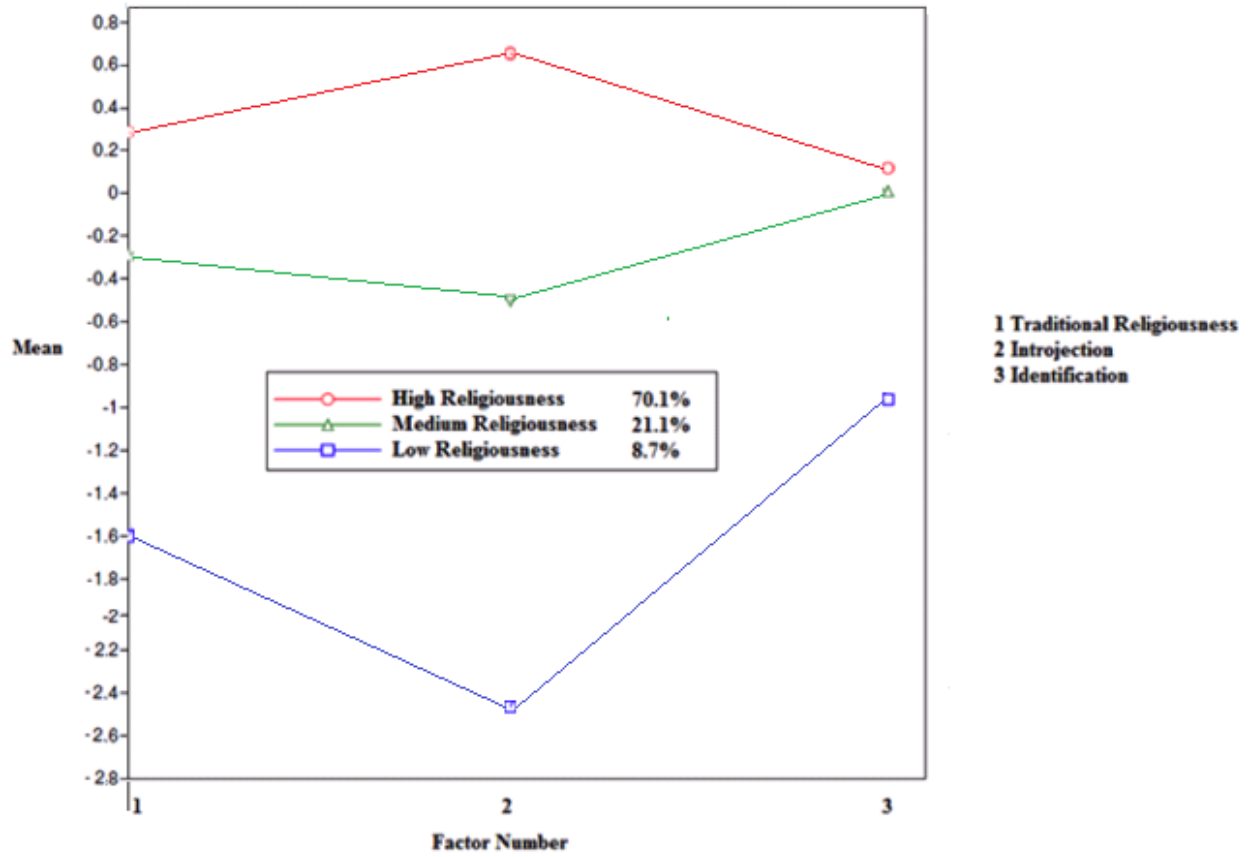*Profile Group Membership for Parents' Time 1 Data*

1 Traditional Religiousness
2 Introjection
3 Identification

Legend:
High Religiousness — 70.1%
Medium Religiousness — 21.1%
Low Religiousness — 8.7%

Figure 2
Profile Group Membership for Children's Time 2 Data

1 Identification/Importance
2 Introjection
3 God Monitoring
4 Attendance/Social Support
5 Private Practices
6 Deterministic Monitoring

High Religiousness	28.4%
Introjectors	47.6%
Low Religiousness	24.0%
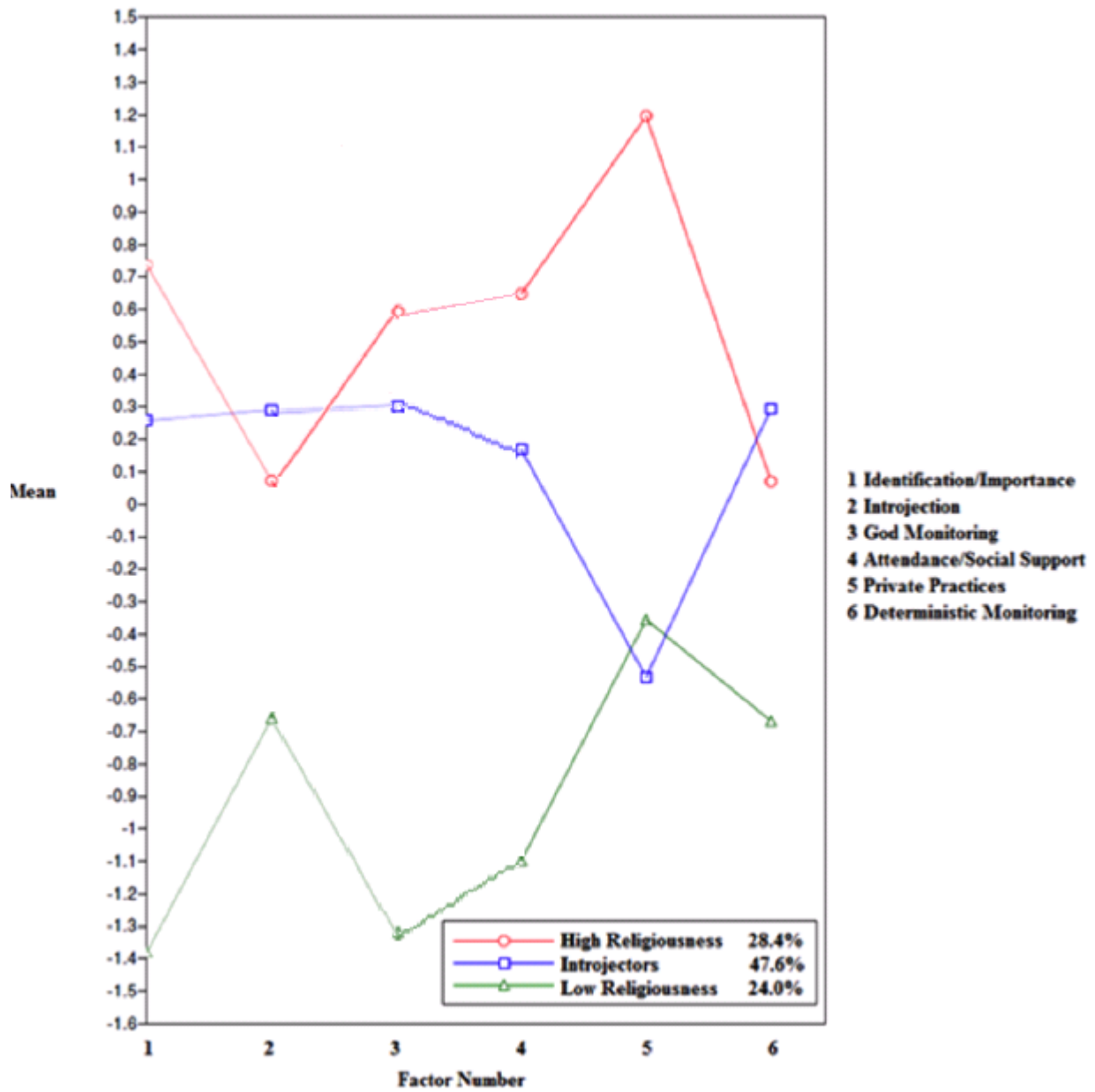
Figure 3
Profile Group Membership for Parents' Time 2 Data

1 Traditional Religiousness
2 Connectedness
3 Viewing Religious Doubts as Positive
4 Social Support/Attendance
5 Meditative Experience
6 Introjection
7 Universal Order
8 Willingness to Face Existential Questions
9 Connection to the Dead
10 Generativity
11 Openness to Religious Change
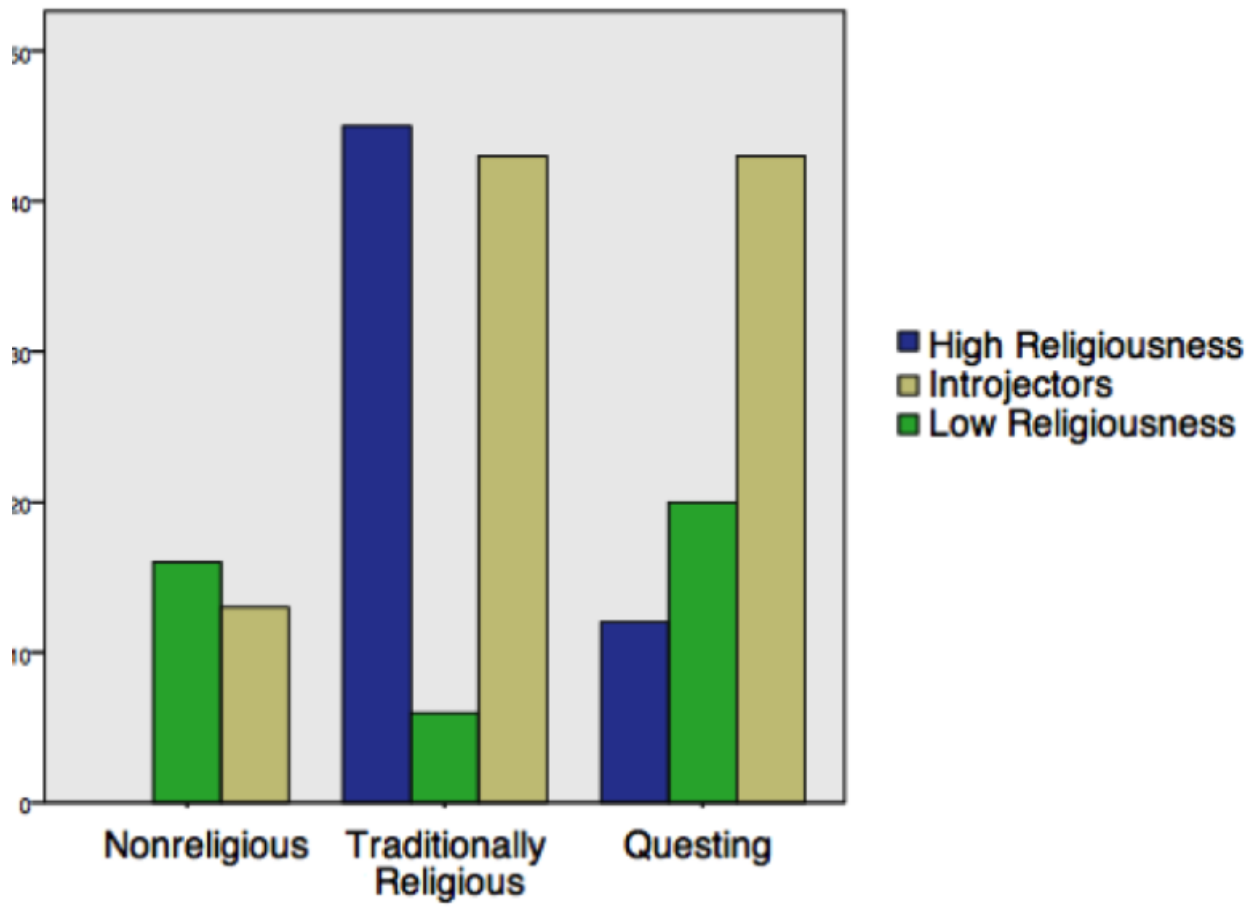12 Transcendent Meditation
13 Private Practices
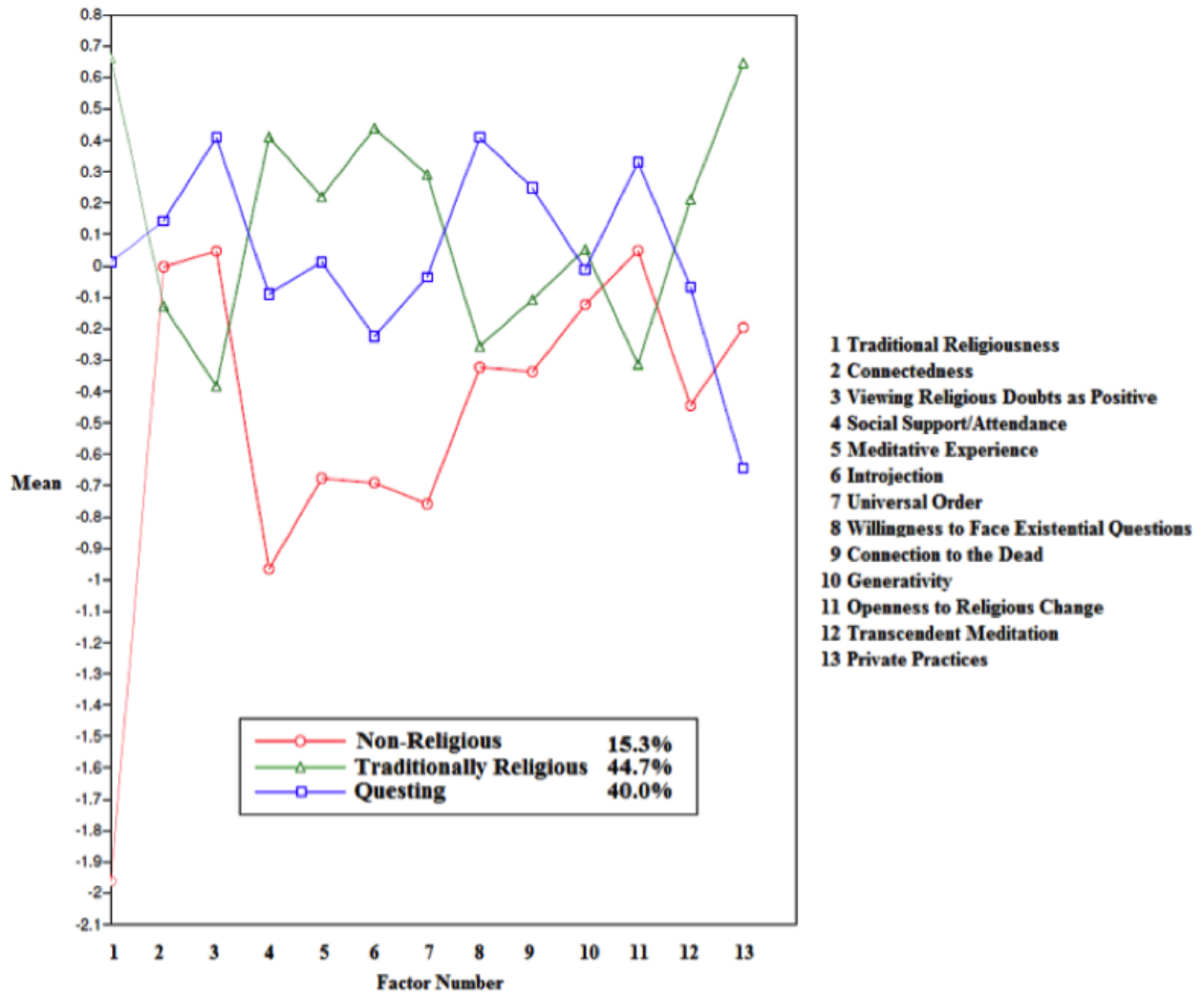
Figure 4
Frequencies of Child Profile Membership by Parent Profile Membership

Demographic Information

1. How old are you? (Record age in years.)   AGE_____
2. When is your birthday?   DOB __ __/__ __/__ __ __ __
                                              Mo   Day   Year

3. What is your gender?
     1 = Female
     2 = Male

4. What your marital status - married, widowed, separated, divorced, or never married?
     1 = never married
     2 = married
     3 = widowed
     4 = divorced
     5 = legally separated
     6 = separated, not legally
     7 = living together as married

5. How would you describe your own race?
     1. Black
         40 African American
         41 Caribbean or West Indian
         42 Cuban
         43 Dominican
         44 Puerto Rican
         90 Other _____ (specify) Black mix- with 2 or more black ethnicities.
     2 White
         80 White, Caucasian, Euro-American not of Latino Origin
     3 Latino or Hispanic, Non-Black
         50 Cuban
         51 Dominican
         52 Puerto Rican
         53 Mexican
           Other _____(specify)
         90 Other _____(specify) Latino/ Nonblack mix with 2 or more
       Latino/nonblack ethnicities
     4,5, or 6 Biracial or Multiracial
     4   90 Black / White
     5   90 Latino / White
     6   90 Latino / Black
     9   90 Other _____(specify)
     7 Asian or Asian-America
         30 Chinese
         31 (East) Indian
         32 Filipino

33 Japanese

34 Other _____(specify)

90 Other _____(specify) Asian mix- with 2 or more Asian ethnicities

8   20 American Indian

9   Other

10 Alaskan Native / Eskimo / Aleut

60 Middle Eastern

70 Pacific Islander

91 Other _____(specify)

6. When is your child's birthday?   DOB __ __/__ __/__ __ __ __
                                                    Mo   Day   Year

7. What is your relation to _____?

1 = Mother

2 = Father

3 = Grandmother

4 = Grandfather

5 = Stepmother

6 = Stepfather

7 = Foster parent

8. What is your child's gender?

1 = Female

2 = Male

9. How would you describe the race of your child?

1. Black

40 African American

41 Caribbean or West Indian

42 Cuban

43 Dominican

44 Puerto Rican

90 Other _____ (specify) Black mix- with 2 or more black ethnicities.

2 White

80 White, Caucasian, Euro-American not of Latino Origin

3 Latino or Hispanic, Non-Black

50 Cuban

51 Dominican

52 Puerto Rican

53 Mexican

Other _____(specify)

90 Other _____(specify) Latino/ Nonblack mix with 2 or more Latino/nonblack ethnicities

4,5, or 6 Biracial or Multiracial

4   90 Black / White

5 90 Latino / White
6 90 Latino / Black
9 90 Other _____(specify)
7 Asian or Asian-America
  30 Chinese
  31 (East) Indian
  32 Filipino
  33 Japanese
  34 Other _____(specify)
  90 Other _____(specify) Asian mix- with 2 or more Asian
ethnicities
8 **20 American Indian**
9 **Other**
  10 Alaskan Native / Eskimo / Aleut
  60 Middle Eastern
  70 Pacific Islander
  91 Other _____(specify)

10. Please estimate your total annual family income before taxes for all the adults in your household. Please include all (including TANF, AFDC, food stamps, SSI, rent voucher, fuel assistance and child support).

a. None   or $0 per month
b. Less than 1,000 or Less than $83 per month
c. $1,000 - $2,999 or $83 - $249 per month
d. $3,000 - $4,999 or $250 - $416 per month
e. $5,000 - $7,499 or $417 - $624 per month
f. $7,500 - $9,999 or $625 - $833 per month
g. $10,000 - $14,999 or $834 - $1,249 per month
h. $15,000 - $19,999 or $1,250 - $1,666 per month
i. $20,000 - $24,999 or $1,667 - $2,083 per month
j. $25,000 - $34,999 or $2,084 - $2,916 per month
k. $35,000 - $49,999 or $2,917 - $4,167 per month
l. $50,000 – $74,999 or $4,168 - $6,249 per month
m. $75,000 - $99,999 or $6, 250 - $8,333 per month
n. $100,000 - $199,999 or $8,334 - $16,666 per month
o. $200,000 or more or $16,667 or more per month

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Religiosity – Parent and Child Time 1

Here are some statements that describe religious attitudes and practices. Please answer all questions as honestly as possible. For each question circle the number that best describe your feelings and behaviors regarding religious experience.

1.   What is your religion, if any?
1) Protestant (Give denomination): _____
2) Roman Catholic
3) Jewish
4) Muslim
5) Other (Specify): _____
6) None

2.   To what extent do you consider yourself a religious person?
1) Very religious
2) Moderately religious
3) Slightly religious
4) Not at all religious

3.   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

4.   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

5.   How often do you pray privately in places other than at church or synagogue?
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

6.   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

7.   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

8.   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

9.   How important is religious faith in your life?
1) Very important
2) Important
3) Somewhat important
4) Not too important
5) Not at all important

Here are some questions on what you think about things. Read each one, and circle a number to show what you think. How important it is……….

10.   To believe in God
1) Not at all important
2) A little important
3) Pretty important
4) Very important
How important it is……….

11.   To be able to rely on religious teachings when you have a problem.
1) Not at all important
2) A little important
3) Pretty important
4) Very important

12.   To be able to turn to prayer when you're facing a personal problem.
1) Not at all important
2) A little important
3) Pretty important
4) Very important

13.   To rely on religious beliefs as a guide for day to day living.
1) Not at all important
2) A little important
3) Pretty important
4) Very important

14.   To look to God for strength, support, and guidance when you deal with major problems in your life.
1) Not at all important
2) A little important
3) Pretty important
4) Very important

Appendix C
Religiosity – Parent and Child Time 2

Here are some statements that describe religious attitudes and practices. Please answer all questions as honestly as possible. For each question circle the number that best describe your feelings and behaviors regarding religious experience.

1.   What is your religion, if any?
1) Protestant (Give denomination): _____
2) Roman Catholic
3) Jewish
4) Muslim
5) Other (Specify): _____
6) None

2.   To what extent do you consider yourself a religious person?
1) Very religious
2) Moderately religious
3) Slightly religious
4) Not at all religious

3.   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

4.   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

5.   How often do you pray privately in places other than at church or synagogue?
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

6.   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

7.   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

8.   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

9.   How important is religious faith in your life?
1) Very important
2) Important
3) Somewhat important
4) Not too important
5) Not at all important

Here are some questions on what you think about things. Read each one, and circle a number to show what you think. How important it is……….

10.   To believe in God
1) Not at all important
2) A little important
3) Pretty important
4) Very important
How important it is……….

11.	To be able to rely on religious teachings when you have a problem.
1) Not at all important
2) A little important
3) Pretty important
4) Very important

12.	To be able to turn to prayer when you're facing a personal problem.
1) Not at all important
2) A little important
3) Pretty important
4) Very important

13.	To rely on religious beliefs as a guide for day to day living.
1) Not at all important
2) A little important
3) Pretty important
4) Very important

14.	To look to God for strength, support, and guidance when you deal with major problems in your life.
1) Not at all important
2) A little important
3) Pretty important
4) Very important

The following questions deal with the relationships you've had with the people in your congregation

15.	How often do the people in your congregation make you feel loved or care for?
1) Very often
2) Fairly often
3) Once in a while
4) Never
5) Not applicable

16.	How often do the people in your congregation listen to you about your private problems and concerns?
1) Very often
2) Fairly often
3) Once in a while
4) Never
5) Not applicable

17.	How often do the people in your congregation express interest and concerns in your well-being?
1) Very often

2) Fairly often
3) Once in a while
4) Never
5) Not applicable

Sexual Behaviors

1. Have you ever had sexual intercourse?
A. Yes
B. No

2. How old were you when you had sexual intercourse for the first time?
A. I have never had sexual intercourse.
B. 8 years old or younger
C. 9-10 years old
D. 11-12 years old
E. 13-14 years old
F. 15-16 years old
G. 17 years old or older

3. With how many people have you had sexual intercourse?
A. I have never had sexual intercourse.
B. 1 person
C. 2 people
D. 3 people
E. 4 people
F. 5 people
G. 6 or more people

4. The last time you had sexual intercourse did you or your partner use a condom?
A. I have never had sexual intercourse
B. Yes
C. No