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Trajectories of Religious Coping from Adolescence into Early Adulthood: Their Form and Relations to Externalizing Problems and Prosocial Behavior

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Abstract

Little is known about changes in religious coping and their relations to adolescents' and young adults' functioning. In 686 Italian youths, trajectories of religious coping were identified from age 16–17 years to age 22–23 years; cohorts of youths reported at three of the four assessments. Four trajectories of religious coping were identified: decreasing, low stable, high stable, and increasing. A decline in religious coping was associated with high levels of externalizing problems at age 16–17, whereas an increase in religious coping was associated with higher externalizing problems at ages 18–19 and 20–21 years, and with relatively high involvement with deviant peers. High stable religious copers were high in prosocial behavior at three ages; low stable religious copers were higher than people undergoing change in their religious coping from mid-adolescence into early adulthood. These results can expand our current thinking about religious coping and adolescent adjustment.

Keywords

religion; coping; prosocial behavior; externalizing problems

The effects of religion and spirituality on youth are historically understudied but an emerging area of research (Johnson, 2008; King & Roeser, 2009; Roehlkepartain, King, Wagener, & Benson, 2006). This emerging field has been galvanized by findings relating religious or spiritual variables to many positive outcomes. The purpose of this study was to examine the relation of pattern of change in religious coping from adolescence into early

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[1]Participants also rated (0 = *never* to 8 = *two or three times a day*) their alcohol use with 3 items from a scale developed by Elliot et al. (1985; e.g. "*Indicate how frequently you drink liquor/spirits [for example, whisky]*"; T2–T5 alphas ranged from .73 to .79). The Levene's Test of Equality of error variances was significant at T1 and T2, *p*s < .05 and .001. The overall model for alcohol use was significant at all four times, *F*s(7, 390; 7, 665; 7, 498; 7, 107) = 3.81, η_p^2 = .06; 12.88, η_p^2 = .12; 11.40, η_p^2 = .14; and 3.88, η_p^2 = .20, *p*s < .001. Males scored high in alcohol use at all four times, *p*s < .001, .001, .001, and .01. In addition, a significant interaction of religious coping class and sex was found at T3, *F*(3, 498) = 3.25, *p* < .05, and η_p^2 = .02. Although the test of simple effects was not significant for either sex, *F*(3, 498) = 1.99, p = .11, partial eta squared = .012, for boys, consistent with the findings for deviant peers, in the pairwise comparisons, boys in the I group reported higher alcohol use than boys in the HS and LS groups, ,*p* < .03 and p = .05. The same pattern was near significant, *p* < .10, at age 18/19.

adulthood to externalizing problems (e.g., aggression, delinquency, and covert antisocial behaviors) and prosocial behavior (i.e., behavior intended to benefit others such helping).

Religion and Outcomes in Childhood and Adolescence

Religiousness in adolescence is generally seen as a protective factor when it comes to several kinds of at-risk or anti-social behaviors, as well as in regard to psychological maladjustment (reviewed in Bahr, Maughan, Marcoc, & Li, 1998; Smith 2003; Weaver et al., 2002). Moreover, because of the emphasis in most religions on the welfare of others (Saroglou, Delpierre, & Dernelle, 2004), many have viewed religion as an impetus for prosocial behavior. For example, Johnson (2008) suggested that better outcomes are associated with religion or spirituality not just because religion discourages drugs and alcohol and delinquency but also because it increases well-being, hope, purpose, meaning in life, and educational attainment; these capacities might help individuals cope and develop in positive ways. Roeser, Issac, Abo-Zena, Brittian, and Peck (2008) consider spiritual development in adolescence to be a way of moving people away from egocentic concerns to concerns about others, larger meaning in life, and well-being and health. Thus, there are multiple reasons—involving more abstract psychological processes as well as concrete social or psychological resources—that might explain relations of religiosity to behaviors that benefit rather than harm oneself and others.

Consistent with conceptual expectations, researchers often have found associations between religiosity and positive outcomes for children and youth. In regard to risky externalizing behaviors, religious participation or commitment was associated with lower levels of adolescents' alcohol binging, drug use, risky sex, driving while drinking, not using seat belts, and even non-optimal diet and exercise (Benson, Scales, Sesma, & Roehlkepartain, 2006; Donahue & Benson, 1995; Feinberg, Ridenour, & Greenberg, 2007; Good & Willoughby, 2006; Ream, 2006; Wagener, Furrow, King, Leffert, & Benson, 2003; Wallace & Forman, 1998), albeit not always (e.g., Benda & Corwyn, 1997, when controlling for family and peer influences; Wills, Yaeger, & Sandy, 2003, in early adolescence). There is also some evidence that religiosity relates to lower levels of aggressive or violent behavior, but the relation is usually quite modest (Benson et al., 2006; Bradford, Vaughn, & Barber, 2008; Donahue & Benson, 1995; French, Eisenberg, Vaughan, Purwono, & Suryanti, 2008; Good & Willoughby, 2006; Sinha, Cnaan, & Gelles, 2007; Wagener et al., 2003; Wallace & Forman, 1998). In yet other studies, there was no relation of religious attendance or importance to vandalism (Sinha et al., 2007) or findings were for older high school students but not junior high boys (for whom there was a positive relation; Wagener et al., 2003). One of the few longitudinal studies on this issue provided support for the prediction of religion from delinquency as well as vice versa (Benda & Corwyn, 1997) whereas another found no evidence of causal relations between religiosity/spirituality and Indonesian youths' externalizing problems (Sallquist, Eisenberg, French, Purwono, & Suryanti, 2010).

Consistent with theoretical expectations, religious attendance and reports of the importance of religion have also been modestly associated with indices of prosocial behavior (Benson et al., 2006; Furrow, King, & White, 2002; Huebner & Mancini, 2003; Kerestes, Youniss, & Metz, 2004; King & Furrow, 2004; Lichter, Shanahan, & Gardner, 2002; Wagener et al., 2003). In one of the few studies in which multiple reporters were used, Indonesian Muslim adolescents' religious practice/spirituality was sometimes modestly related to prosocial measures, even across reporters (e.g., adolescents' reports of religious practices correlated with teachers' and parents' reports of prosocial behavior). In a follow-up of that sample, Sallquist et al. (2010), using panel structural equation modeling, found marginally significant prediction over time between religiosity/spirituality and prosocial responding, as well as in the reverse direction. Thus, although religiosity may have provided the motivation

and opportunity for prosocial behaviors, being prosocial in this highly religious context may have drawn adolescents into the religious community.

Religious adolescents do have opportunities to engage in helping activities at religious institutions (e.g., church or mosque) and religious environments encourage such activity. King and Furrow (2004) found that the association between religious variables and prosocial indicators was mediated by social capital (including social interaction, trust of social partners, and shared vision with parents, friends, and other adults). It is likely that involvement in prosocial activities is often due to social factors, supporting the notion that religious variables (especially religious attendance) are partly indicators of community involvement. However, because prosocial behavior appears to be positively related to children's abilities to self-regulate (see Eisenberg, Fabes, & Spinrad, 2006, for a review), religiousness also would be expected to predict prosocial behavior if the former is useful for coping with negative emotions and stress.

Religious Coping

The notion of religiousness affecting youths' coping behavior is an idea that is common in the literature (Smith, 2003). Oser, Scarlett, and Bucher (2006) asserted that "One of the fundamental and undoubtedly universal functions of religiousness is coping" (p. 984). In Pargament's model, "religious coping is defined as a search for significance in times of stress in ways related to the sacred (Pargament, 1997). He argues that religion offers individuals unique ways to deal with stress and that life events can be interpreted in religious terms (also see Mahoney, Pendleton, & Ihrke, 2006). In fact, items on religious coping scales tend to be similar to some of those on religiosity scales; moreover, religious coping is a subscale of some religiosity measures (Fetzer Institute, 1999). In addition, people tend to average religious coping items with other items tapping religiosity (see Mahoney et al., 2006). Thus, religious coping can be viewed as a function of religiosity for many but not all individuals—a construct that overlaps with, but is not identical to, religiosity.

Investigators have found that adults' religious beliefs and church attendance appear to be important coping mechanisms for negotiating challenges and stresses (see Pargament, 1997). Pargament, Koenig, and Perez (2000) proposed that religion can serve coping functions by providing meaning, control, comfort, intimacy (social cohesion), and life transformation. Religion can serve, in these ways, both positive and negative coping functions (Pargament, 1997). With regard to meaning, for example, the meaning of event can be appraised in a positive way (an event is part of God's plan) or in a negative way (the Devil is tormenting me). In this study, we were focused on what have been labeled as positive aspects of religious coping.

In one of the few studies on religious coping in adolescence, adolescent mothers who were involved in church and had contact with and dependence on church members were better adjusted, had higher occupational and educational attainment, and exhibited less child abuse potential than less religious adolescent mothers (Carothers, Borkowski, Lefever, & Whitman, 2005). Thus, they were low in some aspects of aggression, as well as generally more competent. Using a measure of religious coping that reflected several relatively positive aspects of religious coping (i.e., praying for guidance, experiencing God's love and care, finding a lesson from God, and taking control over what one can and leaving the rest to God) and controlling for other types of coping, Brechting and Giancola (2006) found that religious coping was inversely related to the number of drugs used and frequency of drug use—variables that are often considered indices of externalizing problems--but did not relate to substance use problems (i.e., problematic attitudes, thoughts and behaviors that may be the result of substance use involvement). In a study of college students, Pargament, Smith,

Koenig, and Perez (1998) found that positive religious coping (e.g., finding comfort in God, putting faith in God) was associated with stress-related growth and cooperative behavior, findings that suggest that these students might have been more prosocial. However, there are, to our knowledge, no studies of the relations of adolescents' religious coping to their prosocial behavior.

Gaps in the Literature

Our study addresses several major gaps in the literature. Two of these gaps are the use of primarily North American samples and the dearth of relevant longitudinal data. Moreover, unlike in other studies using longitudinal data to study religiosity or religious coping, we examined patterns of change in religious coping. Also, there is insufficient research on the development of adolescents' religious coping more generally and on sex differences in the correlates of religious coping; both of these issues are foci in the present study.

Culture

Most empirical work on religiosity and adjustment has been conducted in North America and the theorizing cited above might apply best or only to the particular religious dynamics present in America. Yet the relation of religiosity or religious coping with social, emotional, and psychological functioning is likely moderated to some degree by the culture or subculture.

Some evidence suggests that the relation between religious commitment and delinquency varies even within the United States, with the relation being nonsignificant in the western part of the country but not in other areas (Stark, 1996). Moreover, there are ethnic/racial differences in the associations of religion with risky behaviors and internalizing problems in the U.S. (Le, Tov, & Taylor, 2007; Perkins, Luster, Villarruel, & Small, 1998) The variation in findings on the correlates of religiosity in the U.S. points to a key need in research on religiosity and religious coping – a focus on samples other than Caucasian, non-Hispanic North Americans.

In this study, we go beyond studying regional and ethnic differences within the U.S. by examining religious coping and its relations with externalizing problems and prosocial behavior in Italy. The U.S. is highly religious for an industrialized first world country (Norris & Inglehart, 2004); thus, there could be a different effect of religion in the U.S. than in other industrialized countries. Moreover, the dynamics of religion in the U.S. are relatively unique, with a religious marketplace which gives people the ability to pick whatever religious affiliation fits their outlook and goals (rational choice theory of religion; Sherkat & Wilson, 1995; Warner, 1993). Positive outcomes could go with religion because individuals pick the religion they like and are not constrained by the religion into which they were born.

The choice of Italy for studying religious functioning is an interesting contrast to the U.S. because of the predominance of Catholicism and the importance of Catholicism in Italian history and culture. Most Italians self-identify as Catholic (about 90%) and the presence of other religious groups is very low (2.5%). However, Americans are more strongly religious (62%) than Italians (44%; Religion Monitor, 2008). In addition, especially at ages 15 to 29 years and 30 to 49 years, a lower percentage of Italians (28%) consider religion to be very important in their lives than Americans (45%; World Values Survey, n.d.). Similar differences are found for religious adherence of American and Italian Catholics (European Values Study, n.d.). These data illustrate relevant cultural differences between the U.S. and Italy and support the importance of studying Italians' religious coping strategies over the transition to young adulthood.

A Longitudinal Perspective

Longitudinal studies have been identified as a needed future direction for this field because of their potential for clarifying causal pathways (King & Roeser, 2009). In a cross-sectional study, Winterowd, Harrist, Thomason, Worth, and Carlozzi (2005) found that college students' spirituality was related to higher anger and stress and less anger control. Perhaps stressed or angry people turn to religion to deal with stress/anger rather than religion serving to prevent stress and anger (and related negative behavior). Although most longitudinal studies are also correlational, looking at directions of relations across time is a useful step in trying to disentangle causal relations.

In one of the few longitudinal studies, Brechting and Giancola (2006) found that religious coping at 12–14 years predicted less substance use at age 15–16 (items in this study were discussed above). In another longitudinal study examining religiosity rather than religious coping, Pearce, Jones, Schwab-Stone, and Ruchkin (2003) found that religiousness in a mostly African American and Latino sample at 12.5 years of age predicted fewer conduct problems a year later and seemingly buffered against the negative effects of exposure to violence. Engaging in private (likely internalized) religious practices such as prayer, watching or listening to religious programs on the TV or radio, and reading religious literature were associated with a decline in conduct problems over time whereas both private and public religious behaviors/factors were negatively associated with concurrent conduct problems. However, having high levels of positive spiritual beliefs about the transcendent and one's interaction with the transcendent appeared to be associated with an increase in conduct problems under conditions of high (but not low) witnessing of violence. The authors suggested that youths who believe that they are in a relationship with a loving God who provides them with strength and comfort become disillusioned or discouraged after witnessing high levels of community violence. Alternatively, they noted that youths who engage in externalizing behaviors may be less likely to hold religious beliefs through a process of cognitive dissonance.

Correlational studies are always ambiguous about causality. Is religious coping causing better outcomes, or are better "outcomes" causing religion? If a delinquent adolescent shows up at church, is he or she welcome? Moreover, if religion provides so many resources for coping, maybe many children who are not doing well turn to religion for help. Risky behaviors may also affect religious participation (Ream, 2006); it is likely that the direction of causality is reciprocal. Such a pattern of associations would be more evident in longitudinal than in concurrent designs.

Longitudinal research is important for another reason. With latent class growth analyses, it is possible to examine different trajectories of the development of religious coping, as well as their relations to levels of functioning at various ages. Such research can provide needed information about individual differences in the development of religious coping, as well as information about how patterns of change are related to developmental outcomes.

Currently there are few data on changes in religious coping in adolescence and early adulthood and longitudinal data on change in religiosity are relatively rare. Several investigators have found that there are declines in behaviors (e.g., attendance at services) in the college years, but stability or increases in the intrinsic commitment to and importance of religious beliefs (Arnett & Jensen, 2002; Astin, 1993). In a recent study, Stoppa and Lefkowitz (2010) followed a mostly Protestant and Catholic, ethnically diverse sample Americans over three semesters of college. At the group level of analysis, people tended to become less likely to attend religious services and activities over time. Men decreased more than women. However, the importance of religion remained the same. At the individual level of analysis, there was considerable heterogeneity; decreasing was the most common

pattern for service attendance, but stability in activity attendance and belief were the most common pattern. Nonetheless, the importance of religious beliefs, which appeared to include some items tapping religious coping, decreased for about 1/3 of the sample and increased for just less than 1/4 of the sample.

In the adolescent years, religious involvement has been found to increase for some adolescents and to decrease for others (King & Boyatzis, 2004) and to decline somewhat in overall mean level (Sallquist et al., 2010); reports of the importance of faith for the majority of adolescents remain stable (Smith, Faris, Denton, & Regnerus, 2003). In one study, King, Elder, and Whitbeck (1997) found that the majority of adolescents were stable in their religious involvement—41% remained high and 12% remained low. Of the remaining 47%, a similar percentage increased rather than decreased in religious involvement. Based on these findings, we expected some variability in trajectories of religious coping, with considerable stability for the majority of youths and more declining than increasing trajectories.

Gender Differences

In the present study, we examined if trajectories of religious coping or the relations of religious coping to externalizing problems and prosocial behavior differ for males and females across adolescence. Kim (2008) found gender differences in the pattern of associations between religiosity and externalizing problems: Religious attendance predicted externalizing among nonmaltreated boys, but not among maltreated boys or girls. Thus, it is important to examine if sex moderates relations between religious coping and young adults' social functioning.

The Present Study

In the present study, religious coping was assessed 4 times (albeit only 3 times each for each of the two major cohorts) from age 16 to 17 years to 22 to 23 years. Individual differences in the trajectories of reported religious coping were identified and these were used to predict both externalizing problems and prosocial behavior at each age. Consistent with the literature demonstrating positive relations between religiosity or religious coping and adaptive functioning, we predicted that individuals who were stably high in religious coping, and perhaps those who increased in religious coping, would be relatively low in externalizing problems and high in prosocial behavior (especially at older ages for the latter). However, consistent with the notion that religious coping may be heightened when individuals are stressed or during transitions, it seemed possible that increases as well as declines in religious coping would reflect attempts to cope with transitions and/or stress and, thus, would be related to less optimal outcomes (e.g., high levels of externalizing problems and low levels of prosocial behavior). For example, change in level of religious coping and externalizing problems may be due to change in one's peer group or in other aspects of the social context as youths enter early adulthood. For this reason, we examined if youths' association with deviant peers was associated patterns of change in religious coping; if so, they might partly account for the association between religious coping and externalizing problems (because associations with deviant peers are related to externalizing problems; see Dodge, Coie, & Lynam, 2006). In general, we expected girls, compared to boys, to report more prosocial behavior and less externalizing behavior. Moreover, because of the greater involvement of men in externalizing problems in adolescence and early adulthood (Dodge et al., 2006) —which is likely to result in greater variability for boys and perhaps floor effects for girls--it seemed possible that religious coping would be more closely associated with externalizing problems for boys.

Methods

Sample and Design of the Longitudinal Sample

Six hundred and eighty-six adolescents (332 boys and 354 girls) were included in the study. All were of Italian ethnicity. The participating adolescents were drawn from two junior high schools in Genzano, a residential community located near Rome. The community represents a socioeconomic microcosm of the larger society, composed of families of skilled workers, farmers, professionals, local merchants, and their service staff. In particular, 16% were in professional or managerial ranks, 42% were merchants or employees in various types of businesses, 12% were skilled workers, 22% were unskilled workers, 3% were retired, 2% were temporarily unemployed but with a salary, and 3% were unemployed. This occupational socioeconomic distribution matched the national profile (Istituto Italiano di Statistica, 2002). The composition of the family also matched national data with regard to type of families and number of children. Most adolescents were from intact families (94.1%) and only 5.9% were from single-parent (i.e., separated or divorced) homes. On average, families had only one child.

The present study is part of a larger longitudinal project that started in 1993 with the primary goal of investigating the personal and social determinants of children and adolescents' adjustment. During the project's first year, all the 4th, 5th, and 6thgraders from one of two large elementary schools in Genzano were recruited for participation, and an additional cohort of 4th graders was added from the same school over the course of following years. Overall, the project adopted a staggered, multiple-cohort design, with four different cohorts recruited in four consecutive school years, and annual assessments were conducted until 1998 (waves 1 to 6). Since then, the project has been focusing on the transition from adolescence to emerging adulthood with assessments 2 years apart (waves 7 to 10).

Due to the availability of the measure of religious coping starting from the year 2000 (wave 8), in one group of participants first had the measure at age 16 and 17 (Group 1: wave 8) whereas the other first had it at age 18 and 19 (Group 2, wave 8).These two groups were prospectively assessed in waves 9 (at age 18 to 19 for Group 1 and at 20 to 21 for Group 2) and 10 (age 20 to 21 for Group 1; age 22 to 23 for Group 2). For analyses, the two groups were combined based on their age and were examined from age 16 and 17 (considered Time 1 in this study) to age 22–23 (Time 4; Time 2 was age 18–19 and Time 3 was age 20–21).

From 1993 (Wave 1) to 2000 (Wave 8) the retention rate was on average (i.e., across both cohorts) 65.7%; from 2000 (Wave 8) to 2004 (Wave 10), the retention rate was on average 64.4%. Univariate analyses of variance indicated that there were no significant differences in the means of demographic characteristics, religious coping, and maladjustment variables used in the study between the participants who provided complete data for the present study and the ones who dropped out over the years.

Participants were 16–17 years old at Time 1 (T1; $M = 16.48$; $SD = .50$ years; 49% males), 18–19 years old at Time 2 (T2; $M = 18.49$; $SD = .50$ years; 49% males), 20–21 years old at Time 3 (T3; $M = 20.40$; SD = .49 years; 45.4% males) and 22–23 years old at Time 4 (T4; $M = 22.37$; $SD = .50$; 40.6% males). Given that only Group 1 was assessed for religious coping at 16–17 years old and only Group 2 was assessed at age 22–23, the *n*s for the for time points were 398, 661, 504, and 187. Cohort effects were previously tested and were found to be nonsignificant for socio-demographic and major study variables. In our sample, 87.5% were Roman Catholics; .7%, .2%, and .4% were Protestants, Orthodox Christian, and Buddhists, respectively, while 9.2% were atheists and 2.0% were other religion. Approximately 81% rarely attended church activities (from never to two-three times a year), whereas 19% attended more frequently.

Procedures

Adolescents at T1 and T2 were asked to be part of assessment groups that were scheduled during the initial phone contacts. During these sessions (held in a school), a series of paper-and-pencil instruments were administered to groups of about 30 students by three trained female researchers. With the exception of two measures (prosocial behavior scale and violence abuse scale), the set of instruments measuring the variables of theoretical interest was originally developed with English-speaking samples. Therefore, they were first translated into Italian and then back-translated into English to verify the accuracy of the Italian version. At T3 and T4, young adults were contacted by phone and invited to give their consent to participate in the study. At all times, they received a small payment. A stringent consent procedure was followed including, at various stages, parents' and children's consent and approval from school councils, and opportunities for youths to decline participation if they so chose.

Measures

Religious coping—Religious coping was assessed with the 4-item Italian version of The Coping Strategies Scale (e.g., *I put my trust in God; I try to find comfort in my religion; I seek God's help; I pray more than usual*) assessing young adults' strategies when dealing with stressful tasks or events (Sica, Novara, Dorz, & Sanavio, 1997, originally developed by Carver, Scheier, & Weintraub, 1989). Participants rated items on a 4-point scale (1 = *I usually don't do this at all* to 4 *= I usually do this a lot*; Cronbach alphas ranged from .91 to .94. The items on this measure are similar to those on numerous measures of religiosity (Fetzer Institute, 1999).

Religiosity and religious participation—Participants rated their overall religiosity on one item ("*How religious do you consider yourself?*"; 0 = *not religious at all* to 7 = *very religious*) and the frequency of participation in religious activities on one item (1 = *never* to 6 = *every day*). These measures were available only at T3 or T4 (depending on the group/cohort).

Externalizing behavior—Externalizing behavior was assessed with three scales. Participants rated (1= *never/almost never* to 5= *very often*) the frequency of clandestine antisocial behaviors such as stealing and lying on the 18-item Covert Antisocial Scale (Capaldi & Patterson, 1989), developed at the Oregon Social Learning Center (e.g., *Does it ever happen that you steal something from strangers?*; alphas ranged from .81 to .84). Participants rated (1 = *never* to 3 = *often*) the frequencies of minor and more serious types of delinquent behavior on the 15-item Delinquency Scale (Elliot, Huizinga, & Ageton, 1985; e.g., *During the last year how many time have you assaulted someone with the intent of seriously injuring him or her?*; alphas = .77 to .92). Finally, participants rated (1 = n*ever/almost never* to 5 = *almost always/always*) their involvement in violent activities (e.g., fighting, vandalism, or weapon use) and victimization of violence on the 11-item Violence/Abuse Scale (Caprara, Mazzotti, & Prezza, 1990; e.g., *Have you been involved in acts of vandalism?*; alphas = .89 to .91).

Correlations between Delinquency, Violence/Abuse, and Covert Antisocial Behavior ranged from .42 to .60 at T1 (*df*s = 394 to 396), .42 to .62 at T2 (*df*s = 558 to 660), .34 to .60 at T3 (*df*s from 502 to 503), and .51 to .64 at T4 (*df*s = 184 to 185), all *p*s < .001. Thus, an overall composite of externalizing behavior was created by averaging the above three scales within time. Because the Delinquency Scale was rated on a 3-point scale whereas the Violence/Abuse and Covert Antisocial Scales were rated on a 5-point scale, Delinquency Scale scores were adjusted to have the same range as the other scales prior to forming the composite. The

composite scale was formed using the average of at least two of three scales (i.e., if a participant was missing a score for one of the scales).

Prosocial behavior—Participants rated (1 = *never/almost never true* to 5 = *almost always/always true*) the frequency of their prosocial behavior (e.g., sharing, cooperating, taking others' perspectives in difficult contexts) on the 16-item Prosocial Behavior Scale (Caprara, Steca, Zelli, & Capanna, 2005; e.g., *I help immediately those who are in need;* alphas = .93–.94).

Involvement with deviant peers—Participants rated (1 = *never* to 5 = *often*) their tendency to be involved with peers who use drugs, alcohol, steal, etc. over the past year on the 13-item Involvement with Deviant Peers Scale (Capaldi & Patterson, 1989; T2–T5 alphas = .75 to .91; e.g., *During the last year how many of your friends have: Used marijuana/hashish?*).

Results

Descriptive Analyses

Correlations were computed among the variables prior to determining latent class trajectories for religious coping for the major analyses.

Consistency of key constructs across time—Reports of religious coping were substantially correlated across time, with *r*s ranging from .50 to .64, all *p*s < .001 (*n*s ranged from 187 to 502). The across-time correlations for externalizing problems ranged from $r(185) = .45$ (T2 with T4) to $r(182) = .70$ (T3 with T4), *p*s < .001. Analogous correlations for prosocial behaviour ranged from $r(248) = .53$ (T1 to T3) to $r(182) = .73$ (T3 to T4), *p*s < .001.

Correlations of religious coping with religiosity—Religiosity at T3 or T4 was substantially related to religious coping at T1, T2, T3, and T4, *r*s(253, 437, 424, 182) = .49, .52, .60, and .65, *p*s < .001. Thus, the two constructs appear to be overlapping but not identical.

Correlations of religious coping with externalizing problems and prosocial behavior—Externalizing problems typically were not significantly correlated with religious coping, either within or across time. The only significant correlation was between T2 religious coping and T4 externalizing problems, $r(185) = -.16$, $p < .03$. In contrast, prosocial behavior was positively but modestly related to religious coping in 3 of 14 correlations and near significantly related in four additional correlations. Specifically, religious coping at T2 was positively related to T1 prosocial behaviour, $r(396) = .16$, $p < .01$; religious coping at T2 was positively related to T2, T2, and T4 prosocial behaviour, *r*s(371, 659, and 185) = .09, .10, and .17, *p*s = .10, .009, and .018; T3 religious coping was near significantly related to T2 prosocial behaviour, $r(502) = .07$, $p < .10$; and T4 religious coping was related to T2 and T4 prosocial behaviour, *r*s(185, 185) = .12 and .13, *p*s < .10 and .07. Thus, there were small but somewhat consistent relations of religious coping with prosocial behaviour, within and across time.

Relations of externalizing problems to prosocial behaviour—Correlations between the measures of externalizing and prosocial behavior, within and across time, were modest, ranging from $r(248) = -.13$, $p < .05$ (T1 prosocial behavior with T3 externalizing problems) to $r(373) = -.33$, $p < .001$ (T1 externalizing behavior with T2 prosocial behavior).

Religious Coping Trajectory Latent Classes

The number of latent classes of trajectories for religious coping was established with latent class growth analyses (LCGA) in M*plus* Version 4.1 (Muthén & Muthén, 1998–2006). Missing data were handled by using the MLR estimator (maximum likelihood estimation with robust standard errors).

LCGA allows for latent classes of growth trajectories to be specified. Between-class variation in the trajectory is allowed (i.e., the average intercept and slope may differ across classes), but within-class variation (i.e., the intercept variance and slope variance within class) is not estimated. The researcher determines the number of classes by specifying different numbers of latent classes by considering class size and theory, and by comparing statistics reported in the output (e.g., Bayesian Information Criterion [BIC], posterior probabilities, entropy).

In this study, models were evaluated through comparison of sample-size adjusted BICs, the Lo-Mendell-Rubin Adjusted Likelihood Ratio Test (LRT), estimated class counts, posterior probabilities, entropy, and consideration of conceptual issues. Linear and quadratic models were tested for 1-, 2-, 3-, 4-, and 5-class models. Linear models were set up so that the latent intercept factor was indicated by religious coping at T1, T2, T3, and T4 with each factor loading set at 1.00. The latent linear slope factor was indicated by religious coping at T1, T2, T3, and T4 with factor loadings set at 0.00, 1.00, 2.00, and 3.00, respectively. In the quadratic models, the setup was the same, but a latent quadratic slope factor was indicated by religious coping at T1 to T4 with factor loadings set at 0.00, 1.00, 4.00, and 9.00, respectively. For all models, as is typically done, manifest religious coping means were fixed at 0.00 for model identification, and latent intercept, linear slope, and quadratic slope means were estimated.

Log likelihood values, sample-size adjusted BICs, adjusted LRTs, estimated class counts, posterior probabilities, and entropy values for the linear and quadratic models including 1 to 5 classes are presented in Table 1. In addition to comparison of sample-size adjusted BICs and other indices previously mentioned, significance of quadratic growth terms was considered when determining whether the linear or quadratic model was better. The 4-class quadratic model was considered the best LCGA model for religious coping (see Table 1 and Figure 1). The 5-class models were not considered suitable. Although the sample-size adjusted BICs and entropy values were slightly better in the 5-class relative to the 4-class models, the LRTs suggested that the 5-class models were not significantly better than the 4-class models. Thus, based on parsimony, we chose the 4-class models. Furthermore, the 4-class models made conceptual sense, whereas the 5-class models basically split the high stable group into a high-stable and high but decreasing (for the linear model) or high but increasing (for the quadratic model) groups. Most problematic, *n*s for the high and stable group of 5-class quadratic model ranged from 12 to 40 for the combined sample of males and females at different ages, and as low as 5 when divided into males and females (and were also low in the 5-class linear model).

In the 4-class quadratic model, we found four trajectories: high stable (HSs), decreasing (Ds), increasing (Is), low stable (LSs). For this model, classification quality was adequate but not good, as noted by the entropy value (.66) and the classification probabilities (.85, .73, .90, and .72 for Class 1, 2, 3, and 4, respectively). As is illustrated in Figure 1, Class 1 (18.4% of the sample, 37.3% males) included adolescents whose religious coping was initially high (mean religious coping at T1 = 3.11 and remained stable (mean linear slope = 0.20, *ns*; quadratic slope = -0.08, *ns*). Class 2 (31.5% of the sample, 48.3% males) included adolescents whose religious coping was initially moderate (mean religious coping at T1 = 2.52) and significantly decreased with some levelling off with age (mean linear slope =

-0.51, $p < .01$; mean quadratic slope = 0.08, $p < .05$). Class 3 (31.5% of the sample, 52.2% males) included adolescents whose religious coping was initially low (mean at T1 = 1.36) and remained stable (mean linear slope = -0.11, *ns*; mean quadratic slope = 0.02, *ns*). Class 4 (18.7% of the sample, 53.9% males) included adolescents whose religious coping was initially low (mean religious coping at T1 = 1.71) and significantly increased with some decline in the increase with age (mean linear slope = 0.74, $p < .01$; mean quadratic slope = -0.14, $p < .05$; see Table 2 for mean religious coping within each group).

Preliminary Analyses

Religious practice and religiosity—The frequency of regular participation in religious activities significantly differed across religious coping groups, χ^2 (3; $n = 444$) = 69.33, $p < .001$. Approximately 46.7%, 12.7%, 22.7%, and 3.9% of HSs, Ds, Is, and LSs reported participating in religious activities everyday to two or three times a month, whereas the remainder reported participating in religious activities less frequently. Adolescents in the LSs group were significantly less likely to participate in religious activities than other groups, $p < .001$.

Religiosity level significantly also differed across the four groups identified, $F(3, 437) = 92.32$, $p < .001$. According to multiple comparisons with Bonferroni correction, all groups significantly differed from one another (HS, D, LS, and I *Ms* = 4.82, 3.01, 1.62, and 3.96, *SD*s = 1.41, 1.38, 1.52, 1.66).

Relations of Religious Coping Trajectories to Externalizing and Prosocial Behavior—General Linear Model (GLM) ANOVAs were computed for the externalizing and prosocial behavior testing the main effects of the religious coping class (participants' most likely class membership based on their highest model-estimated posterior probability) and sex, as well as interaction effects of the religious coping class with sex (see Table 3 for means). Simple effects were computed for significant interactions; if the univariate *F* was significant, pairwise multiple (Least Significant Difference adjustment) comparisons from the program were used to determine which classes differed.

Externalizing problems—For all of the externalizing problem runs, Levene's test was significant at $p < .001$, indicating that the error variance of the dependent variable was not equal across groups. Unequal variances across groups can increase type I error. Using a more conservative significance level reduces concerns about heterogeneity's effect. Thus, findings that were significant at $p < .05$ may not be reliable and should be viewed with caution as a trend (Keppel & Wickens, 2004), whereas findings at about $p < .025$ are likely more reliable.

At T1 (age 16–17), the overall model was significant, $F(7, 390) = 8.13$, $p < .001$; $\eta_p^2 = .13$. There was an effect only for sex, $F(1, 390) = 44.16$, $p < .001$; $\eta_p^2 = .10$. Boys' externalizing behavior was higher than girls'.

At T2 (age 18–19), the overall model was significant, $F(7, 655) = 17.80$, $p < .001$; $\eta_p^2 = .16$, with effects for sex and the religious coping class x sex interaction, *F*s(1, 665) and (3, 665)= 86.73; $\eta_p^2 = .12$, and 3.76; $\eta_p^2 = .02$, *p*s < .001 and .05. In respect to the interaction, the simple effect for boys was significant, $F(3, 655) = 4.92$, $p < .01$; $\eta_p^2 = .02$. Boys in the decreasing (Ds) trajectory class reported higher externalizing behavior than boys in the high-stable and low-stable trajectory classes, *p*s < .03 and .001.

At T3 (age 20–21), the overall model was significant, $F(7, 499) = 13.82$, $p < .001$; partial $\eta^2 = .16$. Significant main effects for trajectory class, $F(3, 499)= 5.87$, $p < .001$; $\eta_p^2 = .03$, and sex, $F(1, 499)= 68.44$, $p < .001$, $\eta_p^2 = .12$ (see Table 3), and a significant interaction of

religious coping trajectory class with sex, $F(3, 499) = 5.05$, $p < .01$, $\eta_p^2 = .03$ were found. For the interaction effect, the simple effect for boys (but not girls) was significant, $F(3, 499) = 10.26$, $p < .001$, $\eta_p^2 = .06$. Men belonging to the I trajectory class reported higher levels of externalizing behavior than men in the HS, D, and LS trajectory classes, *p*s < .02, .001, and .001.

At T4 (age 22–23), the overall model was significant, $F(7, 179) = 6.18$, $p < .001$, $\eta_p^2 = .20$. Significant effects for trajectory class, $F(3, 179) = 3.03$, $p = .03$, $\eta_p^2 = .05$, sex, $F(1, 179) = 20.01$, $p < .001$, $\eta_p^2 = .10$ (see Table 3), and the interaction of religious coping class with sex were found, $F(3, 179) = 3.43$, $p = .02$, $\eta_p^2 = .05$. In regard to the interaction effect, the simple effect was again significant only for men, $F(3, 179) = 6.22$, $p < .001$, $\eta_p^2 = .09$. Men belonging to the Is trajectory class reported higher levels of externalizing than men belonging to the HS, D, and LS groups, *p*s < .01, .001, and .001 (see means in Table 3).

In supplemental analyses, we controlled for externalizing at a younger age to examine for potential effects of religious coping on change in externalizing problems. Because the majority of youths (depending on their cohort) reported on externalizing problems at *either* age 14/15 or 16/17, we used data from age 14/15 (alphas = .79 to .92 for all three measures in the two cohorts) and/or age 16/17 and averaged externalizing behavior across these ages. This index was then used as a covariate in ANCOVAs predicting externalizing from religious coping classification at ages 18/19, 20/21, and 22/23 (in the manner described above). Due to missing data for the covariate, the samples sizes dropped considerably at all ages (see *df*s below). At all ages, the covariate for externalizing was a highly significant predictor of later externalizing behavior, *F*s(1, 545; 1, 401; 1, 108) = 151.86, 77.86, 9.28, *p*s < .001, .001, and .003, $\eta_p^2 = .22$, .16, and .08.

At T2 (age 18–19), the overall model was significant, $F(8, 545) = 34.46$, $p < .001$; $\eta_p^2 = .34$. Significant effects were found for sex, religious coping class, and the religious coping class x sex interaction, *F*s(1, 545), (3, 545) and (3, 545)= 28.91, $p < .001$, $^2 = .05$; 2.91, $p < .04$, 2 η_p $\eta_p = .02$; and 2.92, $p < .04$ $\eta_p^2 = .02$ (and the covariate was highly significant). With respect to the interaction, the simple effect for males was significant, $F(3, 545) = 5.13$, $p < .01$, $\eta_p^2 = .027$. Men in the D group reported more externalizing behavior than men in LS and HS trajectory groups, *p*s < .001 and = .022; moreover, men in the I group were higher in externalizing than LSs, $p < .05$ (adjusted *M*s for D, LS, HS, and I = 1.63, 1.43, 1.48, and 1.55, *SE*s = .04, .04, .06, and .05). This pattern was similar to the findings without the covariate, especially in regard to the Ds.

At T3 (age 20–21), the overall model was significant, $F(8, 401) = 21.21$, $p < .001$; $\eta_p^2 = .30$. Significant effects were found for sex, religious coping class, and the religious coping class x sex interaction, *F*s(1, 401), (3, 401) and (3, 401)= 26.75, $p < .001$, $^2 = .06$; 4.94, p 2 $\eta_p < .01$, $\eta_p = .04$, and 5.24, $p < .001$, $\eta_p^2 = .04$ (and the covariate was highly significant). With respect to the interaction, the simple effect for males was significant, $F(3, 401) = 10.48$, $p < .001$; $\eta_p^2 = .07$. Males in the increasing class reported more externalizing than those in the HS, D, and LS groups, *p*s < .01, .001, and .001. In addition, HS males scored higher than LSs whereas Ds scored higher than LSs, *p*s = .023 and .041 (adjusted *M*s for D, LS, HS, and I = 1.40, 1.28, 1.44, and 1.63, *SE*s = .04, .04, .06, and .05). The findings for Is were similar to those in the analysis without the covariate although there were also more significant pairwise comparisons for other groups.

At T4 (age 22–23), the overall model was significant, $F(8, 108) = 4.93$, $p < .001$; $\eta_p^2 = .27$. A significant effect was found only for sex, $F(1, 108) = 7.54$, $p = .007$ (and the covariate). Boys were higher than girls in reported externalizing problems. Although the sex X religious coping class interaction was not significant, the simple effect for boys was quite significant,

$F(3, 108) = 3.66$, $p = .015$, $\eta_p^2 = .09$. According to the pairwise comparisons for men, Is were higher than HSs, $p < .002$ (and marginally higher than Ds and D, HS, S groups, ps = .056, .002, and .077 (Ms for Is, Ds, HSs, and LSs = 1.59, 1.28, 1.30, and 1.37, SEs = .07, .07, .13, and .10). Thus, the findings in the analysis including the covariate at T4 were similar but weaker (generally nonsignificant) than those in the original ANOVA; the weaker pattern of results at T4 could be due to the smaller N for the analyses with the covariate.

Prosocial Behavior—The overall model for prosocial behavior was significant at all four times, Fs(7, 390; 7, 655; 7, 499; 7, 179) = 7.78, $\eta_p^2 = .12$; 12.93, $\eta p^2 = .12$; 7.52, $\eta_p^2 = .10$; and 3.36, $\eta_p^2 = .12$, ps < .001, .001, .001, and .01, respectively. Significant effects for sex were found at all four times, $F(1, 390; 1, 655; 1, 499; 1, 179) = 26.31$, $\eta_p^2 = .06$; 55.05, $\eta_p^2 = .08$; 32.16, $\eta_p^2 = .06$; and 17.08, $\eta_p^2 = .09$, ps < .001. Females were higher than males in prosocial behaviour (see Table 3).

Main effects of religious coping trajectory class were found at T1, T2, and T3, Fs(3, 390; 3, 655; 3, 499) = 5.61, $\eta_p^2 = .04$; 3.37, $\eta_p^2 = .02$; and 3.58, $\eta_p^2 = .02$; ps < .001, = .02, and = .01, but not at T4. At T1, HSs had higher prosocial behavior than Ds, LSs, and Is, ps < .01, .01, and .001. In addition, LSs reported higher prosocial behaviour than Is, $p = .05$ (see Table 3 for means). Similarly, at T2, HSs had higher prosocial behavior than Ds, LSs, and Is, and LSs reported higher prosocial behaviour than Is, ps < .01, .02, .03, and .05. At T3, HSs reported higher prosocial behavior than Ds and Is, ps < .05 and .01. The trajectory groups did not differ at T4, perhaps partly due to the smaller sample size.

Additional analyses were computed to examine the effects of covarying prosocial behaviour at ages 14–15 (alphas = .75 to .93 across cohorts) and/or ages 16–17 on the findings. When earlier prosocial behaviour was covaried, neither the main effects of religious coping group nor the sex X religious coping group interactions were significant at any age, although the covariate was a very strong predictor of later prosocial behavior. However, according to the pairwise comparisons, the HS group was still at least marginally significantly high than the Ds at T2 and T3, ps = .033 and .10, and the Is at T2, $p = .10$. Thus, the findings for prosocial behavior were in the same direction but not robust when controlling for earlier prosocial behavior.

Relations of Religious Coping Trajectories to Peer Group

In an attempt to better understand why males' membership in the increasing trajectory group was associated with males' externalizing problems, we examined trajectory group differences in youths' association with deviant peers.

Levene's test of equality for variances was significant at T1, T3, and T4, $p < .001$. The overall model for involvement with deviant peers was significant at T2, T3 and T4, Fs(7, 653; 7, 498; 7, 179) = 4.37, $\eta_p^2 = .05$; 5.23, $\eta_p^2 = .07$; and 5.06, $\eta p^2 = .17$, ps < .001. Significant effects for trajectory group membership were found at T4, $F(3, 179) = 3.19$, $\eta_p^2 = .05$, $p = .025$. At T4, HSs had lower involvement with deviant peers than LSs, $p < .01$ (see Table 3). Significant effects for sex were found at T2, T3 and T4, $F(1, 653; 1, 498; 1, 179) = 18.13$, $\eta_p^2 = .03$; 24.85, $\eta_p^2 = .05$; and 14.30, $\eta_p^2 = .07$, ps < .001; males were higher than females in involvement with deviant peers at all three times. In addition, an interaction of trajectory group membership with sex was found at T3, $F(1, 498) = 4.22$, $p < .01$, $\eta_p^2 = .03$. The simple effect for males was significant, $F(3, 498) = 3.17$, $p = .02$, $\eta_p^2 = .02$. At T3, males in the I group had higher levels of involvement with deviant peers compared to HS, D, and LS males, ps = .03, .02, and .003, respectively.

Discussion

The effects of religious coping in adolescents have infrequently been examined but there is a growing awareness of the role of religion in many adolescents' lives. Existing research has been largely cross-sectional, and conducted mainly in the U.S. Our study examined patterns of change in religious coping in Italian adolescents. We investigated relations between these patterns of change and externalizing and prosocial behavior in adolescence and early adulthood.

We found four classes of religious coping: a high stable class, a decreasing class, a low stable class, and an increasing class. The decreasing and low stable classes each comprised about a third of the sample, the other two classes (the high stable class and the increasing class) were a bit less common (about 18% and 19%). The relatively small size of the increasing class is to be expected based on prior work; Stoppa and Lefkowitz (2010) found that increasing patterns were relatively rare for religious behaviors, occurring for 10% or less of their sample of college students, although nearly a quarter of the sample reported increases in the importance of religious beliefs. The sizable group of late adolescents/young adults declining in their religious coping is also consistent with prior work: Older adolescents and adults appear to increase their frequency of questioning of religious beliefs, perhaps especially as they move through college (Lefkowitz, 2005). The percent of high stable religious copers (18%) was fairly low compared to the percent (41%) found by King et al. (1997) in the U.S.; however, as mentioned in earlier, the U.S. is a relatively religious country compared to many other industrialized nations. Three of our classes – the low stable, decreasing, and increasing classes--were about evenly split between the sexes, but the high stable class had only 37.3% males. This is not surprising given that female adolescents' religiosity is often higher than that of males (e.g., Stoppa & Lefkowitz, 2010).

Our findings both dovetail with and, at times, conflict with current views about the relations of religious coping in adolescence and early adulthood with externalizing and prosocial behaviors. At age 18–19 years, young men belonging to the decreasing trajectory class demonstrated higher externalizing behavior than men belonging to the high-stable class and this pattern of findings held when earlier externalizing behaviour was covaried in the analyses. This is consistent with current theorizing, reviewed above, about the positive effects of religious coping. But at ages 20–21 and 22–23, young men belonging to the increasing trajectory class reported higher levels of externalizing behavior than men belonging to the other classes and, this pattern generally held (especially at T3) when earlier levels of externalizing were covaried in the analysis. This is surprising given that high levels of religiousness and religious coping are typically theorized and have been shown to be associated with positive outcomes. One interpretation is that male adolescents who are having difficulty with their adjustment turn (or are pushed) toward religion as a way of helping them get back on track. As men enter their 20s and are expected to be preparing for adult roles and relationships, externalizing behaviors may be increasingly problematic in social interactions and, consequently, those young men who are relatively externalizing in their behavior may be seeking solutions to the negative reactions they elicit from others.

The findings for self-reported association with deviant peers suggest that men in the increasing group were especially at risk at age 20–21. At T3, males in the increasing group reported higher levels of involvement with deviant peers compared to men who were high and stable, low and stable, or declining in religious coping. Due in part to their association with deviant peers, men increasing in religious coping may have been experiencing problems in their lives and turned to religion to cope. Alternatively, problems of another type (e.g., with obtaining work, satisfying relationships) may have caused these men to use associate with deviant peers and use religious coping. Regardless of the causal relations, the

data suggest that the use of religious coping may be associated with suboptimal coping at some stages of development, at least for men in Italy. Moreover, the findings in which earlier externalizing problems were covaried from the analyses at T2, T3, and T4 are consistent with the possibility that changes in externalizing problems are associated with changes in religious coping.

The lack of findings in regard to externalizing problems for females is likely due, at least in part, to the lesser variability in females' externalizing problems and the low levels, relative to males, of their reported externalizing problems. In auxiliary analyses, the sex difference in the variances was significant at all four ages, ps < .001, and as already reported, males were significantly higher than females in externalizing problems. Because most youths/ young woman had quite low levels of externalizing, it was relatively difficult to predict from another variables such as religious coping.

At several time points, people high and stable in religious coping had higher prosocial behaviour; the lack of findings at T4 may have been partly due to the reduced sample size. This pattern was expected given prior findings of a relation between religiosity and prosocial behavior (see Eisenberg et al., 2006, for a review). Also of interest, the low and stable religious copers were next highest in prosocial behavior and were significantly higher than youths increasing in religious coping at ages 16–17 and 18–19. Thus, stability in religious coping appeared to be associated with prosocial behavior; however, because the aforementioned findings were not evident when prosocial behavior at ages 14/15 and/or 16/17 were covaried, there was little evidence of a causal relation. The finding that those in the increasing religious coping group tended to be lowest on prosocial behavior is consistent with the association between externalizing problems and being in the increasing trajectory group. Perhaps youths who are experiencing more change in their religious coping are also undergoing a variety of other changes and stressors that result in more focus on the self than on others' welfare.

Thus, we obtained some findings that are quite predictable from existing views of the effects of religious coping in adolescence, as well as some findings that are a bit challenging to reconcile with each other and with the prevailing views in the literature of religious coping as an unambiguously positive influence on youth development. Given these findings, we feel several recommendations for future research are in order. One is that more longitudinal work is needed to uncover dynamics between religiousness and coping outcomes over time. We are aware of few longitudinal investigations of religiousness in adolescence, particularly in other cultures. Second, there is a need to broaden theory about how religious coping promotes both positive and negative outcomes in adolescents. Existing theories typically discuss only positive effects of religiousness in adolescence. Our current results indicate a more balanced view is needed, suggesting reasons that religious adolescents would be doing better, as well as more poorly, than nonreligious adolescents. Such theories would need to discuss how changes in religiousness would relate to outcomes. In the present study, periods of transition—as indicated by increasing or decreasing religious coping—were associated with relatively poor outcomes. Such complex dynamics may be obscured in cross-sectional studies, especially if the guiding theory (as is currently the case) only gives reason to expect positive outcomes to be associated with religion.

Our third recommendation is in a sense an extension of our second. If trajectories for religiosity and/or religious coping have positive and negative outcomes over time, we need to better understand the mechanisms of effects of religion on antisocial and prosocial behaviour--as well as mechanisms driving effects in the other direction (i.e., how adjustment can affect religion). Our findings suggest that the association with deviant peers and/or involvement in externalizing behaviors may in some way increase the likelihood of men's

turning to religious coping. As emerging adults are confronted with the developmental tasks needed to attain financial and social independence, associations with deviant peers might increase negative outcomes and the need for coping. Thus, there is a need to examine how religious coping might be a response to failures or problems in other domains of functioning.

The strengths of this study include its large sample size, longitudinal design, use of latent class growth analyses to identify groups of people differing in religious coping, and the involvement of a European sample. Weaknesses include the use of solely self-reported data and the fact that the outcomes were not assessed after the end of the religious coping trajectories (past age 23). Moreover, there were relatively few individuals in the increasing and decreasing classes, especially females in the former class, which might have precluded some findings obtaining significance. Despite these weaknesses, this study provides some sorely needed data on religious coping and its development and correlates.

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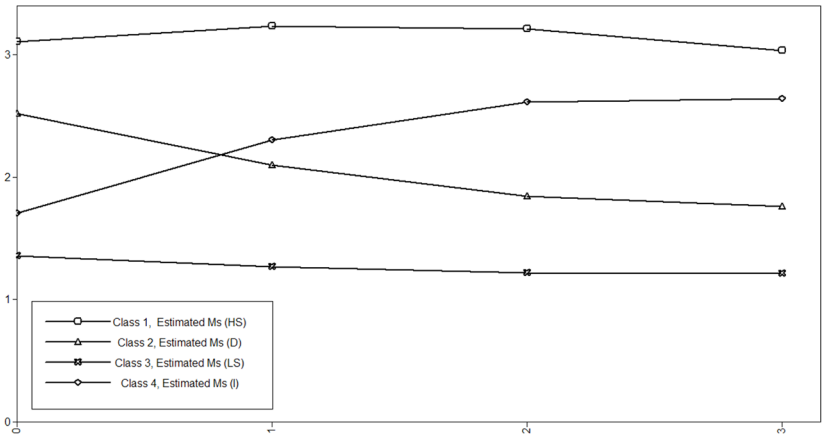

Figure 1.
Trajectories of religious coping

Table 1

Fit Indices and Means of the Intercept, Linear, and Quadratic Slopes for the 1-Class Model (1c) to 4-Class (4c) Models

Model	Log likelihood	Sample- size Adj. BIC	Lo- Mendell- Rubin Adj. LRT	Estimated Class Count	Posterior Probabilities	Entropy	Intercept *Mean*	Slope *Mean*	Slope *Quadratic Mean*
1c lin	−2218.641	4457.416		686	1.00	N/A	2.102***	−0.022	
1c quad	−2218.612	4460.715		686	1.00	N/A	2.108***	−0.037	0.005
2c lin	−1979.337	3988.876	455.37***	247.89	0.903	0.738	2.866***	−0.007	
				438.11	0.932		1.692***	−0.052*	
2c quad	−1978.790	3994.494	461.96***	437.23	0.935	0.737	1.707***	−0.090	0.014
				248.77	0.898		2.822***	0.088	−0.032
3c lin	−1925.679	3891.628	102.104***	305.05	0.829	0.688	2.201***	−0.053	
				150.63	0.863		3.129***	−0.017	
				230.32	0.884		1.358***	−0.043	
3c quad	−1923.959	3898.254	105.620***	232.49	0.893	0.691	1.398***	−0.130+	0.031
				149.30	0.863		3.062***	0.151	−0.059
				304.21	0.826		2.195***	−0.024	−0.010
4c lin	−1908.228	3866.792	33.208*	201.08	0.689	0.633	2.440***	−0.280***	
				217.45	0.875		1.335***	0.047+	
				139.88	0.848		3.165***	−0.021	
				127.59	0.707		1.809***	0.326***	
4c quad	−1899.362	3862.483	47.381*	125.95	0.854	0.663	3.106***	0.202	−0.075
				216.03	0.732		2.522***	−0.506**	0.084*
				216.08	0.896		1.358***	−0.106	0.019
				127.94	0.721		1.706***	0.739***	−0.142*
5c linear	−1895.483	3851.370	24.25	107.00	0.679	0.646	3.149***	−.188*	
				56.87	0.769		3.118***	.177	
				107.71	0.733		1.709***	0.393***	
				211.65	0.725		2.335***	−0.247***	

Model	Log likelihood	Sample- size Adj. BIC	Lo- Mendell- Rubin Adj. LRT	Estimated Class Count	Posterior Probabilities	Entropy	Intercept *Mean*	Slope *Mean*	Slope *Quadratic Mean*
				202.77	0.879		1.311***	−0.052*	
5c quad	−1885.489	3848.160	26.72	191.29	0.719	0.671	2.337***	−0.563***	0.137**
				196.55	0.894		1.294***	−0.060	0.004
				57.65	0.701		3.184***	−0.405	−0.067
				104.79	0.808		3.079***	0.312*	−0.099
				135.72	0.732		1.728***	0.794***	−0.163**

Note. c = class, lin = linear model, quad = quadratic model;

+ $p < .10$,

* $p < .05$,

** $p < .01$,

*** $p < .001$.

Table 2

Means and Standard Deviations for Religious Coping

Variable	HS		D		I		LS	
	M	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*
Religious Coping T1	3.13	.54	2.52	.52	1.63	.41	1.31	.38
Religious Coping T2	3.27	.45	2.09	.53	2.29	.61	1.23	.36
Religious Coping T3	3.22	.53	1.80	.41	2.70	.44	1.15	.28
Religious Coping T4	3.03	.74	1.74	.54	2.66	.51	1.17	.32

Note. HS = high stable, D = decreasing, I = increasing, LS = low stable, T = time.

Table 3

Means, Standard Deviations, and Sample Sizes of the Key Variables within Religious Coping Class

		High Stable						Decreasing						Low Stable						Increasing					
		Male			Female			Male			Female			Male			Female			Male			Female		
		M	*SD*	*n*	*M*	*SD*	*n*	*M*	*SD*	*n*	*M*	*SD*	*n*	*M*	*SD*	*n*	*M*	*SD*	*n*	*M*	*SD*	*n*	*M*	*SD*	*n*
Externalizing Behavior	T1	1.56	.59	32	1.31	.40	43	1.69	.62	63	1.28	.22	70	1.57	.39	68	1.32	.29	62	1.60	.45	32	1.31	.22	28
	T2	1.52	.49	47	1.23	.21	76	1.67	.61	111	1.24	.19	115	1.48	.32	104	1.29	.21	95	1.58	.43	62	1.34	.31	53
	T3	1.48	.49	36	1.17	.16	61	1.44	.43	79	1.22	.21	92	1.32	.23	70	1.24	.17	77	1.66	.55	47	1.26	.30	45
	T4	1.30	.24	9	1.17	.14	29	1.32	.26	31	1.18	.13	33	1.29	.21	16	1.19	.14	30	1.65	.72	20	1.17	.29	19
Prosocial behavior	T1	3.74	.60	32	3.9	.51	43	3.46	.57	63	3.72	.55	70	3.37	.57	68	3.85	.63	62	3.25	.69	32	3.60	.55	28
	T2	3.66	.58	47	3.8	.61	76	3.33	.59	111	3.77	.61	115	3.34	.65	104	3.88	.60	95	3.45	.68	62	3.75	.53	53
	T3	3.74	.57	36	3.9	.62	61	3.48	.67	79	3.77	.56	92	3.45	.68	70	3.92	.65	77	3.34	.67	47	3.74	.61	45
	T4	3.70	.32	9	3.9	.66	29	3.46	.57	31	3.88	.76	33	3.33	.46	16	3.87	.69	30	3.50	.58	20	4.06	.52	19
Deviant peer Involvement	T1	1.6	.96	31	1.45	.96	43	1.73	1.12	70	1.43	.86	70	1.58	.82	68	1.58	.88	62	1.77	1.03	32	1.57	.99	28
	T2	1.6	.93	47	1.40	.65	76	1.93	1.02	115	1.53	.78	115	1.88	.89	103	1.67	.82	95	1.87	1.03	62	1.47	.87	53
	T3	1.9	1.47	36	1.43	.75	60	2.00	1.01	92	1.70	1.08	92	1.87	.71	70	1.79	.85	77	2.45	1.76	47	1.42	.58	45
	T4	1.6	.65	9	1.26	.41	29	1.83	.74	33	1.53	.63	33	2.04	.55	16	1.86	.80	30	2.21	1.05	20	1.34	.54	19
Religiosity	T3	4.61	1.43	31	4.91	1.38	56	2.75	1.44	64	3.19	1.30	77	1.35	1.39	55	1.76	1.55	70	3.49	1.82	37	4.41	1.37	39
	T4	4.25	1.04	8	4.86	1.48	29	2.81	1.14	31	3.22	1.39	32	1.38	1.71	16	2.21	1.40	29	3.60	1.67	20	4.89	1.20	19
Religious participation	T3	1.48	.51	31	1.59	.50	56	1.91	.29	67	1.84	.37	79	2.00	.00	55	1.94	.23	70	1.78	.42	37	1.76	.43	38
	T4	1.56	.53	9	1.66	.48	29	1.90	.30	31	1.81	.40	32	2.00	.00	16	1.90	.31	29	1.75	.44	20	1.72	.46	18

Note. *M* = mean, *SD* = standard deviation, *n* = sample size, T = time.