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RELIGIOSITY, IDENTITY DEVELOPMENT, AND HEALTH OUTCOMES IN A LATE ADOLESCENT SAMPLE

By

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ABSTRACT

RELIGIOSITY, IDENTITY DEVELOPMENT, AND HEALTH OUTCOMES IN A LATE ADOLESCENT SAMPLE

By

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The current study (N=440) attempted to replicate and extend the findings of a previous study by this author on the role of religion in coping with stress in a late adolescent sample. That study suggested that religion, particularly personal religious beliefs and prayer, may help late adolescents cope with the stresses associated with their developmental period by selectively influencing their perceptions of minor daily events.

The current research investigated whether this relationship between religion and the perception of minor daily events was in turn related to physical and mental health outcomes. Several hypotheses were made about the indirect and direct relationship of specific religious variables with health measures. Correlational and path analyses failed to support many of the hypotheses. Only some small positive, as well as negative, direct links between religion and health outcomes were found. In general, the results for this sample of late adolescents were consistent with the findings in the literature for adult samples that religion has a positive but small relationship to measures of well-being.

Additional analyses uncovered some information about the relationship of religion to general identity development as well as pointing to some of the components of religion that seem to be particularly salient for this age group. Based on this sample, it appears that there are important gender differences in the structure and function of religion. For this sample, religion seemed to be closely associated with the Foreclosure identity status for males, while it related to the Achievement status for females. For both males and females of this age group, the personal meaning that is associated with religious belief and commitment appears to be the crucial element in religion. In particular for females, the social aspects of religious involvement seem to be important.

Finally, this study provided further psychometric support for the religiosity measure developed by this author in a previous study.

To Rose, my wife and best friend, for your love and support that helped make a dream come alive.

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Introduction

A Gallup survey of religion in America (1987) found that ninety-one percent of the respondents stated a religious preference, with sixty-nine percent of the sample claiming membership in a church or synagogue. With regard to the personal salience of religion, fifty-five percent ranked religion as very important in their lives. In a similar national poll (Gallup, 1981), almost one-third of the respondents (31%) considered their religious beliefs to be the most important aspect of their lives.

Although religion is an integral part of the American culture, it is currently not a popular topic of psychological research (Byrnes, 1984). This was not always the case. At the end of the last century and through the 1920's, the psychology of religion was a much-discussed interest area and the topic of numerous empirical investigations (Ames, 1910; Coe, 1910; Leuba, 1912; Starbuck, 1899; and James, 1961). Without trying to unravel the historical causes for the decline in religious research, it is sufficient to observe that religion has not only lost its previous status in mainstream psychology, but it has also taken on a negative connotation due to its association with racial prejudice (Allport & Kramer, 1946; Allport, 1966) and psychopathology (Bergin, 1983; Sevensky, 1984). Religious beliefs by psychotherapy clients are frequently treated as defensive maneuvers by their therapists (Strunk, 1979) and the social control dimensions of religion are

emphasized in professional and educational literature while the social support aspects of religion receive less exposure and study (D'Antonio et al., 1982).

Although current research has failed to replicate previous negative associations with religion, only weak links between religion and positive life outcomes have been found, and many of these have focused on global measures of life satisfaction and subjective well-being (Glik, 1986; Peterson & Roy, 1985; Witter, Stock, Okun, & Haring, 1985; Duke & Johnson, 1984). A concise description of the ambiguous state of affairs in religious research can be found in the tentative conclusion by Bergin, Masters, and Richards (1987) that "religiousness is not necessarily indicative of emotional disturbance." (p. 197)

One line of research investigating more specific outcomes associated with religion follows the observation of Strunk (1979) that for some people, religion takes on an "important dimension that becomes an authentic coping process" (p. 194). Lindenthal, Myers, Pepper, and Stern (1970) found that mentally impaired individuals and normal controls turned to prayer with equal frequency in response to less controllable events such as catastrophes and health problems. Hay & Morisey (1985) found that religious interpretations of experiences were especially prevalent in crisis situations for their English countryside sample. Others have also found aspects of religion as mediating in individual coping processes with particularly stressful

events (Zimmerman, 1984; Sanderson & Crawley, 1982; Zuk, 1959). However, the utility of religion for coping with life stressors has not received unequivocal support. For example, McLure & Loden (1982) found that while time spent on religious activities was related to overall life satisfaction, it was not related to perceived life stress, leading to the suggestion that the subjects did not use their religion to deal with everyday problems. Even assuming the tentative empirical link between religion and coping with stressful events, it is not clear how religion impacts the coping process or what particular religious variables might be involved. For instance, it has been suggested that religiosity may contribute to an individual's sense of meaning and purpose in life (Peterson & Roy, 1985) or provide a base of social support (Glik, 1986). These speculations on the precise functioning of religion as a factor in the coping process are complicated by the lack of consensus about the salient dimensions of religiosity. Research over the past twenty years have identified from two (Allport & Ross, 1967) to twenty-one (King & Hunt, 1975) different factors or dimensions of religiosity. Conversely, it has also been argued that religiosity is basically a unidimensional phenomenon (Clayton & Gladden, 1974).

Previous Research by the Author

My previous research (Antosz, 1988, 1989), which will be discussed, was an initial attempt to identify particular aspects of religion that may be involved in the daily coping

processes of some individuals as well as to determine to what extent developmental differences may effect any relationship between religion and coping. To this latter end, the results from a late adolescent and an adult sample were compared. Specifically, it was hypothesized that religiosity functions in the overall coping process by reducing the subjective perception of certain life events as being stressful. This study attempted to isolate patterns of religious variables that would discriminate subjects who differentially perceive similar situations as stress-producing. The dependent measure was the Daily Hassles and Uplifts Scales (Kanner, Coyne, Schaeffer, & Lazarus, 1981). On the Hassles Scale, a subject can endorse any of 117 daily events as stressful and occurring within the last month. The Uplifts Scale describes 135 similar daily events that may have brought some measure of joy or satisfaction to the subject. Thus it was specifically predicted that aspects of religiosity would be negatively correlated with the number of Hassles endorsed. While there was no firm basis for a hypothesis for the relationship between religion and the frequency of Uplifts endorsed, a positive correlation was expected.

Scale development.

The salient components of religiosity for both an adult and a late adolescent sample were investigated. To meaure the different aspects of religion for these groups, a review of the literature was undertaken to find an appropriate

measurement instrument. Despite uncovering a variety of religious measures, none of them fulfilled the following criteria required for this study: (a) a brief and psychometrically sound instrument, (b) capable of measuring specific components of religiosity, (c) not specific to a particular religious denomination or Christianity in general, (d) and able to discriminate between personal and institutional religious beliefs and practices.

As a result, the Religious Involvement Survey (RIS) was constructed for this study. The RIS was generally patterned after the measure used by Cornwall, Albrecht, Cunningham, and Pitcher (1985) which tapped the institutional and personal modes of religiosity along cognitive, behavioral, and affective dimensions in a Mormon sample. Due to the many significant differences in responses between the adolescent and adult samples in my study, each group was analyzed individually. While explanatory factor analysis resulted in generally uninterpretable scales, it did suggest patterns of relationships. This led to a series of confirmatory factor analyses combining conceptual and statistical parameters, and resulting in five very similar scales for both the adult and late adolescent samples. These scales consisted of measures of Personal Religious Beliefs, Personal Prayer, Church Worship, Church Beliefs, and Church Non-worship Activites. Each scale had adequate internal consistency (alphas >.80) for each sample. Despite the moderate to high intercorrelations between the scales (a

range of .39 to .75), they differentially related to the other independent variables as well as to the dependent measures, the frequency scores on both the Daily Hassles and Uplifts scales. The pattern of intercorrelations of the religious scales with the other variables was different for each of the samples.

Results.

With regard to the dependent measures of perceived Hassles and Uplifts, the late adolescent sample showed some positive correlations between the Personal Religious Beliefs scale and frequency scores on both the Hassles (r= .16, $p<.05$) and Uplifts (r=.25, $p<.001$) scales. These correlations were unaffected by controlling for the effects of measures of self-esteem and attributional style. This is particularly interesting since the measure of attributional style included attributions of control for various events to God as well as to Self, Powerful Others, and Chance. Meanwhile some of the other religion scales shared considerable variance with God-attribution scores, and thus small but significant zero-order correlations of these religious variables with the Hassles and Uplifts scales disappeared when the locus of control variables were statistically controlled. Further regression analyses of the relationship between religion and the other independent variables with frequency scores on the Hassles and Uplifts scales indicated that the Personal Religious Beliefs scale was the single most important predictor of Uplift scores.

Looking at the best-fit regression models utilizing the magnitude of the multiple R as well as the relative size of the Standard Error of the Estimate (SEE), the Hassles scores were best predicted (R=.28, R squared=.06, SEE=20.92) by a combination of self-esteem scores (beta=-.18), Personal Religious Beliefs (beta=.16), gender (beta=.15), and self-attributions (beta=.12). Despite various regression procedures and combinations of variables, the Personal Religious Beliefs scale was the only variable to significantly predict frequency scores on the Uplifts scale (R=.27, R squared=.07, SEE=22.36).

The relationship between religious beliefs to perceived daily Hassles and Uplifts was somewhat different for the adult sample. There were no significant zero-order correlations between any religous variables and the number of Hassles endorsed. With attributional style held constant, a small but significant negative correlation between Hassles and Personal Religious Beliefs was uncovered. Subsequent regression analyses indicated that the number of Hassles endorsed was best predicted by scores on the self-esteem scale and Chance-attributions (R=.46, R squared=.19, SEE=18.59). The number of daily Uplifts was predicted by Church Beliefs and sex (R=.27, R squared=.05, SEE=26.28). Thus it appears that certain aspects of religion are related to the perception of daily minor events for the late adolescent sample but not for the adult sample.

Developmental Approach (Beliefs)

These results in general do not support the initial hypothesis that religion aids in the coping process by reducing the subjective perception of certain life events as stressful. Nonetheless, they are consistent with a developmental approach to religious beliefs and behaviors. Elkind (1970) and Fowler (1981) integrate the growth of religious thinking and identity with concurrent events in the cognitive and psychosocial development of the individual. Both Elkind and Fowler agree that the onset of formal operational thinking in adolesence contributes to the development of religious thinking in the individual. The adolescent's ability to reflect on and question childhood religious beliefs and practices can be utilized to find solutions for current conflicts and in the process, forge a more complex and personal religious identity.

This search by adolescents for a personal faith more consistent with their overall outlook on life is why Hurlock (1973) contends that adolescent attitudes and beliefs rather than their religious practices are indicative of their current interest in religion. This would explain why surveys of high school and college students like those by Nordin (1972) and Conger (1973) reveal a discrepancy between reports of church attendance and the importance of religion to the adolescents.

Fowler (1981) contends that progress toward religious identity, like other aspects of the individual's movement

toward general psychosocial identity achievement, is related to an increase in cognitive structures, social interactions and experiences with arising conflicts. If strong personal religious beliefs are assumed to be some marker of progress in the achievement of religious identity, it should be expected that religiosity functions like other accumulated psychosocial strengths in supporting positive adaptational outcomes for the individual. As argued by Kanner et al. (1981) and Weinberger et al. (1987), the Hassles and Uplifts Scale serves as an effective predictor of current and subsequent psychological problems and physical symptoms.

If the above assumptions about religious identity formation are correct, then the strong association between Personal Religious Beliefs and frequency of reported Uplifts by the late adolescent sample would be expected. As conceived by Kanner et al., the daily Uplifts are positive experiences that can possibly serve "as emotional buffers against stress disorders." (1981, p. 6) Thus the data from the Antosz (1989) sample suggests that personal religious beliefs could play a role for some late adolescents in buffering them from the stress associated with their ongoing attempts to cope with developmental tasks. However, the less robust but still significant relationship between Personal Religious Beliefs and frequency of Hassles reported does pose an apparent problem to this conceptualization.

Personal Religious Beliefs

Some solution to this dilemma can be found by looking

beyond the mere frequecy scores of the Hassles and Uplifts scales and analyzing the specific items endorsed, comparing the responses of those scoring high on the Personal Religious Beliefs scale with responses of those scoring at the low end. The highest and lowest thirds of the sample were utilized in lieu of a median split in order to more sharply highlight differences between groups. Regardless of the comparison method, there is a larger percentage of females in the high Personal Religious Belief groups. However, a Chi-square analyses of these differences are non-significant, with less discrepancy between the percentages of men and women in groups occurring in the top and bottom thirds of the Personal Religious Belief scores.

While there does not appear to be a clear pattern of inter-group differences on the Hassles Scale, some of the items more frequently endorsed by the group high in Personal Religious Beliefs tend to conceptually cluster together. For instance, those higher in Personal Religious Beliefs express more concerns over living arrangements (e.g., "home maintenance (inside)" and "neighborhood deterioration"). Other items refer to financial concerns such as "financial security," "financial responsibility for someone who doesn't live with you," and "cutting down on electricity, water, etc." Other Hassles for this group seem to revolve around issues associated with personal reflection such as "the meaning of life," "being exploited," "inner conflicts,' "regrets over past decisions," and "getting ahead." As a

whole, the Hassles more frequently endorsed by those with stronger Personal Religious Beliefs are not atypical of the issues confronting late adolescents attempting to individuate from their families and face the realities of an adult world.

The differences between the high and low Personal Religious Beliefs groups are more striking on the Uplifts Scale. There are statistically significant differences on items pertaining to health, with the high Personal Religious Beliefs group more frequently endorsing items like "staying or getting into good physical shape," "getting enough sleep," "feeling healthy," "relaxing," and "having enough (personal) energy." It would also appear that this group finds successful, active coping as a source of positive feelings (e.g., "meeting a challenge," "confronting someone or something," "making decisions," "past decisions panning out," "resolving conflicts over what to do," "thinking about the future," "resolving inner conflicts," "being efficient," "capitalizing on an unexpected opportunity," and "meeting your responsibilities"). Additionally this group of adolescents is more likely to find their daily perks in altruistic acts ("giving a compliment," "doing volunteer work"), and mastery-related behaviors ("using skills well at work," "practicing your hobby," and "fixing/repairing something (besides at your job)").

Some of the specific Hassles reported more frequently by the late adolescents high in Personal Religious Beliefs are

also related to a source of gratification. For instance, these adolescents tend to report being "concerned about the meaning of life" and yet they more frequently endorsed "life being meaningful" as a daily uplift. Similarly, "home maintenance (inside)" is a frequent Hassle for these adolescents, yet there is the bonus of the "home (inside) pleasing to you." "Financial security" is a source of concern for this group, so "getting unexpected money" more frequently becomes an unanticipated joy.

The last point suggests the possibility that the expectations of this particular group of adolescents, namely those high in Personal Religious Beliefs are less idealistic and more realistic. For example, a young person actively in the process of separating from his or her family might have more opportunity to experience the financial insecurities of self-support. Although this group's personal religious beliefs may provide them with a set of ideals to strive for, they seem to better appreciate real-world inequities and thus are pleasantly surprised by "finding no prejudice or discrimination when you expect it."

Finally the largest discrepancies on the Uplifts items between the high and low groups on the Personal Religious Beliefs scale are on "praying" and "meditating." This is not unexpected since there is a very high correlation between the Personal Prayer and the Personal Religious Belief scales. In fact, combining these two scales into a "personally religious" scale and entering it into the

regression equation for predicting the number of uplifts endorsed, results in a slightly larger multiple R than just using the score on the Personal Religious Belief scale.

In summary, then, the group of adolescents who espouse stronger Personal Religious Beliefs seem to experience more daily Uplifting events than their counterparts scoring lower on this particular religous variable. However, for this high personal belief group, most positive experiences do not just "happen" to them; rather they actively effect positive events. In support of this, one of the two uplift items that the less religious group more frequently endorsed was "being visited, phoned, or sent a letter," which would seem to be a fairly passive source of gratification. (The only other item in the uplifts scale endorsed significantly more frequently in this group is "sex.") Overall, it appears that the high Personal Religious Belief group of late adolescents is actively working on tasks developmentally appropriate for this age group and finding some joy and gratification in doing so.

However, given the instructions for filling out the Uplifts scale ("circle the events that made you feel good in the past month"), no conclusion can be made as to whether or not the the less personally religious group is also engaged in similar tasks. Even if this group of late adolescents is developmentally similar to the high belief group, it would appear that they experience little gratification in dealing with the issues of this age period as indicated by endorsing

fewer of these developmentally appropriate events as Uplifting. The high Personal Religious Belief group's active involvement would seem to provide considerable benefits in the form of personal successes and satisfactions but not without some cost in the increased number of stressors they experience in confronting their important developmental tasks.

Attributional Styles

Examining the attributional styles of this late adolescent group, particularly in relationship to Personal Religious Beliefs, the results are as expected. The low Personal Religious Belief group is significantly higher (t=4.23, p<.001) in Person (self) attributions, and significantly lower (t=9.36, p<.001) in God attributions than the high Personal Religious Belief group. The high belief group is somewhat, though not significantly (t=1.70, p<.09) lower on Chance attributions and about the same in Powerful Other attributions as the low belief group. Breaking down the scores on the locus of control variables of the entire late adolescent sample into high, medium, and low, the high belief group scored low-high-medium-medium on the Person, God, Chance, and Other variables respectively. By contrast, the attributional profile for the low belief group is high-low-medium-medium. To view the locus of control variables from a more traditional perspective (Internal-External), the scores for the God, Chance, and Powerful Other attributions can be summed up to give a

general External score. Comparing the high and low religious belief groups according to this dichotomy, the high belief group is significantly lower on the Internal dimension ($\underline{t}$=-4.23, $\underline{p}$<.001) and significantly higher ($\underline{t}$=4.47, $\underline{p}$<.001) on the External locus of control dimension than the low belief group. These findings are consistent with previous studies of religious commitment and causal attribution (Gorsuch & Smith, 1983; Ritzema, 1979). However, given the usually favorable traits and outcomes associated with individuals with a high Internal and low External attributions, the differences between the high and low belief groups on the Hassles and Uplifts scales would seem paradoxical.

A posssible resolution for this dilemma can be found in studies looking at religion and attributions. Gorsuch and Smith (1983) emphasize the distinction between "cause" and "responsibility" for an event (p. 349). Utilizing written vignettes varying on severity of outcome, Gorsuch and Smith found that the more religious subjects attributed greater effort to the actors in stories with extreme outcomes even though they did not simulataneously attribute more responsibility for the outcomes to the actors. Gorsuch and Smith concluded that in events with severe outcomes, the more religious subjects may view a person as the direct cause of an outcome by virtue of intention and individual effort while still attributing ultimate responsibility for the outcome to God. Such a formulation would be consistent

with the notion of God being responsible for an outcome when "a person functions as God's 'agent'" (Gorsuch & Smith, 1983, p. 349). The particular locus of control measure used in the study by Antosz (1987) includes extreme (getting "into a car accident") and ultimate ("...what will happen in my life") outcomes and no distinction is made between cause and responsibility.

Looking at God attributions in relationship to problem-solving, Pargament et al. (1988) concluded that "the content of 'God control' is a multi-dimensional one" that can describe either a "deferring" or "collaborative" type of relationship with God. (p. 102) Each of these perceived personal relationships with God are differentially related to measures of personal competence. At least in respect to their sample, Pargament and his collegues found that the collaborative style (working with God) was more frequently endorsed and was associated with higher personal competency scores than the deferring (manipulation by God) style.

Hassles and Uplifts

While these recent data point to a definite association between some religious variables and one stress indicator (the Daily Hassles & Uplifts Scale), a functional relationship between these religious variables and effective coping with stress has not been demonstrated. Although there is some initial support for the utility of the Hassles & Uplifts Scale as a predictor of psychological (Kanner et al., 1981) and physical symptoms (Weinberger et al., 1987;

Kanner et al., 1981; Monroe, 1983; Zarski, 1984; Holahan et al., 1984), the case for a causal link between major or minor life events and reported symptoms is hardly a consensual matter (e.g., Grant et al., 1987). Even allowing for a hypothetical causal relationships between the daily Hassles and current and subsequent symptomology, it is still not clear how strong personal religious beliefs would be related to an individual's coping system.

Some hints in this area are provided by certain Uplift items that were more frequently endorsed by the group with high Personal Religious Belief scores. For instance, "praying" & "meditating" were two Uplifts items more often endorsed by the high religious belief group. It is possible that certain religious behaviors like these can serve an ameliorative role with experienced stress by dampening its cumulative impact on the individual (Holahan & Moos, 1987; Aldwin & Revenson, 1987). The two items on the Personal Religious Belief scale that most strongly correlate with the frequency score on the Uplifts scale are "I try to carry religion over into all my dealings in life" and "I do not think about my personal religious beliefs very often" (reversed scored). Another item on the religious questionnaire that did not load on any of the five subscales but that correlated highly with the number of Uplifts endorsed was "as a rule, I do not share my personal religious beliefs with others" (reversed scored). It is possible that religious beliefs play some preventive

function in the cognitive appraisal of potentially stressful events (Pearlin et al., 1981; Folkman & Lazarus, 1980).

The group with high Personal Religious Belief scores more frequently endorsed the Uplifts item, "life being meaningful." Again, while these are only correlations, it has been suggested by other researchers that personal faith can be a salient framework for providing direction in the daily affairs of some individuals (Zika & Chamberlain, 1987; Ben-Sira, 1985; Hadaway & Roof, 1978). It is interesting to note that while for the high Personal Religious Belief group none of the items on the Church Beliefs scale are related to the Uplifts Scale, two items on the religious survey with very strong correlations with the frequency score of the Uplifts scale pertain to this group's affiliation with an institutional religion ("the church is not a very important part of my life", which is reverse scored, and "I believe my church is the true religion"). This would suggest that in addition to their personal faith, members of this particular group have also made a strong commitment to an organized religious body. These descriptions of a strong commitment to and involvement with religious beliefs and institutions as well as the satisfaction gained from confronting developmentally appropriate tasks appear similar to the components of commitment, control, and challenge that characterize the notion of "hardiness" in coping with stress as conceptualized by Kobasa, Maddi, & Courington (1981).

Suggestions For Further Research

The study just described (Antosz, 1988; 1989) suggests some interesting relationships among one aspect of religiosity and the psyhosocial development and coping processes of late adolescents. The data identify a link between Personal Religious Beliefs and the cognitive appraisal of daily events. However, there is an inherent paradox between the item analysis and overall scoring of the Hassles and Uplifts Scale, which represents the dependent variable. Based on the descriptive analysis presented, it seems that those late adolescents reporting stronger Personal Religious Beliefs appear to be dealing more effectively with developmentally appropriate tasks. As a result, it is tempting to predict that this group would thus score better on measures of adaptational outcomes like physical and mental health. However, as indicated, the group high in Personal Religious Beliefs endorsed significantly more items on the Hassles as well as the Uplifts subscales than their less religious counterparts. According to previous research with this instrument, frequency scores on the Hassles subscale have been positively related to physical (Weinberger et al., 1987; Zarski, 1984; DeLongis et al., 1982) and psychological (Holahan et al., 1984; Monroe, 1983; Kanner et al., 1981) symptoms and negative well-being (Zika & Chamberlain, 1987). Additionally for females, higher scores on the Uplifts subscale have also been related to increases in negative

affects and psychological symptoms (Kanner et al., 1981). Thus in light of these other findings with the Hassles and Uplifts Scale, an alternate prediction might be that Personal Religious Beliefs are positively related to poor adaptational outcomes.

A closer look at the data may lessen the appeal of this latter prediction. For instance, while both Hassles and Uplifts scores were significantly related to Personal Religious Beliefs in the late adolescent sample, the relationship of this scale with Uplifts was stronger than with Hassles. As previously summarized, the regression analysis predicting Hassles frequency scores included Personal Religious Belief, sex, self-esteem, and self-attributions. However, the variable of Personal Religous Beliefs was the sole predictor of Uplifts scores. Given the previously described item analysis of the Hassles and Uplifts, it is possible that the elevated Hassle scores of the group high in Personal Religious Belief is reflecting some of the stress associated with this group's increased involvement in the developmentally appropriate tasks of late adolesence. However, as previously noted regarding this group, they also appear to be experiencing more joy and satisfaction in dealing with these developmental tasks than their less religious counterparts.

A possible relationship between developmental issues and scores on the Hassles and Uplifts Scale is also supported by the fact that the pattern of correlations

between Personal Religious Beliefs and Hassles and Uplifts for the late adolescent sample was not found in the adult sample (Antosz, 1989). Additionally, the positive relationship between Uplift scores and negative affects and psychological symptoms reported by Kanner et al. (1981) was based on a middle-aged sample.

The results of my previous research seem to suggest that religion may be related to the coping process in a particular developmental group, specifically late adolescents. However, to gather further support for this notion, another study with a similar sample of late adolescents will need to not only replicate the relationship between religion and the perception of minor daily events but also go one step further and examine the relationship between the perception of stress and health outcomes. In addition, much of the previous speculative discussion about the relationship between religion and relative progress on developmental tasks calls for a more direct measure of developmental status to substantiate these ideas. Finally, while some initial relationship between religion and the perception of minor daily events has been identified, the specific components and processes by which religion effects the coping mechanisms of individuals need to be further elucidated and tested.

The Current Study

In this study the relationship between religiosity and adaptative outcomes is more directly investigated utilizing measures of psychological and physical health. Speculations stemming from the previous data about the specific coping process associated with religiosity are tested. Additionally, the relationship of religiosity with other aspects of ego identity development in late adolescents are also examined in more detail. Finally, more psychometric data on the Religious Involvement Scale (RIS) developed for the previous study are gathered to determine the overall utility of the RIS as a research tool.

Cognitive Appraisal

After examining religiosity and adaptational outcomes, Peterson and Roy (1985) concluded that the nature of the relationship between well-being and religiosity may vary depending upon the aspect of well-being and the dimension of religiosity under consideration. Other support for this notion comes from the previous study (Antosz, 1988) which found significant relationships between two of five religous variables (Personal Prayer and Personal Religious Beliefs) and the cognitive appraisal of positive daily events as measured by the Uplifts subscale. With a sample of college undergraduates, Cohen and Hoberman (1983) found that on a measure of depressive symptoms, positive life events acted as a buffer against the stressful impact of negative life

events. Cohen and Hoberman found a weaker buffering effect for postive life events with physical symptoms. Considering that others have also postulated a stress-buffering role for positive life events (Lazarus,Kanner, & Folkman, 1980; Reich & Zautra, 1981), it is predicted that the religious variables of personal prayer and personal beliefs will have an indirect effect on Psychological Well-being and physical symptoms through the cognitive appraisal of daily life events. More specifically, it is expected that these two religious variables will be directly related to the number of positive life events reported which in turn will be positively related to a measure of Psychological Well-being (Hypoth. b1) and inversely related to measures of psychological distress and physical symptoms (Hypoth. b2). (These and the following hypotheses will be summarized later.)

Direct Effects of Religion

In addition to the indirect effects of these religious variables, it is also predicted that they will have direct effects on the health outcome measures. Specifically, the Personal Prayer variable seems to tap a positive, affective component of religiosity. As a result, high scores on this religious subscale should be directly related to higher scores on the Psychological Well-being scale which measures positive affect as well as other variables (Hypoth. a1). The items on the Personal Religious Beliefs subscale, on the other hand, overtly refer to cognitive and behavioral

components of religiosity. From the previous analysis of this subscale's relationship to certain items on the Uplfits subscale, it was noted that individuals scoring high on this variable endorsed more health-related behaviors like good sleep and exercise habits and less use of drugs. Because of this connection between certain religious beliefs and health promoting behaviors, it is predicted that scores on the personal religious beliefs variable will have a direct and inverse relationship with the number of physical symptoms reported (Hypoth. a2).

In the previous analysis of the data from the Antosz (1988) study, some speculation was made about the possible functional relationship between strong personal religious beliefs and an individual's general coping system. The constructs of personal meaning and social support are examined in the current study as possible explanatory variables in this relationship between religiosity and coping.

Personal Meaning

One of the more frequently mentioned functions of religion is the sense of purpose and direction that it provides for the individual (Peterson & Roy, 1985; Hadaway & Roof, 1978; Grossman, 1975; Greeley, 1972; Allport, 1950). Davidson (1972) reviews the suggestions of other writers regarding religion's ability to provide individuals "with meaningful explanations (e.g., God's will) for events and conditions (e.g,, death) which may be difficult to explain

at the natural level alone." (p. 66) In addition to explaining events, Spilka, Shaver, and Kirkpatrick (1985) posit that religious belief systems can "satisfy the individual's need or desire to predict and control events" (p. 8). The lack of purpose and meaning in life have been implicated in maladaptive outcomes like drug addiction (Newcomb & Harlow, 1986) and alcoholism (Jacobson, Ritter, & Mueller, 1977). Thus, some treatment programs for these chemical dependencies have specifically focused on the construct of life meaning (Gruner, 1984; Crumbaugh, 1981). As a result, it is predicted that in the current study, personal religious belief will be positively associated with self-reports of meaning and purpose in life which in turn will be positively associated with psychological well-being (Hypoth. b3) and inversely related to psychological distress (Hypoth. b4). If religion does function in the coping process by instilling meaning and purpose in the lives of individuals, then the direct relationship between psychological health and personal meaning should diminish when the effects of religion are partialled out.

Social Support

Some of the effects of social support are similar to those resulting from having a sense of purpose and meaning in life. In a survey study, Klinger (1977) found that less than 50% of those polled cited religious faith or occupational success as an important source of meaning to them. However almost all the respondents mentioned

relationships with others, the feeling of being loved and wanted, as a major factor in making their lives meaningful. In studying the religious needs of college students, Pargament, Enchemendia, Johnson, and McGath (1984) found that regardless of the level of religious involvement, a significant proportion of students cited belonging to a group "which makes one feel accepted and loved" as an important factor in selecting a religious group to join (p. 277). Bruhn and Philips (1987) identify personal faith and and the anticipation of positive events (hope) as two closely related themes that extend throughout the life span and help shape an individual's perception about giving and receiving social support. From this developmental point of view, religiosity may effect how social support behaviors are learned and utilized in other life areas.

Thus it would appear that the social support function is an important part of religion, suggesting that religious variables other than personal belief and personal prayer may be related to the coping process. There is already support for the positive relationship between attendance at religious services and involvement in religous activities with psychological well-being (Bruhn & Philips, 1987; Witter et al., 1985; Bergin, 1983; McClure & Loden, 1982).

In a health survey of a large undergraduate sample, Comstock and Slome (1973) unexpectedly found statistical differences in the reporting of four health-related problems between female students with no stated religous affiliation

and those claiming any religious affiliation. Specifically, the no-affiliation group reported greater frequencies of bad drug experiences, contraceptive needs, upset stomachs, and respiratory problems. While the social control function of religious beliefs may account for the inter-group differences in the first two problem areas (Studer & Thornton, 1987; Gruner, 1984), it is not clear which religious variables, if any, are associated with the last two somatic problems.

Since Comstock and Slome (1973) did not find the same patterns of results for male students, it is possible that there are gender differences in the effect and importance of the social support aspects of religiosity. Gender differences in the pattern of intercorrelations among the religious variables in the Antosz (1988) study suggest that the social aspects of religious affiliation are more important for females than males. For instance, the variable of Church Worship, which taps both private and social aspects of religion, correlated more highly with Personal Prayer for males while it was more closely associated with Church Nonworship Activities for females.

In a non-religious context, Walker and Greene (1987) found that social support operated differently for male and female adolescents. For the males, peer social support served a buffering effect in relation to negative life events and psychopyhsiological symptoms. Such an interaction was not found for females. It appeared that

while high levels of social support did not protect females from higher frequencies of stressful life events, low levels of peer support were associated with high symptom levels regardless of the frequency of negative life events. These results are consistent with a main effects interpretation of the relationship between peer support and symptoms (Cohen & Wills, 1985).

In their review of the literature on social support, Cohen & Wills (1985) also concluded that various support functions are differentially effective in buffering stress for males and females. For instance, studies by Husaini, Neff, Newbrough, & Moore (1982) and Henderson (1981) found that confidant support acted as a stress buffer for females but not for males. Meanwhile, Henderson, Byrne, Duncan-Jones, Scott, & Adock (1980) found a buffering effect of companionship activities for males but not for females.

Although females may be more prone to become socially involved in organized religion, it would seem possible that both males and females who are socially integrated into a religious group could benefit from the various social support functions available. Thus it is predicted that scores on the Church Nonworship Activities variable and on a short measure of social interaction within a religious group will be positively correlated with Psychological Well-being scores (Hypoth. a3) and negatively correlated with Psychological Distress scores (Hypoth a4). Yet it is expected that the positive effects of this relationship

between church involvement and Psychological Well-being will be seen for a higher proportion of the female subjects. Given the theoretical speculation about the links between social support and physical illness (Krantz, Grunberg, & Baum, 1985; Jemmott & Locke, 1984; Cohen & McKay, 1984; Gore, 1981), it is predicted that the same measures of social involvement in religion will be negatively associated with physical symptoms (Hypoth. a5). It is possible that this latter relationship will not be as strong for females. Walker & Greene (1987) suggest that peer support may not effectively discourage adolescent females from somatization in response to increased levels of stress.

Ego Identity

One of the tentative conclusions drawn from the previous study by this author (Antosz, 1988) as previously discussed was that those students reporting a high level of personal religious beliefs appeared to be more actively engaged in behaviors associated with the developmental tasks of late adolesence. Since this conclusion was based on individual items endorsed on the Uplifts subscale, it is not clear whether this particular group was actually confronting these developmental issue more frequently or whether they simply derived more satisfaction or joy from engaging in these activities. Parker (1985) suggests that personal religious development may parallel the general ego identity development of individuals. He further states that overall ego identity "can be and often is expressed in the

development of religious values." (p. 47) Using Fowler's (1981) stages of religious development and Marcia's (1966) identity statuses, Mischey (1981) found a strong relationship between the stages of religious and ego identity development. However, even Parker (1985) admits that identity formation in adolescents does not always occur simultaneously in all domains, a premise that receives support from others (Thorbecke & Grotevant, 1982; Coleman, 1974, 1978).

Gender Differences

This last notion about the unevenness of ego identity development across various life domains is very compatible with the notion of gender differences in adolescent development. Josselson, Greenberger, & McConochie (1977a, 1977b) describe how high school females differ from males in their use of interpersonal relationships to facilitate personal differentiation, increase self-esteem, and relieve anxiety. Hodgson and Fischer (1979, 1981) concluded from their studies of college students that males are more developmentally advanced in occupational choices while females seem to be further along in sex ideology and sex-role conceptualizations. Alishio and Schilling (1984) found college-age males focusing on occupational issues while females focused upon interpersonal and sexual issues. Gender differences in achievement orientation and in interpersonal relationships has been uncovered by others (Stein & Bailey, 1973; Rosenberg & Simmons, 1975) and have

been highlighted by Gilligan's (1982) criticisms of current developmental theories to adequately account for these differences. In response to the burgeoning evidence for gender differences in adolescent identity development, Grotevant, Thorbecke, and Meyer (1982) have extended Marcia's (1966) identity status interview, which focused on ideological and occupational content areas, into the interpersonal domain covering areas of friendship, dating, and sex roles.

Assuming that there are intra-individual and gender differences in the developmental processes of late adolescents, it is predicted that for the group scoring high on the Personal Religious Beliefs variable, the females will more frequently approach or attain the identity achievement status as defined by Marcia (1966) in the interpersonal domain (Hypoth. c1). The males in this high belief group are expected to be more developmentally advanced in the ideological domain (Hypoth. c2). It is expected that the males and females in this high personal belief group will differ from each other and from their same sex counterparts in the low religious belief group according to these patterns.

Measures of Religion

The final objective of the proposed study is to gather psychometric data for the Religious Involvement Survey (RIS) developed in the previous study by Antosz (1988). While there is no shortage of measures of

religiosity, there is a need for a psychometrically-sound instrument that can serve as an effective research tool. One of the most popular means of measuring religiosity is the use of one or two forced-choice questions usually focusing on church attendance, formal religious affiliation, or self-rated religiousness. Campbell and Coles (1973) argue that religiosity and religious affiliation are relatively independent dimensions of religion, and surveys that rely solely on church membership data can result in misleading inferences about religious factors. In their review of such national surveys, Carroll and Roozen (1973) identify serious shortcomings with such measures including the "fuzzy" definition of religion, a unidimensional approach to measurement of a complex construct like religion, and a bias toward traditional religious institutions. (p. 332)

Next to such single item measures of religiosity, the next most prevalent assessment tool has been Allport's (1966) Religious Orientation Scale (ROS). Allport conceived of an Intrinsic (I) and Extrinsic (E) orientation to religion. An extrinsic orientation refers to an instrumental motivation for religious behavior that includes using religion to attain goals like personal solace and social standing. An intrinsic orientation, however, describes an ultimate motivation for religious belief and practices, whereby religion is a value in and of itself. Through 1984, the ROS has been used in nearly seventy

published studies (Donahue, 1985). One of the early critiques of the ROS by Hunt and King (1971) argued that the I-E orientation was not a unidimensional, bipolar contimuum as conceived by Allport (Allport and Ross, 1967), but rather contained several component variables. Hunt and King felt that while the Extrinsic orientation was clearly defined as a selfish, utilitarian approach to religion, the Intrinsic orientation was not operationally defined. Despite Donahue's (1985) defense of the ROS in his review and meta-analysis of research on the instrument, it is clear that while the Extrinsic subscale has been consistently correlated with variables like prejudice and dogmatism, the Intrinsic subscale has only been related to other measures of religiosity, thus supporting Hunt and King's (1971) original criticism about this scale's limited research utility.

Batson and Ventis (1982) built on Allport's (1966) I-E scale by adding a third orientation, that of Quest. According to Batson, Quest is "an approach that involves honestly facing existential questions in all their complexity, while resisting clear-cut, pat answers" (Batson & Ventis, 1982, p. 149). Although Batson & Ventis present studies exploring the conceptual utility and psychometric properties of their revised version of the Religious Life Inventory (RLI-R; Batson & Ventis, 1982), there are still serious misgivings about this scale and its theoretical underpinnings (Finney & Maloney, 1985; Hilty, Morgan, &

Hartman, 1985; Hood & Morris, 1985; Spilka, Kojetin, & McIntosh, 1985).

King and Hunt (1972, 1975) and others (Cornwall, Albrecht, Cunningham, & Pitcher, 1986; DeJong, Faulkner & Warland, 1976; Himmelfarb, 1975; Law, 1974; Glock & Stark, 1965) have constructed scales that measure religion as a multidimensional construct. However, these scales are either specific to a particular denomination or to mainstream, traditional Christianity, thus limiting their use and the generalizability of their results. Additionally, these scales were constructed with the common objective of more closely studying the structure of religious belief and practice, with litle or no emphasis on developing an effective research tool that could be used with non-religious variables. Other more topic-specific measuring instruments like Caird & Law's (1982) scale for non-conventional religious beliefs and Hunt's (1971) LAM (literal, anti-literal, and mythological) scale measuring religious meaning and commitment have been developed with little follow-up work or research application while others like Hood's (1975) Mysticism scale have at least been utilized in later research.

The current study attempted to refine the Religious Involvement Survey (RIS; Antosz, 1988) and systematically collect data on the psychometric properties of the scale. Reliability was assessed with measures of internal consistency and item-total correlations. Test-

retest reliability were gathered over a one month period with a different sample.

Construct validity was determined through confirmatory factor analysis. Discriminant validity was tested through the differential relationship of the RIS subscales to the current study's outcome variables. Concurrent validity was investigated by including another established religious measurement tool in the study. A moderately high correlation between the two religious measures, with the RIS displaying better predictive ability with the outcome measures would be reasonable support for continued development of the RIS.

In summary, for the current study, several hypotheses have been made regarding religious variables and the adaptational outcome measures of physical and psychological health. These hypotheses are summarized in Table 1. In the process of testing these hypotheses, further psychometric data on the Religious Involvement Inventory was systematically collected.

Table 1. A Summary of the Major Hypotheses.

Independent Variable	Direction of Effect	Dependent Variable
A. Direct Effects:		
a1. Prayer	Positive	Psychol. well-being
a2. Personal Religious Beliefs	Negative	Physical symptoms
a3. Church Activities, social integration	Positive, especially for females	Psychol. well-being
a4. Church Activities, social integration	Negative	Psychol. distress
a5. Church Activities, social integration	Negative, especially for males	Physical symptoms
B. Indirect Effects:		
b1. Prayer and Personal Religious Beliefs	Positive through Hassles & Uplifts	Psychological well-being
b2. Prayer and Personal Religious Beliefs	Negative through Hassles & Uplifts	Psychol. distress Physical symptoms
b3. Personal Religious Beliefs	Positive through Purpose-in-Life	Psychol. well-being
b4. Personal Religious Beliefs	Negative through Purpose-in-Life	Psychol. distress
C. Gender and Identity Effects:		
c1. Personal Religious Beliefs (Hi Belief)	Positively related for females	Identity Achievement (Interpersonal)
c2. Personal Religious Beliefs (Hi Belief)	Positively related for males	Identity Achievement (Ideological)

Method

Subjects

The late adolescent sample (N=440) utilized in this study was comprised of male (n=139) and female (n=300) college undergraduates recruited from psychology classes at a large midwestern state university. Although a strictly college sample limits the generalizability of results to all similar-aged adolescents, there are some important benefits in utilizing this particular kind of sample. The aim and the results of the previous study by this author support the use of a similar sample group to avoid introducing external confounds. The late adolescents of a college sample often are experiencing their first extended separation from their families and facing the complexity and anonymity of a large university setting. The milieu for this group may be quite different than that for adolescents who choose alternate routes upon graduation from high school. Additionally, the presence of a student health center can serve as a somewhat uniform criterion for measuring one type of illness-related behaviors.

The target size of the sample was six hundred subjects to provide an adequate pool of responses with which to test the measurement model especially since gender differences on some of the variables were hypothesized. Characteristically, in undergraduate samples of this nature, female volunteers are often overrepresented. Thus to compensate for the smaller percentage of male subjects, a

larger, overall sample size was planned to insure an adequate sampling of males.

Subjects were recruited from various sections of introductory psychology courses as well as from two smaller upper level psychology classes. The student volunteers were unpaid but received research credits that applied to their course grade. All the students participated during the Spring Term of 1988. Because of the limited size of the available subject pool at this time, only four hundred and forty subjects were recruited.

The composition of the resulting sample was 300 females and 139 males, with the data for one subject uncoded for gender. The age range of the sample was from 17 to 23, with a mean age of 19.2 years old. 83% of the students were either in their first or second year of college. The subjects were predominantly white (89%) and almost all (96%) lived away from home during the school year. 15.7% of the students reported that they were <u>not</u> currently affiliated with any formal religious organization. 45.5% of the sample identified themselves as Catholic, 30% as a variety of major Protestant denominations, 5.9% as Jewish, and the remaining as inter-demoninational or nondenominational Christians.

Given the method of voluntary recruitement through a predetermined human subject pool in a college setting, there is always some question as to the representativeness of the sample with respect to critical variables. For this particular sample, there are some differences in religious

affiliation in comparison to national surveys for this age group (Gallup, 1987). While the figures for affiliation with the Catholic church or various Protestant denominations are different in a national poll (Protestant=47% and Catholic=33%), the percentage of no stated religious affiliation among this age group is similar (14%). The religious affiliation of the sample recruited for the previous study by this author (1988) through a recruiting process similar to that used for the current study, the religious affiliation broke down into 36% Catholics and 32% Protestants, with 18% reporting no religious affiliation. Thus it appears that the current sample is more heavily represented by Catholics, but generally the same percentage of students in this sample in comparison to a national sample are reporting some religious affiliation.

Measures

Religious Involvement Survey.

A revised version of the Religious Involvement Survey (RIS) developed for the last study to measure the independent variable of religiosity served the same function in the current study (Appendix A). Although only seventeen of the original forty-seven items of the RIS were ultimately employed for the five religious scales in the previous study, other items from the initial pool were also used in this study. The five scales from the previous study were derived from four interpretable factors of an exploratory factor analysis (principal components analysis with a

varimax rotation) of the RIS. Thirty-five of the initial 47 RIS items loaded on the initial four factors that were then further refined using a confirmatory factor analysis routine. For the current study, the 35 items of the four initial factors were retained. The twelve items that were deleted included Batson's Quest items, which did not correlate well with other RIS items or with each other, and most of the "consequential" items (behavioral manifestations of religious belief other than public worship activities). Consequential items more appropriate to this specific-age sample were written and included with the remaining 35 RIS items (for example, "my personal religious beliefs are reflected in the way I treat the people around me, both friends and strangers"). In addition, some of the existing items were slightly modified. All of the items referring to beliefs and practices of organized religions were given a "No Church" response alternative to differentiate those individuals who state a specific religious affiliation but score low on these formal religion items from those subjects who do not claim membership in any organized religion.

Given the importance of the religiosity variable in this study and the basically untested psychometric properties of the RIS, another, more established measure of religiosity was also included. For the purposes of this study, the DeJong et al. (1976) Religiosity Scale seemed most appropriate, considering its multidimensional approach to religiosity and its empirically derived factor structure,

which are characteristics of the RIS. This 38-item scale was developed by DeJong, Faulkner, and Warland at Pennsylvania State University. The original samples used for the scale construction consisted of 542 American and 400 German college undergraduate students. Based on factor analyses, six similar subscales were identified for both samples and included the religious dimensions of belief, knowledge, experience, practice, individual moral consequences and social consequences. Second-order factor analyses combined the belief, experience, practice, and individual moral consequences into a generic religiosity factor. The remaining two subscales of religious knowledge and social consequences of religion remained relatively independent higher order factors. While DeJong et al. (1976) do not report any reliability coefficients, a recent unpublished study using 155 college undergraduates computed Cronbach alphas on the six subscales that ranged from .54 to .89. The total scale alpha was .89 and the summed reliability coefficient for the belief, experience, and practice subscales was .93 (Eckert, 1984). The data from the original samples gathered by DeJong and his collegues have been subjected to cluster analyses to determine an empirical taxonomy of religious indviduals (Filsinger, 1981; Filsinger, Faulkner, & Warland, 1979).

Hassles and Uplifts.

While the Hassles and Uplifts scales were not the major dependent measures in the current study, they were included

to test the hypotheses that the perception of daily events is a mediating process in the relationship between religion and physical and psychological outcomes. While some studies (Kanner et al., 1981; Weinberger et al., 1987) have not shown a clear association between scores on the Uplifts scale and stress-related outcomes, the particular relationships that emerged betweem the Uplifts scale and the personal religious belief variable in the previously described study (Antosz, 1988) justified this subscale's use in the current study. In fact, the unexpected results from the last study required some form of replication with this scale. The Hassles subscale was also included since a smaller but still significant relationship was observed between the the frequency of hassles endorsed and the personal religious belief variable.

Psychological symptoms and well-being: MHI.

The major dependent variables of psychological and physical symptoms were measured by the Mental Health Index (MHI, Veit & Ware, 1983) and a brief questionnaire/checklist of somatic problems and perceived physical health status constructed for this study. The MHI is a 46-item questionnaire measuring psychological distress and well-being during the past month. This instrument has 8 imbedded items controlling for socially desireable response sets. Scoring results in 2 higher order factors of positive and negative subjective well-being and 5 lower order factors including anxiety, depression, emotional ties, general

positive affect, and loss of behavioral control. This instrument was developed as part of a larger battery of tests to assess general health status in the Health Insurance Study by the Rand Corporation under a grant by the U.S. Department of Health, Education, and Welfare. Beginning in 1974, over 8000 individuals in 2750 families were enrolled in the study in six selected national sites for periods of three to five years. Like the other instruments in the battery, the MHI was validated on over 4000 subjects. Because the MHI provides scores for negative as well as positive subjective well-being, it is especially compatible with the concept and format of the Hassles and Uplifts scales.

Although the MHI has not been extensively used in other academically based research, Veit and Ware (1983) provide considerable psychometric support for this instrument. The internal consistency coefficients based on 5,089 subjects range from .83 to .91 for the five lower order factors and from .92 to .96 for the two higher order factors and the total MHI index. Stability coefficients over a one year interval range from .56 to .64. Intercorrelations among the five subscales range from .34 to .75. Cassileth et al. (1984), using a sample of over 800 medical patients, report a correlation of .82 between the MHI depression scale and the Beck Depression Inventory and a .84 correlation between the MHI anxiety subscale and the Spielberger State Anxiety scale. In a study of over 1500 adults, Manning, Newhouse,

and Ware (1982) found that the MHI was a better predictor of the utilization of general medical services than other measures of health status. A similar study by Ware et al. (1984) found the MHI to be an effective predictor of the use of outpatient mental health services.

Physical symptoms: CHIPS.

Physical symptoms were measured by a modified version of the Cohen-Hoberman Inventory of Physical Symptoms (CHIPS). The CHIPS is a 39 item list of common physical symptoms that are rated according to how much that problem bothered the individual during the past two weeks. Items are rated from 1 (not at all) to 5 (extremely). The authors of the scale state that although many of the symptoms included on the scale have been traditionally viewed as psychosomatic problems, they excluded any symptoms of "an obviously psychological nature (e.g., felt nervous or depressed)." (Cohen & Hoberman, 1983, p. 106) In the same article, the authors report that for two separate college student samples (N=331 and 114), the CHIPS correlated significantly (r=.22 and .29) with visits to the student health center within a 5-week follow-up period. In another sample of 70 undergraduate students, Cohen & Hoberman (1983) report an internal reliability (Cronbach's alpha) of .88 for the CHIPS. Additionally for this last sample, the CHIPS correlated .44 (p<.001) with a life events checklist for college students.

In addition to the 39 symptoms on the CHIPS, 6 other

physical problems common to college-age samples were included (Ebbin & Blankenship, 1986; Hoffman & Madsen, 1977). Other health related items added to the checklist included questions about the frequency of use of various medical services (e.g., student health center, family physcian) as well as health habits and the use of alcohol, tobacco, and recreational drugs. Two items concerning general health status as suggested by Davies & Ware (1981) were also included. To control for the effect of ongoing or chronic health problems on the reports of current symptoms (Grant, Patterson, Olshen, and Yager, 1987; Billings & Moos, 1982), the CHIPS was modified to include data about symptoms from the past year as well as from the past month. The other questions about health habits, use of medical services, and concern about overall health also gathered data about these two points in time.

Ego identity: EOMEIS-2.

In order to more directly determine the relationship of religious identity to other aspects of the general adolescent developmental task of identity formation, the Extended Version of the Objective Measure of Ego Identity Status (EOMEIS-2, Grotevant & Adams, 1984) was used. The EOMEIS-2 is a 64-item self-report instrument based on Marcia's (1966) 4-category continuum of identity achievement status, including diffusion, moratorium, foreclosure, and identity achievement. The EOMEIS-2 measures identity as defined by the presence or absence of crisis and commitment

in several domains. Ideological identity is assessed in the domains of occupation, politics, religion, and philosophical life-style. Interpersonal identity is measured in the areas of sex roles, friendship, recreation, and dating. Protocols are scored so that subjects can be classified into one of Marcia's identity status categories for either or both the ideological and interpersonal content areas.

The EOMEIS-2 is the second and latest revision of this instrument. The three versions of this test have been the subject of eight psychometric studies and have been used as a research tool in thirty other published studies (Adams, Bennion, & Huh, 1987). This instrument has been used with subjects ranging in age from 14 to 56 years of age. Norms for the different versions of the instrument are based on samples of nearly 700 college students and over 2000 high school students. The internal consistency of the interpersonal and ideological subscales ranges from .30 to .89 across thirteen studies with a median alpha of .66. Test-retest reliability of time intervals of up to one month range from .59 to .93 with the median stability coefficient of .76 (Adams et al., 1987). Validity data from thirty-eight studies have shown that the EOMEIS-2 (and the two previous versions of the test) scales relate predictably to variables such as cognitive development, rigidity, authoritarianism, intimacy, locus of control, self-esteem, academic achievement, conformity behaviors, and involvement

in social activities. This instrument also correlates moderately well with other ego identity measures, and more importantly, shows moderate to high agreement in identity classifications determined with the Marcia Ego Identity Interview (Adams et al., 1987).

Purpose in life: PIL.

The Purpose-in-Life (PIL) test by Crumbaugh (1968) was used as a measure of personal meaning. Crumbaugh developed the PIL in an attempt to operationalize Frankl's (1962) existential concepts. The PIL is a self-report scale made up of twenty items rated from 1 (low purpose) to 7 (high purpose). Thus total scale scores range from a low of 20 to a high of 140, with scores usually skewed toward the high end of the scale (Robinson & Shaver, 1972). Crumbaugh (1968) initially validated the scale on four normal (N=805) and five psychiatric (N=335) groups. Based on the scores of these validation groups, Crumbaugh determined that scores below 92 indicate a lack of clear meaning and purpose; scores between 92 and 112 represent an indecisive range; while scores above 112 indicate the presence of definite purpose and meaning in life (Crumbaugh & Maholic, 1969). Crumbaugh (1968) reported a split-half reliability coefficient of .85 based on a subsample (N=120) of one of the original normal groups. No test-retest figures were reported. The PIL correlated significantly (r=-.65) with the Depression scale of the MMPI and also correlated -.40 with the Srole anomia (social alienation) scale. Since its

development, the PIL has been used in over 100 theses and dissertations (Crumbaugh, 1982) as well as being utilized as a pre-post measure of treatment manipulations (e.g., Gruner, 1984; Jacobson et al., 1974).

Social support.

In order to investigate the social support function of religion, three items measuring social integration were used in addition to the church activities subscale of the RIS. These three items are taken from Roberts & Davidson (1984) to measure social interaction within a religous group. The items survey how well the individual fits in socially with other church members; how helpful church membership has been in meeting the right kind of people; and how many of the individual's closest friends are also members of the same church. The last item was included in the original RIS item pool. The other two items were also imbedded in the RIS for this study. In order to acommodate the response format of the other RIS items, the Roberts & Davidson items were modified from three to four choice responses. In their sample of over 500 adults in two church congregations, Roberts & Davidson found that their three item scale on social relationships in the church had an internal reliability (Cronbach's alpha) of .74 and was the strongest predictor of church involvement among variables like religious belief, religious meaning, age, education, and denomination.

Demographics.

Finally, a brief demographic background questionnaire (Appendix B) was included to gather information about age, gender, and ethnicity. Additional questions concerned current and previous religious affiliation, parttime employment, academic load and major, and involvement in campus and off-campus organizations and activities. Five items that were used in the previous study (Antosz, 1988) to measure the perceived organization of the subjects' church or synagogoue along the social control dimension defined by Pargament et al. (1979) were also included. According to Pargament and his collegues, "social control can be defined on a continuum ranging from nonparticipative/individually restrictive social control to participative/individually enhancing social control" (pp. 650-651). For descriptive purposes, the latter type of organizational structure and process can be called "horizontal" and the the former, "hieararchical" (Pargament et al., 1979, p. 651). All of this information was collected to provide a descriptive profile of the sample as well as to gather data on possible control variables.

Procedure

To avoid any further sampling error than that usually incurred with volunteerism, subjects were recruited to participate in a study entitled "Coping with Stress." Meeting in small groups no larger than 25 students, the subjects were briefly informed that the current study was an

attempt to determine how this particular age group dealt with daily stressors and that religion was one of several areas of coping resources being investigated. The subjects then filled out a questionnaire packet containing all the self-report measures previously described. The sequence of measures in the packets were set-balanced as a safeguard against systematic error variance from order effects. Other aspects of the test procedure such as the completion of the questionnaire packet in one sitting, and emphasizing the importance of complete and accurate data were all planned attempts to improve the quality of the data.

Results

In general, the data analyses for this study followed the general principles and strategies outlined by Hunter and Gerbing (1982), who argue for the "construction of two interrelated models, causal and measurement models" (p. 267). According to this approach, it is critical to initially determine the adequacy of the measurement model. Toward this end, most of the measurement instruments in this study were subjected to at least an initial factor analysis and a test of internal consistency using Cronbach's coefficient alpha.

Psychometric Properties of the Measures

Religious Involvement Survey (RIS).

Considerable attention was given to the RIS since it is a new, relatively untested instrument. An initial factor analysis (principal components analysis with a varimax rotation using communalities) resulted in four factors that accounted for all of the 42 items. The first factor consisted solely of items pertaining to institutional religion and included all six items of the previous Church Beliefs (REL2) and Church Worship (REL5) subscales. The standard score alpha of this first factor was .94. The second factor contained predominantly items referring to personal beliefs including four of the five items from the previous Personal Religious Beliefs (REL4) subscale. The alpha for this factor was .93. Together these two factors accounted for 36% of the total score variance. The third

and smaller factor included all three of the items from the previous Church Nonworship Activities (REL3) subscale and had an alpha of .62. Finally, all three of the items from the previous Personal Prayer (REL1) subscale loaded on the final factor which had an alpha of .73. In effect, the original subscales of the RIS received preliminary support in this blind factor analysis procedure. The intercorrelations between these four factors ranged from -.02 to .88, for a mean factor intercorrelation of .53 using Fisher's z-Transformation).

A confirmatory factor analysis using Hunter's PACKAGE computer program (Hunter, Gerbing, Cohen, & Nichol, 1980) tested the five subscales of the RIS which were derived during the initial development of the RIS (Antosz, 1988). Standard score alphas for the five subscales of REL1 to REL5 were .67, .83, .73, .88, and .74 respectively. Factor intercorrelations ranged from .07 to .81 with a mean of .57. Further confirmatory factor analyses were performed in an attempt to refine these scales using the conceptual and statistical criteria outlined by Hunter and Gerbing (1982) which include homogeneity of content, internal consistency, and external consistency or parallelism. Only minor modifications were made as the result of these analyses. One item with a weak reliability, as judged by its estimated communality value, was replaced in the Personal Prayer (REL1) subscale. One item from the Personal Religious Beliefs (REL4) subscale was deleted because it lacked

sufficient discriminating value between scales. An extra item was added to each of the Church Worship (REL5) and Church Nonworship Activities (REL3) subscales to improve their internal consistency. The standard score alphas for the final five subscales of REL1 to REL5 are .73, .83, .77, .87, and .80 respectively. Factor intercorrelations ranged from -.06 to .69 with a mean of .45.

Data for test-retest reliability of the RIS subscales were collected from a sepearate volunteer undergraduate sample. This sample (N=42) was predominantly female (n=29) and somewhat older (M=22 years old) than the original study sample. The interval between administrations was approximately four weeks. For the whole RIS, the correlation between testing periods was very high (r=.96). The correlations for the individual subscales were: Personal Prayer (r=.88), Church Beliefs (r=.87), Church Nonworship Activities (r=.92), Personal Religious Beliefs (r=.92), and Church Worship (r=.91).

Gender Differences in the RIS.

Because of gender differences that were observed during the initial development of the RIS subscales (Antosz, 1988), the internal consistency and interscale correlations for the revised subscales were also computed separately for males and females. The results indicate that the revised subscales have adequate internal consistency for each gender group with alphas ranging from .70 to .87. While some of the interscale correlations are larger for the female

subsample, only one of the ten intercorrelations exceeds the .70 criterion of independence suggested by Stark and Glock (1968). These results then allow for meaningful comparisons between genders on the religious scales themselves as well as gender comparisons on the relationships between this set of religious scales and the outcome variables. A list of the items in each RIS subscale as well as the standard score alphas for each subscale for the whole sample and for each gender are presented in Table 2. The RIS subscale correlations and as well as means and standard deviations for each subscale for the whole sample and for each gender are detailed in Table 3.

A series of *t* tests were performed on the five RIS subscales to determine gender differences. As it can be seen in Table 4, males scored significantly lower as a group than females on four of the subscales (Church Beliefs, Church Non-worhsip Activities, Personal Religious Beliefs, and Church Worship). However, the males scored higher on the Personal Prayer scale, with the *t*-value approaching significance. Additionally, Personal Prayer (REL1) is the only subscale where there is a significant difference in the within group variances ($F=1.35$, $p<.05$) with males having considerably more variation in scores on this particular subscale. Examining the pattern of interscale correlations for each gender, the only major differences between genders is on the relationship of Personal Prayer to the other subscales. While the magnitude of the relationship between

Table 2 RIS Subscales and Reliabilities.

Personal Prayer (REL1)

--I experience peace and joy during my private prayers or meditations.
--About how many times in a week do you pray at home privately or with your family (other than grace before meals)?
--My private prayer is one of the most important and satisfying aspects of my religious experience.

Alphas for: whole sample=.73, males=.77, females=.70

Church Beliefs (REL2)

--I believe in what my church teaches about the nature of God.
--Based on what I know about the major doctrines of my church, I would say I strongly believe...(response choices from "all of them" to "none").
--I believe my church's teachings about what is required to gain salvation.

Alphas for: whole sample=.83, males=.80, females=.84

Church Nonworship Activities (REL3)

--How much help has your church or religious group membership been in meeting the right kind of people?
--I attend Bible instruction classes, prayer groups, or other such groups sponsored by my church that help me grow in my religious faith.
--List the church offices, committees, or jobs of any kind in which you served during the past twelve months.
--Church activities (meetings, committee work, etc.) are a major source of satisfaction in my life.

Alphas for: whole sample=.77, males=.73, females=.78

Table 2 (cont'd).

Personal Religious Beliefs (REL4)

--I would say that my personal religious beliefs affect the way I look at everyday events.
--I do not think about my personal religious beliefs very often.
--My personal religious beliefs do not effect my decisions in the various areas of my life (e.g., work, family, friends).
--I try to carry my personal religious beliefs over into all my dealings in life..

Alphas for: whole sample=.87, males=.85, females=.87

Church Worship (REL5)

--The church is not a very important part of my life.
--My church's worship services help me to feel close to God.
--I do not enjoy attending the worship services at my church.
--If not prevented by unavoidable circumstances, I attend church services:...(responses from "more than once a week" to "twice a year of less").

Alphas for: whole sample=.80, males=.76, females=.81

Table 3 RIS Subscale Intercorrelations.

Whole sample

	REL1	REL2	REL3	REL4	REL5
REL1	--	.03	.16	-.06	.02
REL2		--	.57	.66	.69
REL3			--	.63	.66
REL4				--	.67
REL5					--
Mean	9.64	9.31	7.20	9.82	10.41
SD	3.15	2.09	2.44	2.94	2.67
Maximum Score	12.00	13.00	12.00	16.00	16.00

Males

	REL1	REL2	REL3	REL4	REL5
REL1	--	-.27	-.01	-.18	-.19
REL2		--	.52	.57	.67
REL3			--	.57	.59
REL4				--	.55
REL5					--
Mean	10.08	8.71	6.71	9.38	9.53
SD	3.46	2.23	2.27	2.91	2.56

Females

	REL1	REL2	REL3	REL4	REL5
REL1	--	.20	.26	.02	.14
REL2		--	.58	.70	.68
REL3			--	.65	.68
REL4				--	.71
REL5					--
Mean	9.45	9.55	7.38	10.02	10.75
SD	2.98	1.99	2.48	2.94	2.64

REL1=Personal Prayer
REL2=Church Beliefs
REL3=Church Nonworship Activities
REL4=Personal Religious Beliefs
REL5=Church Worship

Table 4 T Tests by Gender Groups for RIS Subscales.

	Mean	SD	T value	Probability
Personal Prayer (REL1)				
Females	9.45	2.98	-1.84	p<.07
Males	10.08	3.46		
Church Beliefs (REL2)				
Females	9.55	1.99	3.22	p<.01
Males	8.71	2.23		
Church Nonworhsip Activities (REL3)				
Females	7.38	2.48	2.30	p<.01
Males	6.71	2.27		
Personal Religious Beliefs (REL4)				
Females	10.02	2.94	2.12	p<.05
Males	9.38	2.91		
Church Worship (REL5)				
Females	10.75	2.64	3.93	p<.001
Males	9.53	2.56		

Personal Prayer and Church Beliefs is about the same for males (r=-.27) and females (r=.20), the relationship is negative for males and positive for females. Using Fisher's z-Transformation and comparing the correlations between Personal Prayer and Church Nonworship Activities subscales (males: r=-.01 and females: r=.26), there is a significant difference between the genders (z=2.10, p<.05), indicating that Church activities are more related to prayer for females than males. It appears that prayer for males is either not related at all or even negatively related to the other religious variables. Thus while prayer seems to be more important to males, it seems to function differently for each gender with respect to the other measured aspects of religion.

DeJong Religiosity Scale

Looking next at the DeJong et al. Religiosity Scale, an initial factor analysis of the instrument resulted in four factors. The first factor accounted for 21 percent of the variance and contained all the items from the Belief, Experience, and Practice subscales that resulted from DeJong et al.'s (1976) original analyses. The alpha for this first factor was .93 which replicates Eckert's (1984) findings and supports the argument that these three subscales are closely related and are also the most reliable of DeJong's subscales. The remaining three factors were each composed of one of the remaining three subscales of Individual Morality, Social Morality, and Religious Knowledge. These

factors had coefficient alphas of .82, .59, and .71 respectively. The interfactor correlations ranged from .09 to .57. Using confirmatory factor analysis to breakdown the first factor into the three original component scales resulted in alphas of .91, .87, and .74 for the Belief, Experience, and Practice subscales respectively. The three intercorrelations for these subscales were .86, .79, and .73, suggesting that these three subscales together may be measuring a single construct. As a result, these subscales were combined into a single scale for subsequent analyses with the outcome variables. Given the content of these subscales, the combined scale was labeled "Orthodoxy" to reflect the fact that a high score indicates a greater degree of adherance to orthodox Christian beliefs and practices. The coefficient alpha for each gender was .93.

The internal consistency estimates of the six original subscales were very similar for each gender with alphas ranging from .91 to .58. The reliabilities of the social and individual morality subscales were consistently low for the whole sample as well as for the gender subsamples, calling into question their utility especially in light of very similar findings by Eckert (1984).

As a test of concurrent validity for the new RIS scales, comparisons were made between the RIS subscales and similar scales from the DeJong measure and are presented in Table 5. The Church Beliefs (REL2) subscale of the RIS correlated the highest with DeJong's Belief scale (r=.70). DeJong's

Table 5 Correlations Between RIS and DeJong Subscales.

	Religious Involvement Survey (RIS)				
DeJong Religiosity Scale	REL1	REL2	REL3	REL4	REL5
Belief M=34.70 SD=8.83	-.29c	.70c	.48c	.60c	.62c
Experience M=11.88 SD=4.41	-.24c	.63c	.54c	.71c	.61c
Practice M=9.12 SD=3.65	-.11a	.56c	.75c	.66c	.65c
Individual Morality M=20.16 SD=4.17	-.06	.51c	.48c	.48c	.47c
Social Morality M=18.48 SD=2.66	-.03	.15b	.21c	.17c	.19c
Religious Knowledge M=5.53 SD=2.95	-.07	.19c	.26c	.33c	.20c

a: p<.05 b: p<.01 c: p<.001

REL1=Personal Prayer
REL2=Church Beliefs
REL3=Church Nonworship Activities
REL4=Personal Religious Beliefs
REL5=Church Worship

Religious Experience scale correlated .71 with the Personal Religious Beliefs (REL4) subscale, and the DeJong Practice scale correlated .75 with the Church Activities (REL3) subscale. It is noteworthy that the Prayer (REL1) subscale of the RIS correlated negatively with all six of the DeJong scales. However, only the correlations between Personal Prayer and the Belief, Experience, and Practice subscales were statistically significant. If these three DeJong scales are representative of orthodox Christian beliefs and practices, then there is further support that prayer, as measured by the RIS, is a unique aspect of religion for this sample.

It should be noted that while concurrent validity for the RIS can be established by comparing it with the DeJong measure, the overall "religiousness" of the current sample based on the DeJong measure cannot be determined since no normative data (means and standard deviations for the six scale scores) have been published.

Other religious measures.

Turning to the other measurement instruments, the three item measure of social interaction within a religious group taken from Roberts & Davidson (1984) resulted in very low inter-item corrleations and an alpha of .58, making it unacceptable for inclusion in this study. However, during the initial refinement of the Religious Involvement Survey, one of the items was added to the Church Nonworship Activities (REL3) subscale because of its conceptual and

statistical match with the other items in this subscale. The addition of this item to the Church Nonworship Activities subscale more clearly defines a social interaction dimension that apparently is being tapped by this subscale.

The five item scale to measure the perceived organization of the subjects' church or synagogue had an alpha of .73 for the whole sample, with alphas of .70 and .78 for the female and male subsamples respectively. Higher scores on this scale (Involve) describe a more horizontal church structure that exercises social control through increased member participation and involvement. With a maximum score of 20, the mean and standard deviation for the whole sample was 15.62 and 2.40. When this scale was constructed for this author's previous study (Antosz, 1988), similar scores were attained with a comparable college undergraduate sample (M=15.43, SD=2.07).

Purpose-In-Life (PIL).

The Purpose-In-Life (PIL) questionnaire by Crumbaugh (1968) was factor analyzed, resulting in two major factors which were conceptually indistinguishable from each other. These two factors were unlike the future and present purpose factors that Cote and Levine (1983) identified in their factor analysis of this instrument. The current data support the unidimensionality of the construct being measured by the PIL. In addition, the alpha of the full scale PIL for the whole sample is .89, with alphas of .88

and .89 for the male and female subsamples respectively.

The mean score for the current sample was 103.16 with a standard deviation of 14.06. This mean score for the whole sample falls within the "indecisive" range of 92 through 112 described by Crumbaugh & Maholic (1969) based on normative data gathered on 1,151 subjects. According to Crumbaugh & Maholic, scores above 112 indicate clear purpose and meaning in life while scores below 92 indicate a lack of purpose in life.

Ego identity status (EOMEIS-2).

Factor analysis of the measure of ego identity status (EOMEIS-2) turned up one major and several minor factors. Among the nineteen items on the first factor were fourteen of the sixteen Foreclosure status items. The remaining factors were uninterpretable combinations of the other subscale items. The reliabilities of the four ideological and four interpersonal subscales described by Adams et al. (1987) ranged from .56 to .85, with six of the eight alphas falling below .70. Because of these unacceptably low estimates of internal consistency, it was decided not to utilize these particular subscales which empahsized the distinction between interpersonal and ideological dimensions of identity status. When the eight items from each of these two dimensions were combined for each status grouping according to the alternate scoring rules provided by Adams et al. (1987), the alphas improved considerably. The alphas for the sixteem item subscales were .70 for the Identity

Diffusion cluster, .73 for Moratorium, .75 for Identity Achievement, and .89 for the Foreclosure grouping. The reliabilities of these larger scales by gender were very similar to each other and to the alphas for the whole sample. The interfactor correlations for these four scales as presented in Table 6 ranged from -.35 to .42, with most of these relationships predictable by the psychosocial theories of Erikson (1968) and Marcia (1966) which are the conceptual bases for these scales. For instance, the Achievement scale has significant negative correlations with both the Diffusion (r=-.38, p<.001) and Moratorium (r=-.34,

Table 6 Intercorrelations Among the Ego Identity Scales.

	ACH	FOR	MOR	DIF
Achievemnt (ACH)	--	.06	-.34c	-.38c
Foreclosure (FOR)		--	.11a	.27c
Moratorium (MOR)			--	.46c
Diffusion (DIF)				--

a: p<.05 b: p<.01 c: p<.001

p<.001) scales. The Moratorium and the Diffusion scales are positively and significantly correlated (r=.46, p<.001). As a result of these findings, only the sixteen item subscales of the EOMEIS-2 were utilized in subsequent analyses.

The means and standard deviations for the whole sample for these four scales along with normative data provided by Adams et al. (1987) from two college samples are presented

in Table 7. Looking at this data, it appears that the means for the Achievement and Foreclosure scales are relatively lower for the current sample while the Moratorium and

Table 7 Current Sample and Normative Data on the EOMEIS-II.

	Samples					
	Current		Texas		Utah	
Scale	M	SD	M	SD	M	SD
Achievement	62.6	8.6	65.4	8.2	65.5	8.3
Moratorium	54.1	8.9	54.1	9.7	52.6	9.9
Foreclosure	37.2	11.3	39.9	11.1	43.5	10.8
Diffusion	44.1	8.7	44.4	9.2	43.2	9.3

Diffusion scales are very similar across samples. Based on scoring rules which will be explained later for determining identity status groups, these comparisons suggest that there may be fewer subjects in the current sample who fall into the "pure" identity status categories of Achievement and Foreclosure. As a result, there may be more subjects in the current sample who might be classified as belonging to transitional identity status groups. Since Adams et al. (1987) do not provide data on the percentage of their samples classified in the various identity status groups, this point cannot be conclusively tested.

Mental Health Index (MHI).

The Mental Health Index (MHI) was factor analyzed and resulted in one large and four smaller interpretable factors. The first factor consisted primarily of the items

from the Positive Affect subscale as well as items from the Depression and Loss of Behavioral/Emotional Control scales which had strong negative loadings on this factor. The second factor was a replication of the complete Anxiety scale. The remaining three factors were also unidimensional and represented the Positive Affect, the Loss of Control, and the Emotional Ties subscales. The alphas for the five first order subscales ranged from .80 to .89. The second order factors of Psychological Well-Being and Distress had alphas of .91 and .94, respectively. The eight-item Social Desireability Scale, with very low inter-item correlations and a resulting alpha of .26, was dropped from the current study. The reliability of all the scales for the gender subsamples were very similar to each other and to the full sample figures.

It is interesting to note that there is a considerable discrepancy between the mean scores on the MHI for this current late adolescent sample in comparison to the normative data for this measure collected on over five thousand subjects in primarily adult samples. On the Psychological Well-being scale, the mean score for the current sample (M=51.03, SD=10.65) was lower than that for the normative samples (M=59.16, SD=12.16). Conversely, the current sample (M=63.81, SD=15.91) scored much higher on the Psychological Distress scale than the normative samples (M=47.54, SD=15.39). The mean age of the normative samples was 32.2 with a range of 13-69, while the mean age of the

current sample was 19.2 with a range of 17-23. From a life span developmental perspective which would assume that adults generally have a broader range of experiences for developing personal satisfaction as well as more coping resources, the pattern of differences between the scores for this sample and the normative samples would be expected.

Hassles and Uplifts.

A factor analysis was performed on the Hassles and Uplifts subscales. For the Hassles subscale, seventeen factors were extracted, but only seven were interpretable. The items on the first factor pertained to general social and interpersonal concerns and were labeled "Shy". The second factor encompassed complaints about too many responsibilities and too little time to fulfill them and was labeled "Pressure". Together the items on the third factor referred to difficulties making decisions and was labeled "Decisions". The following two factors, which referred to financial worries, were combined and labeled "Money". The last two interpretable factors related to obstacles in visiting family members and concerns about the future. Only the first three factors had adequate internal consistency. Combining the two factors referring to financial issues increased the internal consistency estimate to an acceptable level (alpha=.80). The coefficient alphas for the Shy, Pressure, Decide, and Money factors were .74, .80, .75, and .80 respectively.

Factor analysis of the Uplifts subscale was unsuccessful

as varimax and oblique factor rotations failed to converge. As a result, only one large factor was identified through the initial principal components analysis. Sixty-eight items loaded on this factor which was conceptually uninterpretable. Similar results with the Uplifts subscale were found in a previous study with a college undergraduate sample (Antosz, 1988).

For the purposes of this study, only the frequency score (sum total of items endorsed) and mean intensity score (the sum of severity ratings divided by the frequency score) described by Kanner et al. (1981) were used in the primary analyses of the current study. The four hassles factors described above were used only for ancillary descriptive comparisons since no preliminary hypotheses were made regarding specific clusters of hassles and uplifts. The rationale for utilizing the frequency and mean intensity scores as opposed to the severity score (sum of severity ratings for the two subscales) is the possibility that these scores represent different response styles. The high correlation within these two categories of scores across the subscales (r of hassles and uplifts frequency scores=.72, r of hassles and uplifts mean intensity scores=.41) and the much lower inter-category correlations across subscales (r of Hassles frequency and Uplifts intensity=-.15 and r of Uplifts frequency and Hassles intensity =-.11) suggest distinct styles of reporting stressful and satisfying minor daily events. To the extent that different response styles

might be involved in the coping process, using a total severity rating score for each subscale would only mask important differences. Gender differences in the frequency and mean intensity scores will be discussed later.

In order to get a cleared picture of the current sample's performance on the Hassles and Uplifts scale relative to other samples, the means and standard deviations of the four frequency and intensity scores for the current and four other samples are presented in Table 8. The original normative group for the Hassles and Uplifts scale is the middle-aged sample (ages ranging from 45 to 65) used by Kanner et al. (1981). The data for this sample represent

Table 8 Current Sample and Normative Data on the Hassles and Uplifts.

	Hassles and Uplifts Scores			
Samples	Hassles Frequency	Hassles Intensity	Uplifts Frequency	Uplifts Intensity
Current				
M	34.6	1.72	52.3	1.88
SD	(21.7)	(.35)	(26.7)	(.35)
Kanner et al. (1981)				
M	20.5	1.47	49.5	1.77
SD	(17.7)	(.39)	(27.8)	(.40)
Antosz (1988)				
M	39.1	1.66	53.4	1.80
SD	(26.8)	(.37)	(29.0)	(.33)
Bernardo (1988)				
* M	27.1	1.86	----	----
SD	(14.3)	(.98)	----	----
** M	23.8	1.54	----	----
SD	(13.8)	(.37)	----	----

* Subject pool participants
** Religious groups participants

the average scores for cumulative responses to the scale given each month for nine consecutive months. The remaining three samples have an age range very similar to the current sample. The Antosz (1988) data is taken from this author's previous research with a sample recruited from the subject pool of undergraduate students in introductory psychology courses. The first sample for Bernardo (1988) represents a very similar sample to this author's current and previous samples in terms of recruitment procedures from the same midwestern university. The second sample from Bernardo (1988) consists of subjects recruited from on and off-campus religious groups. The Uplifts subscale was not used in the Bernardo (1988) study. In general, it can be said that the current and three other late adolescent samples endorse more frequent and intense Hassles and Uplifts than the middle-aged sample originally studied by Kanner et al. (1981). These discrepancies in scores may be due to general response style differences between age cohorts or may reflect the developmental differences previously suggested for similar discrepancies on the MHI. However, it is less clear why the mean of Hassles frequencies is noticeably greater for the current sample compared to Bernardo's sample when both samples utilized similar recruitment procedures and both were initially presented to students at studies of how individuals cope with "stress" (Antosz sample) or "daily hassles" (Bernardo sample). Given the larger standard deviation for Hassles frequencies in the current sample, the

the variability of responses was also much greater in this sample.

Medical indices.

The Cohen-Hoberman Inventory of Physical Symptoms (CHIPS) was factor analyzed with a varimax rotation resulting in fifteen small factors, most of which were not conceptually unidimensional. The coefficient alpha for the whole sample was .88, with alphas of .85 and .91 for the female and male subsamples. The score for the CHIPS was computed by summing the ratings for each item, which results in a severity score, similar to that discussed for the Hassles and Uplifts. This type of score seems especially appropriate considering the above discussion about response styles with the Hassles and Uplifts Scale. Initial inspection of the data reveals that the severity score for the CHIPS correlates similarly to both the frequency and mean intensity scores of the Hassles and Uplifts Scale. Meanwhile, computing frequency and mean intensity scores for the CHIPS and correlating them with the Hassles and Uplifts scores results in the same pattern of higher intra-category and lower inter-category correlations, further supporting the notion of response styles.

Since the CHIPS was modified for this current study, there are no appropriate normative data against which the responses of this sample can be compared. The mean scores for this sample were as follows: frequency of symptoms reported (M=16.5, SD=7.2); intensity of symptoms (M=1.68,

SD=.46); and severity of symptoms (M=28.2, SD=15.9).

In addition to the CHIPS summary score, two other health related scores were utilized in the subsequent analyses. A score representing the frequency of medical services use in the past month was computed by summing responses about the number of visits within the past month to seven medical settings, including the university student health center For the whole sample, the mean scores was .90 with a standard deviation of 1.78 with a range of scores from 0 to 12. Finally, two questions with forced-choice responses about the subjects' general state of health and their concern over their health in the past month were used as a measure of overall health status. For the whole sample the mean score was 5.77 with a standard deviation of 1.29. For the sake of interpretability, a maximum score of 8.0 indicates "excellent" health with no health concerns.

Gender Differences

Since it appears that overall the measurement model used in this study adequately applies to each of the gender subsamples, the sharp differences in group means between males and females on the RIS subscales suggests possible gender differences in the overall structure and function of religion. Gender differences were also observed in a similar sample in the pilot study (Antosz, 1988) and a comparison of that late adolescent sample with an adult sample indicated that these gender differences may be unique to this particular developmental group (Antosz, 1989). To

further explore gender differences in the other dependent and independent variables, a series of *t* tests were performed to compare the male and female group means on all the relevant scale scores. As Table 9 indicates, in addition to the significant differences on four of the five RIS subscales, males and females differ significantly on twenty other variables, including two of the mental health indicators, two of the identity scales, and most of the indicators of physical symptoms. Given these considerable gender differences across most of the variables and the increasing support for unique developmental pathways for males and females (Alishio & Schilling, 1984; Gilligan, 1982; Thorbecke & Grotevant, 1982; Josselson, Greenberger, & McConochie, 1977), it appears that the data in this study can be more meaningfully utilized by investigating specific gender differences rather than merely statistically controlling for them in the group data. Thus most of the remaining analyses will be carried out along gender lines.

Hypotheses Testing and Related Analyses

To test the major hypotheses of this study, zero-order correlation matrices for each gender were constructed. These matrices, which include the religious variables as well as the intervening and outcome variables are presented in Table 10. In addition to the RIS variables, the Orthodoxy scale containing the first three subscales of the DeJong Religiosity measure is included.

Table 9 T Tests by Gender Groups for Other Major Variables.

	Mean	S.D.	T value	Probability
EOMEIS-2				
Foreclosure				
Females	36.30	11.26		
			-2.53	p<.01
Males	39.26	11.21		
Diffusion				
Females	42.98	8.21		
			-3.73	p<.001
Males	46.31	9.29		
PIL				
Females	104.2	14.0		
			2.16	p<.05
Males	101.1	14.0		
Hassles & Uplifts				
Average Intensity of Hassles				
Females	1.74	.35		
			2.83	p<.01
Males	1.65	.32		
Average Intensity of Uplifts				
Females	1.92	.35		
			3.60	p<.001
Males	1.80	.33		
DeJong Religiosity Scale				
Belief				
Females	36.10	8.23		
			4.93	p<.001
Males	31.72	9.37		
Experience				
Females	12.42	4.41		
			3.78	p<.001
Males	10.73	4.23		
Practice				
Females	9.37	3.75		
			2.12	p<.05
Males	8.57	3.41		
Individual Morality				
Females	20.82	4.13		
			4.81	p<.001
Males	18.81	3.85		
Social Morality				
Females	18.89	2.49		
			4.89	p<.001
Males	17.58	2.80		

Table 9 (cont'd).

	Mean	S.D.	T value	Probability
MHI				
Loss of Behavioral/Emotional Control				
Females	21.27	6.25		
			2.10	p<.05
Males	19.91	6.42		
Emotional Ties				
Females	7.83	2.58		
			2.21	p<.05
Males	7.25	2.50		
CHIPS				
Number of Symptoms				
Females	17.44	6.86		
			4.24	p<.001
Males	14.35	7.62		
Average Intensity of Symptoms				
Females	1.73	.47		
			3.47	p<.001
Males	1.57	.42		
Total Severity of Symptoms (Number x Average Intensity)				
Females	30.43	15.28		
			4.35	p<.001
Males	23.47	16.33		
Number of Visits to Medical Providers (past month)				
Females	1.00	2.02		
			2.11	p<.05
Males	.69	1.09		
Frequency of Over-the-counter Medications (past month)				
Females	3.62	1.48		
			2.72	p<.01
Males	3.21	1.45		
Frequency of Prescription Medication Use (past month)				
Females	.47	.50		
			2.88	p<.01
Males	.32	.47		
Recreational Drug Use (past month)				
Females	1.43	.96		
			-.2.30	p<.05
Males	1.73	1.36		
Alcohol Use (past month)				
Females	3.48	1.35		
			-3.06	p<.01
Males	3.91	1.31		
Exercise				
Females	3.47	.94		
			-2.80	p<.01
Males	3.73	.88		

Table 10 Intercorrelations Among the Religious and Outcome Variables.

Females

		6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
1.	REL1	-.14b	.05	.03	-.13a	.00	.08	.07	.12a	.15b	.00	.02	.09	.03	.02	.00
2.	REL2	.74c	.27c	.09	-.28c	-.38c	-.08	.05	-.01	.13a	-.08	.14a	.13a	.05	.00	.21c
3.	REL3	.65c	.24c	.16b	-.23c	-.32c	-.11	.00	.02	.09	-.14a	.15b	.10	.15b	-.10	.22c
4.	REL4	.74c	.21c	.12a	-.21c	-.46c	-.01	.06	.02	.03	-.08	.06	.11a	.06	.02	.23c
5.	REL5	.72c	.29c	.17b	-.25c	-.41c	-.04	-.04	.09	.12a	-.11a	.19c	.17b	.15b	-.04	.31c
6.	DEJONG	--	.18c	.09	-.21c	-.44c	-.03	.10	-.01	.03	-.02	.00	.17b	.05	.04	.24c
7.	ACH		--	.06	-.34c	-.38c	-.12a	.04	.13a	.19c	-.01	.09	.18c	.28c	-.10a	.38c
8.	FOR			--	.11a	.27c	-.02	-.11a	.06	-.01	-.04	.14b	-.05	.10a	-.02	-.02
9.	MOR				--	.46c	.12a	-.03	.03	-.19c	.09	-.11a	-.22c	-.28c	.22c	-.26c
10.	DIF					--	.13a	-.05	-.02	-.24c	.04	.01	-.22c	-.27c	.13a	-.42c
11.	MANYHAS						--	.10a	.69c	-.20c	.31c	-.22c	-.01	-.35c	.46c	-.28c
12.	MEANHAS							--	-.12a	.42c	.31c	-.13b	.04	-.23c	.33c	-.21c
13.	MANYUPS								--	-.02	.16b	.00	.04	.11a	.14b	.11a
14.	MEANUPS									--	.08	.12a	.13b	.31c	-.09	.26c
15.	SEVSX										--	-.37c	.20c	-.38c	.49c	-.28c
16.	HEALTH											--	-.14b	.29c	-.25c	.27c
17.	RXVISITS												--	.06	.08	.09
18.	PWB													--	-.71c	.68c
19.	DTRS														--	-.52c
20.	MEANING															--

a: p<.05 b: p<.01 c: p<.001

		M	SD
1.	REL1=Personal Prayer.....	9.45	2.98
2.	REL2=Church Beliefs.....	9.55	1.99
3.	REL3=Church Nonworship Activities..	7.38	2.48
4.	REL4=Personal Religious Beliefs....	10.02	2.94
5.	REL5=Church Worship.....	10.75	2.64
6.	DEJONG=DeJong Religiosity Scale....	57.88	14.69
7.	ACH=Identity Achievement.....	63.14	8.68
8.	FOR=Identity Foreclosure.....	36.30	11.26
9.	MOR=Identity Moratorium.....	54.21	9.12
10.	DIF=Identity Diffusion.....	42.98	8.20
11.	MANYHAS=Frequency of Hassles.....	33.89	19.31
12.	MEANHAS=Mean Intensity of Hassles..	1.75	.35
13.	MANYUPS=Frequency of Uplifts.....	52.26	25.29
14.	MEANUPS=Mean Intensity of Uplifts..	1.93	.35
15.	SEVSX=Severity of Physical Symptoms.	30.43	15.28
16.	HEALTH=General Health Status.....	5.71	1.30
17.	RXVISITS=Number of Medical Visits...	1.00	2.02
18.	PWB=Psychological Well-Being.....	51.05	10.83
19.	DTRS=Psychological Distress.....	64.38	15.85
20.	MEANING=Purpose-in-Life.....	104.16	14.00

Table 10 (cont'd).

Males

		6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
1.	REL1	-.44c	.05	-.15a	-.21b	.06	-.15a	-.01	-.11	.14a	-.05	.12	.11	.09	-.22b	.01
2.	REL2	.71c	.13	.43c	-.09	-.11	-.17a	-.01	.11	.12	.14	-.06	-.10	-.01	.21a	.11
3.	REL3	.61c	.28b	.33c	-.16	-.16	.15	.08	.21a	.22a	.23a	-.07	.06	.12	.04	.16
4.	REL4	.67c	.23b	.17a	.02	-.33c	.12	-.03	.10	.02	.15a	-.05	.03	-.01	.21b	.06
5.	REL5	.69c	.08	.36c	-.13	-.22a	.02	-.14	.10	.19a	.11	-.16	.04	.14	-.01	.21a
6.	DEJONG	--	.10	.35c	-.01	-.34c	.09	.05	.10	.11	.14	-.11	.00	.04	.17a	.15a
7.	ACH		--	-.03	-.25b	-.25b	.05	.12	.16a	.24b	.11	.09	-.07	.14a	-.11	.35c
8.	FOR			--	.13	.18a	.13	-.08	.12	08	.05	-.06	-.24b	-.03	.15a	.09
9.	MOR				--	.38c	.18a	-.01	.10	-.31c	.20a	-.18a	-.05	-.22b	.26c	-.33c
10.	DIF					--	.10	.00	.05	-.17a	-.08	.06	-.19b	.00	-.01	-.11
11.	MANYHAS						--	.08	.78c	-.06	.37c	-.18a	.10	-.21b	.44c	-.19b
12.	MEANHAS							--	-.09	.32c	.31c	-.05	-.11	-.24b	.28c	-.16a
13.	MANYUPS								--	.01	.24b	-.10	.09	.08	.12	.07
14.	MEANUPS									--	.12	.12	.03	.37c	-.19b	.29c
15.	SEVSX										--	-.33c	.09	-.33c	.49c	-.30c
16.	HEALTH											--	-.13	.20b	-.21b	.19b
17.	RXVISITS												--	-.03	.04	-.13
18.	PWB													--	-.72c	.71c
19.	DTRS														--	-.57c
20.	MEANING															--

a: p<.05 b: p<.01 c: p<.001

		M	SD
1.	REL1=Personal Prayer	10.08	3.46
2.	REL2=Church Beliefs	8.71	2.23
3.	REL3=Church Nonworhsip Activities	6.71	2.27
4.	REL4=Personal Religious Beliefs	9.38	2.91
5.	REL5=Church Worship	9.53	2.56
6.	DEJONG=DeJong Religiosity Scale	51.02	15.30
7.	ACH=Identity Achievement	61.53	8.28
8.	FOR=Identity Foreclosure	39.26	11.21
9.	MOR=Identity Moratorium	53.87	8.34
10.	DIF=Identity Diffusion	46.31	9.29
11.	MANYHAS=Frequency of Hassles	35.94	26.19
12.	MEANHAS=Mean Intensity of Hassles	1.65	.32
13.	MANYUPS=Frequency of Uplifts	52.18	29.55
14.	MEANUPS=Mean Intensity of Uplifts	1.80	.33
15.	SEVSX=Severity of Physical Symptoms	23.47	16.33
16.	HEALTH=General Health Status	5.88	1.27
17.	RXVISITS=Number of Medical Visits	.69	1.09
18.	PWB=Psychological Well-Being	51.15	10.16
19.	DTRS=Psychological Distress	62.30	15.65
20.	MEANING=Purpose-in-Life	101.06	14.03

Religion directly related to outcomes for females.

Looking first at the female subsample for the hypothesized relationship between the religious and outcome variables, the following hypotheses were tested: (a1) Personal Prayer is positively related to Psychological Well-being, (a2) Personal Religious Beliefs negatively relates to physical symptoms, (a3) Church Nonworship Activities positively relates to Psychological Well-being especially for females, (a4) negatively relates to Psychological Distress, (a5) and negatively relates to physicla symptoms especially for males.

It appears that Personal Prayer (REL1) and Personal Religious Beliefs (REL4) have no direct relationship to the outcome variables (a1 and a2) except for a small but statistically significant relationship between Personal Religious Beliefs (REL4) and the number of medical visits ($r=.11$, $p<.05$). However, as hypothesized (a3), Church Nonworship Activities (REL3) has a significant positive relationship to Psychological Well-being ($r=.15$, $p<.01$) but it is unrelated to Psychological Distress (a4: $r=.15$, n.s.). Additionally, it is significantly and negatively related to the severity of physical symptoms (a5: $r=-.14$, $p<.05$) and positively to general health status ($r=.15$, $p<.05$). While statistically significant, these correlations are very low.

Although no specific hypotheses were made concerning the other religious variables, it is clear that Church Worship Services (REL5) and to a lesser degree, Church Beliefs

(REL2) are also directly related in the expected direction with some of the outcome variables. Church Beliefs (REL2), Church Nonworship Activities (REL3), and Church Worship (REL5), which are the RIS subscales referring to involvement in institutional religion, are all positively and significantly related to general health status (r=.14, p<.05; r=.15, p<.01; r=.19, p<.001, respectively). While both Church Nonworship Activities (REL3) and Church Worship (REL5) are associated with Psychological Well-being, none of the religious variables have any substantial negative relation with Psychological Distress. It should be noted that the DeJong Orthodoxy scale is significantly and positively correlated with the number of visits to medical providers (r=.17, p<.01).

Religion directly related to outcomes for males.

For the male subsample, Personal Prayer (REL1) is not directly related to Psychological Well-being as hypothesized (a1), but it is negatively and significantly correlated with Psychological Distress (r=-.22, p<.01). The Personal Religious Beliefs subscale (REL4) is significantly correlated with both physical symptoms (a2: r=.15, p<.05) and Psychological Distress (r=.21, p<.01), but these relationships are positive rather than negative as predicted. Although unrelated to the Psychological Distress and Well-being variables (a3 and a4), Church Nonworship Activities (REL3) is significantly correlated to physical symptoms (a5, r=.23, p<.01), but again the direction of the

relationship is the reverse of that which was predicted. Finally, although no predictions were made about the Church Beliefs subscale, it is significantly and positively correlated with Psychological Distress (r=.21, p<.05).

Identity and religion.

Since the ideological and interpersonal subscales of the Identity Achievement scale could not be used because of their insufficient reliability, the hypotheses that personal religious beliefs are positively related to the interpersonal dimension of identity achievememt for females (c1) and to the ideological dimension for males (c2) could not be directly tested. However, the total Achievement scales as well as the three other identity status subscales were examined for their relationship with religion. As Table 11 indicates, the Personal Religious Beliefs subscale is significantly and positively related to identity Achievement status as a whole for both males (r=.23, p<.01) and females (r=.21, p<.001). In addition for males, the Church Nonworship Activities subscale has a somewhat stronger relationship with identity Achievement (r=.28, p<.01). For the females, identity Achievement is also significantly related to Church Beliefs (r=.27, p<.001), Church Nonworship Activities (r=.24, p<.001), Church Worship (r=.29, p<.001) and to the DeJong triad of Orthodoxy subscales (r=.18, p<.001).

No predictions were made about the relationship of religious variables to the other identity status scales, but

Table 11 Intercorrelations Among the Religious and Ego Identity Variables.

Females

	REL1	REL2	REL3	REL4	REL5	DeJong
Achievement	.05	.27c	.24c	.21c	.29c	.18c
Foreclosure	.03	.09	.16b	.12a	.17b	.09
Moratorium	-.13a	-.28c	-.23c	-.21c	-.25c	-.21c
Diffusion	.00	-.38c	-.32c	-.46c	-.41c	-.44c

Males

	REL1	REL2	REL3	REL4	REL5	DeJong
Achievement	.05	.13	.28b	.23b	.08	.10
Foreclosure	-.15a	.43c	.33c	.17a	.36c	.35c
Moratorium	-.21b	-.09	-.16	.02	-.13	-.01
Diffusion	.06	-.11	-.16	-.33c	-.22a	-.34c

REL1=Personal Prayer
REL2=Church Beliefs
REL3=Church Non-worship Activities
REL4=Personal Religious Beliefs
REL5=Church Worship
DeJong=DeJong Orthodoxy triad of subscales
(Belief, Experience, and Practice)

a: $p<.05$ b: $p<.01$ c: $p<.001$

it is clear that especially for females, there is a substantial relationship between identity status and religion as sixteen of the twenty correlations between the RIS and identity variables are statistically significant and in a theoretically predictable direction. In general, it would be assumed that religious beliefs and practice in this age group would be closely associated with the foreclosure status while negatively related to the moratorium and diffusion statuses. For the females in the study, the Church Beliefs and DeJong Orthododoxy subscales are not related to the foreclosure status (both r's=.09) but are positively related to identity achievement as noted above.

For males, the overall relationship between identity status and religion is not as strong as it is for females. Ten of the twenty correlations between the religion and identity variables are significant, with half of these accounted for by the Foreclosure subscale. While Foreclosure is positively correlated as might be expected with Church Beliefs (r=.43, p<.001), Church Nonworship Activities (r=.33, p<.001), Personal Religious Beliefs (r=.17, p<.05), Church Worship (r=.36, p<.001), and the DeJong Orthodoxy triad of subscales (r=.35, p<.001), it has a small but significant <u>negative</u> relationship with Personal Prayer (r=-.15, p<.05). Thus in contrast to the females, both the Church Beliefs and Orthodoxy scales have a strong positive relationship to Foreclosure but are unrelated to identity achievement (r's=.13, .10).

To explore these relationships between religion and identity status further, a series of ANOVAs were carried out with RIS scales as dependent variables and identity status as the independent variable. While the correlations discussed above effectively treated each identity status scale as a continuum, Adams et al. (1987) provide scoring rules for determining identity types with formulas using cutoff scores derived from standardization samples. These formulas simultaneously consider the cutoff score on all four subscales. As a result, it is possible to describe sixteen status types that include not only pure Achievement, Foreclosure, Moratorium, and Diffusion, but also combinations of status types which Adams et al. (1987) interpret as transitional types. For example, a pure Achievement status type occurs when an individual scores above the 73 cutoff score on the Achievement subscale but below the cutoff scores on the Moratorium (63), Foreclosure (53), and Diffusion (53) subscales. The Moratorium/ Diffusion Transition type occurs when an individual scores above the cutoff scores on both the Moratorium and Diffusion subscales but below the cutoffs on the Achievement and Foreclosure subscales. In addition, if none of the cutoff points are attained, a subject is classified as a low-profile Moratorium status.

While sixteen possible status types are described by Adams et al. (1987), for the sake of clarity, only six status types were included in the ANOVA procedure. These

included the four pure types, the low-profile Moratorium, and the Moratorium/Diffusion Transitional type. The latter two groups were included because they were the largest mixed status types. Frequency distributions of both subsamples indicated that these were the six largest groups and account for 118 (84.9%) of the male subjects and 265 (88.3%) of the female subjects. The breakdown of subjects by gender into these six identity status groups are presented in Table 12. From these figures, there are many obvious gender differences. Proportionately by subsample size, twice as many females as males are classified as identity Achievement and as Moratorium while almost three times as many males than females are classifed as identity Diffusion. Females are also somewhat more frequently represented in the low profile Moratorium group.

Table 12 Frequencies of Identity Status Groups by Gender.

	Females		Males	
Status Types	N	%	N	%
1. Achievement	31	10.3	7	5.0
2. Moratorium	28	9.3	6	4.3
3. Foreclosure	12	4.0	5	3.6
4. Diffusion	19	6.3	26	18.7
5. Low-profile Moratorium	164	54.7	68	48.9
6. Mor./Dif Transition	11	3.7	6	4.3
Sum=	265	88.3%	118	84.9%
Total sample=	300		139	

The resulting F values of the ANOVAS for both genders are presented in Table 13. For each analysis, the grand mean is indicated along with the deviation score for each identity status group. The ANOVAs for the females resulted in significant F values for each of the RIS variables. The pure Achievement group had the highest mean score for each comparison. In all cases, the Foreclosure group has the second highest mean score on the religious variables. For the males, there were significant F values only for Personal Religious Beliefs (REL4) and Church Worship (REL5). For the Personal Religious Beliefs comparison, the identity Achievement group had the highest mean score, followed by the Foreclosure group. The Foreclosure group attained the highest means score not only on Church Worship, but on the other two institutional religion scales, Church Beliefs (REL2) and Church Nonworship Activities (REL3). It is interesting to note that even though there were no significant differences between means for the Personal Prayer scale (REL1), the Moratorium and Diffusion groups had the highest means on this variable. In general then, the ANOVAs further support the predicted relationship between identity Achievement and Personal Religious Beliefs.

Religion indirectly related to outcomes for females.

Looking next at the hypotheses regarding the indirect influence of religion on the outcome variables, the following hypotheses are considered for the female subsample: (b1) Personal Prayer and Personal Religious

Table 13 Analysis of Variance of the RIS Variables by Identity Status Groups.

Females

RIS	F Value		Grand Mean	Identity Group	Deviation Score
REL1 (Personal Prayer)	2.84	p<.02	8.76	Achievement	1.61
				Moratorium	-.08
				Foreclosure	.35
				Diffusion	-1.03
				Low-profile Moratorium	-.21
				Mor./Dif. Transition	-.76
REL2 (Church Beliefs)	3.68	p<.01	9.57	Achievement	.97
				Moratorium	-.44
				Foreclosure	.32
				Diffusion	-1.57
				Low-profile Moratorium	.05
				Mor./Dif. Transition	-1.32
REL3 (Church Nonworship Activities)	2.75	p<.02	7.36	Achievement	1.56
				Moratorium	-.50
				Foreclosure	.20
				Diffusion	-.72
				Low-profile Moratorium	-.12
				Mor./Dif. Transition	-1.36
REL4 (Personal Religious Beliefs)	3.61	p<.01	10.58	Achievement	1.71
				Moratorium	-.49
				Foreclosure	.86
				Diffusion	-1.67
				Low-profile Moratorium	-.11
				Mor./Dif. Transition	-1.58
REL5 (Church Worship)	3.26	p<.01	10.76	Achievement	1.49
				Moratorium	-.49
				Foreclosure	1.02
				Diffusion	-1.40
				Low-profile Moratorium	-.10
				Mor./Dif. Transition	-1.76

Table 13 (cont'd).

Males

	F Value		Grand Mean	Identity Group	Deviation Score
REL1 (Personal Prayer)	.80	n.s.	9.54	Achievement	-.54
				Moratorium	1.21
				Foreclosure	-.04
				Diffusion	.96
				Low-profile Moratorium	-.04
				Mor./Dif. Transition	-1.87
REL2 (Church Beliefs)	.86	n.s.	8.59	Achievement	.41
				Moratorium	-.84
				Foreclosure	1.66
				Diffusion	-.67
				Low-profile Moratorium	.13
				Mor./Dif. Transition	-.59
REL3 (Church Nonworship Activities)	.87	n.s.	6.60	Achievement	.40
				Moratorium	-1.10
				Foreclosure	.90
				Diffusion	-.77
				Low-profile Moratorium	.25
				Mor./Dif. Transition	-.60
REL4 (Personal Religious Beliefs)	2.84	p<.02	9.81	Achievement	2.86
				Moratorium	.94
				Foreclosure	1.19
				Diffusion	-1.81
				Low-profile Moratorium	.08
				Mor./Dif. Transition	-1.31
REL5 (Church Worship)	2.64	p<.03	9.36	Achievement	-1.03
				Moratorium	1.39
				Foreclosure	1.89
				Diffusion	-1.44
				Low-profile Moratorium	.45
				Mor./Dif. Transition	-1.69

Beliefs having a positive effect on Psychological Well-being through Hassles and Uplifts, (b2) the same two variables having a negative effect on Psychological Distress and physical symptoms through Hassles and Uplifts, (b3) Personal Religious Beliefs having a positive effect on Psychological Well-being through Purpose-in-Life, and (b4) the same religious variable having a negative effect on Psychological Distress through Purpose-in-Life. From the correlations in Table 10, it appears that for females in this study, there is very little relationship between Personal Prayer (REL1) and Personal Religious Beliefs (REL4) or any other of the religious variables with the Hassles and Uplifts scores. Personal Prayer as well as Church Beliefs (REL2) and Church Worship (REL5) have small but statistically significant positive correlations with the mean intensity of Uplifts (r=.15, p<.01; and r's=.13 and .12, p<.05) and Personal Prayer is positively related to frequency of Uplifts (r=.12, p<.05). However, all the religious variables except Personal Prayer have more substantial positive correlations with the measure of Purpose-in-Life (r's=.21, .22, .23, .31, p<.001 for Church Beliefs, Church Nonworship Activities, Personal Religious Beliefs, and Church Worship).

Examining the relationship of the Hassles and Uplifts and PIL scores with the outcome variables for females, it is clear that these constructs are associated with both physical and psychological health. The frequency of Hassles score is positively correlated with the CHIPS severity score

and the Psychological Distress scale of the MHI (r's=.31 and .46, $p<.001$) and negatively with Psychological Well-being and general health status (r's=-.35 and -.22, $p<.001$). A similar pattern of relationships is observed for the mean intensity of Hassles score. The relationships between the Uplifts scores and the outcome variables are less substantial and less straightforward. While there is a small but significant positive correlation between the frequency of Uplifts score and Psychological Well-being (r=.11, $p<.05$), the frequency of Uplifts also has slightly more robust positive correlations with the severity of physical symptoms (r=.16, $p<.01$) and Psychological Distress (r=.14, $p<.01$). The mean intensity of Uplifts has a strong positive correlation with Psychological Well-being (r=.31, $p<.001$), but it also relates positively to the frequency of medical visits (r=.13, $p<.01$).

The Purpose-in-Life score has moderate to high positive correlations with health status and Psychological Well-being (r's=.27 and .68, $p<.001$) and somewhat smaller but still robust negative correlations with the severity of physical symptoms and Psychological Distress (r's=-.28 and -.52, $p<.001$). Except for the mean intensity of Uplifts, none of the hypothesized mediating variables are associated with the number of medical visits.

With regard to the initial hypotheses of the indirect effect of religion on health measures for females, it appears that although the Hassles scores in particular are

related in the expected direction with both physical and psychological health, the religious variables seem to have little impact on Hassles or Uplifts scores (b1 and b2). Thus the personal prayer and personal religious beliefs scales not only have no direct relationship with the health outcome variables, they also do not seem to have any significant indirect effects on these measures through the perception of minor daily stresses and pleasures. The hypotheses about the indirect effects of Personal Religious Beliefs on Psychological Distress and Well-being receives some preliminary support because of the significant relationship between Personal Religious Beliefs and the Purpose-in-Life variable and this latter variable's significant relationship with psychological health.

To further test this very simple model of Personal Religious Beliefs acting through Purpose-in-Life to effect psychological health, a least squares path analysis program written by Hunter and and Hamilton (1986) was run on the data. This particular path analysis program computes a matrix of reproduced correlations based on the estimated path coefficients and compares the reproduced correlations with the original correlations. The resulting errors from this comparison are squared and summed for use in a Chi-square Test to determine the goodness of fit of the tested model. This path analysis failed to confirm the the hypothesized indirect link of Personal Religious Beliefs with psychological health through the Purpose-in-life

variable. Additionally, testing alternate models using the other religious variables resulted in simlar large error terms which were highly significant as determined by the Chi-square tests.

Religion indirectly related to outcomes for males.

Turning to the male subsample, the hypothesis of Personal Prayer (REL1) and Personal Religious Beliefs (REL4) acting on health outcomes through Hassles and Uplifts (b1 and b2) receives little support. While Personal Prayer has statistically significant but small correlations with the frequency of Hassles (r=-.15, p<.05) and with the mean intensity of Uplifts (r=.14, p<.05), Personal Religious Beliefs are unrelated to these scales. Meanwhile, slightly larger positive correlations occur with Church Nonworship Activities (REL3) and the frequency of Uplifts (r=.21, p<.05) and the intensity of Uplifts (r=.22, p<.05). Church Worship (REL5) also is positively correlated with the intensity of Uplifts (r=.19, p<.05). Unlike the female sample, only one religious variable (Church Worship) has a significant positive relationship with Purpose-in-Life (r=.21, p<.05).

As observed in the female subsample, the relationships of the Hassles and Uplifts and Purpose-in-Life variables with the physical and psychological health scores are also strong in the male subsample. As expected, the frequency and mean intensity of Hassles are correlated positively with physical symptoms (r's=.37, .31, p<.001) and Psychological

Distress (r'=.44, .28, p<.001) and negatively with general health status and Psychological Well-being (r's=-.18, -.21, p<.05). Although the relationship between the mean intensity of Uplifts and Psychological Well-being (r=.37, p<.001) and Distress (r=-.19, p<.05) are statistically significant and in the hypothesized direction, the frequency of Uplifts is significantly but positively correlated with physical symptoms (r=.24, p<.01).

As hypothesized, the Purpose-in-Life scale is significantly and positively related to general health status (r=.19, p<.01) and Psychological Well-being (r=.71, p<.001) and negatively associated with physical symptoms (r=-30, p<.001) and with Psychological Distress (r=-.57, p<.001). None of the hypothesized intervening variables of Hassles and Uplifts and Purpose-in-Life are related to the number of medical visits.

Thus for the male subsample, there seems to be no support for the initial hypothesis about Personal Prayer and Personal Religious Beliefs indirectly effecting health outcomes by acting through the perception of daily minor events (b1 and b2) and through the Purpose-in-Life variable (b3 and b4). Given that Church Worship was the only religious variable significantly associated with the Purpose-in-Life measure, a path analysis as previously described for the female subsample, was utilized to check for a possible indirect effect of this religious variable on psychological health through the Purpose-in-Life variable.

A large error term resulted and thus the analysis failed to support the proposed model.

In summary, none of the hypothesized indirect effects of the religious variables were supported for either subsample. It would seem that conceptualizing the relationship of the religious variables with the Hassles and Uplifts and the Purpose-in-Life variables in terms of the simple causal models presented is inadequate to explain the current data. However, another possible view of the relationship among these variables is that they are all relatively independent exogeneous variables predicting the variance in the various health variables. This perspective might shed some light on those components of religion that are involved when the religious variables exert even a minor but significant effect on the health variables. As a result, a series of partial correlations were performed to observe the direct effects of religion on the outcome variables when the effects of the Hassles and Uplifts and the Purpose-in-Life variables were statistically controlled. These results are discussed in the following section along with other analyses.

Further Analyses

Partial correlations for females.

The zero-order and partial correlations for both subsamples controlling for the four Hassles and Uplifts scores individually and simultaneously are presented in Table 14. Examining the female subsample, it appears that

Table 14 Zero-order and partial correlations between the RIS and health variables controlling for Hassles and Uplifts.

Females

Controlling for Frequency of Hassles

(Partial correlations in parentheses)

	SevSx	Health	RxVisits	PWB	DTRS
REL					
1	.00 (-.03)	.02 (.04)	.09 (.09)	.03 (.06)	.02 (-.02)
2	-.08 (-.06)	.14a(.12a)	.13a(.13a)	.05 (.02)	.00 (.04)
3	-.14a(-.11a)	.15b(.13a)	.10 (.10)	.15b(.13a)	-.10 (-.05)
4	-.08 (-.08)	.06 (.06)	.11a(.11a)	.06 (.06)	.02 (.03)
5	-.11a(-.10)	.19c(.19c)	.17b(.17b)	.15b(.15b)	-.04 (-.02)

Controlling for Mean Intensity of Hassles

	SevSx	Health	RxVisits	PWB	DTRS
REL					
1	.00 (-.02)	.02 (.03)	.09 (.09)	.03 (.05)	.02 (.00)
2	-.08 (-.10)	.14a(.14a)	.13a(.12a)	.05 (.06)	.00 (-.02)
3	-.14a(-.15a)	.15b(.15b)	.10 (.10)	.15b(.16b)	-.10 (-.10)
4	-.08 (-.10a)	.06 (.07)	.11a(.11a)	.06 (.08)	.02 (.00)
5	-.11a(-.10)	.19c(.19c)	.17b(.17b)	.15b(.15b)	-.04 (-.03)

a: $p<.05$ b: $p<.01$ c: $p<.001$

REL1=Personal Prayer
REL2=Church Beliefs
REL3=Church Nonworship Activities
REL4=Personal Religious Beliefs
REL5=Church Worship
SevSx=Physical Symptoms
Health=General Health Status
RxVisits=Number of Medical Visits
PWB=Psychological Well-being
DTRS=Psychological Distress

Table 14 (cont'd).

Females

Controlling for Frequency of Uplifts

(Partial Correlations in Parentheses)

REL	SevSx	Health	RxVisits	PWB	DTRS
1	.00 (-.02)	.02 (.02)	.09 (.09)	.03 (.02)	.02 (.01)
2	-.08 (-.08)	.14a(.14a)	.13a(.13a)	.05 (.05)	.00 (.00)
3	-.14a(-.14a)	.15b(.15b)	.10 (.10)	.15b(.15b)	-.10 (-.10)
4	-.08 (-.08)	.06 (.06)	.11a(.11a)	.06 (.06)	.02 (.02)
5	-.11a(-.13a)	.19c(.19c)	.17b(.17b)	.15b(.14b)	-.04 (-.05)

Controlling for Mean Intensity of Uplifts

REL	SevSx	Health	RxVisits	PWB	DTRS
1	.00 (-.01)	.02 (.00)	.09 (.07)	.03 (-.02)	.02 (.03)
2	-.08 (-.09)	.14a(.12a)	.13a(.11a)	.05 (.01)	.00 (.01)
3	-.14a(-.15a)	.15b(.14b)	.10 (.09)	.15b(.13b)	-.10 (-.09)
4	-.08 (-.08)	.06 (.05)	.11a(.11a)	.06 (.06)	.02 (.03)
5	-.11a(-.12a)	.19c(.18b)	.17b(.15b)	.15b(.12a)	-.04 (-.03)

Controlling for all four Hassles and Uplifts scores

REL	SevSx	Health	RxVisits	PWB	DTRS
1	.00 (-.05)	.02 (.01)	.09 (.07)	.03 (-.01)	.02 (.00)
2	-.08 (-.08)	.14a(.11a)	.13a(.11a)	.05 (-.03)	.00 (.06)
3	-.14a(-.12a)	.15b(.11)	.10 (.09)	.15b(.06)	-.10 (-.03)
4	-.08 (-.10a)	.06 (.06)	.11a(.11a)	.06 (.07)	.02 (.02)
5	-.11a(-.10)	.19c(.15b)	.17b(.15b)	.15b(.05)	-.04 (.04)

a: p<.05 b: p<.01 c: p<.001

REL1=Personal Prayer
REL2=Church Beliefs
REL3=Church Nonworship Activities
REL4=Personal Religious Beliefs
REL5=Church Worship
SevSx=Physical Symptoms
Health=General Health Status
RxVisits=Number of Medical Visits
PWB=Psychological Well-being
DTRS=Psychological Distress

Table 14 (cont'd).

Males

Controlling for Frequency of Hassles

(Partial Correlations in Parentheses)

	SevSx	Health	RxVisits	PWB	DTRS
REL					
1	-.05 (.01)	.12 (.10)	.11 (.13)	.09 (.06)	-.22b(-.17a)
2	.14 (.08)	-.06 (-.03)	-.10 (-.12)	-.01 (.03)	.21a(.16)
3	.23a(.19a)	-.07 (-.04)	.06 (.05)	.12 (.15)	.04 (-.03)
4	.15a(.11)	-.05 (-.03)	.03 (.02)	-.01 (.01)	.21b(.18a)
5	.11 (.11)	-.16 (-.15)	.04 (.04)	.14 (.14)	-.01 (-.02)

Controlling for Mean Intensity of Hassles

	SevSx	Health	RxVisits	PWB	DTRS
REL					
1	-.05 (-.05)	.12 (.12)	.11 (.11)	.09 (.09)	-.22b(-.23b)
2	.14 (.15)	-.06 (-.06)	-.10 (-.10)	-.01 (-.01)	.21a(.22a)
3	.23a(.21a)	-.07 (-.06)	.06 (.07)	.12 (.14)	.04 (.02)
4	.15a(.16a)	-.05 (-.05)	.03 (.03)	-.01 (-.02)	.21b(.23b)
5	.11 (.16)	-.16 (-.16)	.04 (.03)	.14 (.11)	-.01 (.04)

a: $p<.05$ b: $p<.01$ c: $p<.001$

REL1=Personal Prayer
REL2=Church Beliefs
REL3=Church Nonworship Activities
REL4=Personal Religious Beliefs
REL5=Church Worship
SevSx=Physical Symptoms
Health=General Health Status
RxVisits=Number of Medical Visits
PWB=Psychological Well-being
DTRS=Psychological Distress

Table 14 (cont'd).

Males

Controlling for Frequency of Uplifts

(Partial Correlations in Parentheses)

	SevSx	Health	RxVisits	PWB	DTRS
REL					
1	-.05 (-.03)	.12 (.11)	.11 (.13)	.09 (.10)	-.22b(-.23b)
2	.14 (.11)	-.06 (-.05)	-.10 (-.11)	-.01 (-.02)	.21a(.22a)
3	.23a(.19a)	-.07 (-.05)	.06 (.05)	.12 (.10)	.04 (.02)
4	.15a(.13)	-.05 (-.04)	.03 (.02)	-.01 (-.02)	.21b(.23b)
5	.11 (.08)	-.16 (-.15)	.04 (.03)	.14 (.13)	-.01 (.04)

Controlling for Mean Intensity of Uplifts

	SevSx	Health	RxVisits	PWB	DTRS
REL					
1	-.05 (-.07)	.12 (.11)	.11 (.11)	.09 (.03)	-.22b(-.19b)
2	.14 (.12)	-.06 (-.07)	-.10 (-.11)	-.01 (-.06)	.21a(.24b)
3	.23a(.21a)	-.07 (-.10)	.06 (.06)	.12 (.04)	.04 (.09)
4	.15a(.15)	-.05 (-.05)	.03 (.03)	-.01 (-.02)	.21b(.22b)
5	.11 (.09)	-.16 (-.18a)	.04 (.04)	.14 (.07)	-.01 (.03)

Controlling for all four Hassles and Uplifts scores

	SevSx	Health	RxVisits	PWB	DTRS
REL					
1	-.05 (-.01)	.12 (.08)	.11 (.12)	.09 (-.01)	-.22b(-.16a)
2	.14 (.08)	-.06 (-.05)	-.10 (-.14)	-.01 (-.04)	.21a(.22a)
3	.23a(.17)	-.07 (-.08)	.06 (.05)	.12 (.04)	.04 (.06)
4	.15a(.13)	-.05 (-.03)	.03 (.01)	-.01 (-.02)	.21b(.23b)
5	.11 (.15)	-.16 (-.20a)	.04 (.01)	.14 (-.03)	-.01 (.14)

a: p<.05 b: p<.01 c: p<.001

REL1=Personal Prayer
REL2=Church Beliefs
REL3=Church Nonworship Activities
REL4=Personal Religious Beliefs
REL5=Church Worship
SevSx=Physical Symptoms
Health=General Health Status
RxVisits=Number of Medical Visits
PWB=Psychological Well-being
DTRS=Psychological Distress

holding any one of the Hassles and Uplifts scores constant generally has little appreciable effect on the positive relationships of both Church Nonworship Activities (REL3) and Church Worship (REL5) with Psychological Well-being. In addition, the relationships among the other religion and health variables are only slightly changed. However, simultaneously holding constant the effects of all four Hassles and Uplifts scores completely removes the observed significant zero-order correlations for Church Nonworship Activities and Church Worship with Psychological Well-being and physical symptoms, as well as reduces the relationships of some of the religious variables with general health status and medical visits.

Controlling for the effects of Purpose-in-Life alters the positive zero-order relationships between both Church Nonworship Activities (REL3) and Church Worship (REL5) and the mental health variables. As it can be seen in Table 15, the previous significant relationship of Church Nonworship Activities (REL3) and Church Worship (REL5) with Psychological Well-being are completely removed by holding Purpose-in-Life constant. Additionally, significant positive correlations of Psychological Distress with Church Beliefs (REL2, r=.13, p<.05), Personal Religious Beliefs (REL4, r=.17, p<.01), and Church Worship (REL5, r=.15, p<.05) are uncovered as well as significant negative relationship of Church Beliefs and Psychological Well-being (both r's=-.13, p<.05)

Table 15 Zero-order and Partial Correlations Between the RIS and Health Variables Controlling for Purpose-in-Life.

Females

(Partial correlations in parentheses)

REL	SevSx	Health	RxVisits	PWB	DTRS
1	.00 (.00)	.02 (.02)	.09 (.09)	.03 (.04)	.02(.03)
2	-.08 (-.03)	.14a(.09)	.13a(.11a)	.05 (-.13a)	.00(.13a)
3	-.14a(-.08)	.15b(.10)	.10 (.08)	.15b(.01)	-.10(.02)
4	-.08 (-.01)	.06 (-.01)	.11a(.10a)	.06 (-.13a)	.02(.17b)
5	-.11a(-.03)	.19c(.12a)	.17b(.15b)	.15b(-.08)	-.04(.15a)

Males

REL	SevSx	Health	RxVisits	PWB	DTRS
1	-.05 (-.01)	.12(.12)	.11 (.11)	.09(.11)	-.22b(-.26c)
2	.14 (.17a)	-.06(-.08)	-.10 (-.09)	-.01(-.12)	.21a(.33c)
3	.23a(.29b)	-.07(-.10)	.06 (.09)	.12(.00)	.04 (.16)
4	.15a(.17a)	-.05(-.06)	.03 (.04)	-.01(-.08)	.21b(.30c)
5	.11 (.18a)	-.16(-.20a)	.04 (.07)	.14(-.02)	-.01 (.14)

a: p<.05 b: p<.01 c: p<.001

REL1=Personal Prayer
REL2=Church Beliefs
REL3=Church Nonworship Activities
REL4=Personal Religious Beliefs
REL5=Church Worship
SevSx=Physical Symptoms
Health=General Health Status
RxVisits=Number of Medical Visits
PWB=Psychological Well-being
DTRS=Psychological Distress

It would appear that Purpose-in-Life not only accounts for a considerable share of the variance in the positive relationships of Church Nonworship Activites (REL3) and Church Worship (REL5) with Psychological Well-being, but it also serves to mask some of the relationships between the religion and the mental health variables.

With regard to the physical health measures, again Purpose-in-Life accounts for much of the variance in the negative relationships of Church Non-worship Activities (REL3) and Church Worship (REL5) with physical symptoms and the positive relationships of these two religious variables with general health status. However, it has little impact on the small but significant positive relationships of Religious Beliefs (REL4) and Church Worship with medical visits.

Partial correlations for males.

Controlling for the Hassles and Uplifts scores individually for the male subsample results in relatively minor fluctuations from the zero-order correlations between the religious and health variables. Controlling for all four Hassles and Uplifts scores simultaneously reduces the positive relationship of Church Nonworship Activities (REL3) and Personal Religious Beliefs (REL4) with physical symptoms to a nonsignificant level. However, controlling for all the effects of Hassles and Uplifts has little impact on the positive relationships of Church Beliefs (REL2) amd

Personal Religious Beliefs with Psychological Distress. While the negative relationship between Personal Prayer (REL1) and Psychological Distress is reduced, it still remains statistically significant (r=-.16, p<.05). In general, it seems that the perceptions of minor daily events shares less of the variance of the relationship between the religious and health variables for the males than for the females in this sample.

Partialling out the effects of Purpose-in-Life for the male subsample strengthens the positive relationship of Church Beliefs and Personal Religious Beliefs with Psychological Distress (r's=.33, .30, p<.001) and uncovers substantial positive though nonsignificant relationships of Church Non-worship Activities (r=.16) and Church Worship (r=.14) with the same variable. Controlling for Purpose-in-Life also strengthens the positive relationship of Church Non-worship Activities (r=.29, p<.01) and Personal Religious Beliefs (r=.17, p<.05) with physical symptoms and uncovers significant positive relationships between this variable and Church Beliefs (r=.17, p<.05) and Church Worship (r=.18, p<.05). Thus it appears that Purpose-in-Life is also an important mediating variable for males in the relationships of the religious variables with the health variables. In general, partialling out the effects of Purpose-in-Life for males strengthens the positive association of all the religious variables except Personal Prayer (REL1) with both physical and psychological symptoms.

Regression analyses.

For both males and females it appears that Purpose-in-Life is a salient component in any of the positive associations between the religious and health variables. Controlling for the effects of personal meaning dramatically changes the nature of the relationships between religion and health. The perception of minor daily events as measured by the Hassles and Uplifts Scale does not seem to be as closely involved in the relationships between health and religion for either subsample. To further pursue the relatively independent contribution of religion to predicting both psychological and physical health, a series of stepwise regression analyses were carried out with the five health scores as the dependent variables. To test the strength of the religious variables in these equations as well as to determine the most salient predictors of health among the variables measured, all the major independent variables were considered for each of the equations. This then included the five RIS variables, the DeJong "Orthodoxy" scale identified earlier, the Hassles and Uplifts scores, the Purpose-in-Life measure, and the four identity status subscales. In addition, another variable describing certain health "habits" was also included. Three questions on the physical health measure surveyed the frequency of use of recreational drugs, alcohol, and tobacco within the past month. The scores on these three items were simply summed to form a rough composite of particular "habits" that may

directly effect physical health. Indeed the "habits" variable is significantly related to both the severity of physical symptoms (r=.18, p<.01) for females and to general health status for both males (r=-.19, p<.05) and females (r=-.12, p<.05). It is unrelated to the number of medical visits for both subsamples. Another reason for including the "habits" variable in the regression analyses is the relatively strong negative association between this variable and the religious variables which may indicate an indirect influence of religion on physical health. Table 16 presents the correlations for both subsamples between the Health Habits variable and the religious and health measures.

The possibility of some of the psychological health measures predicting the physical health measures was also considered in determining possible variables for some of the regression equations. While it is also possible that physical health may be predictive of psychological symptoms in some samples (Koenig, Kvale, and Ferrel, 1988), the fact that 81% of this sample reported their health to be "good" or "excellent" reduced the likelihood of that relationship for this younger sample.

The regression equations for both subsamples are presented in Table 17. The particular equations reported here were chosen as the best-fit models based not only on the magnitude of the multiple R but also on the size of the corresponding standard error of measurement and the relatively independent relationship among the predictor

Table 16 Correlations of Health Habits With Religious and Health Variables.

Females		Males	
	Habits		Habits
REL1	-.05	REL1	-.03
REL2	-.22c	REL2	-.22a
REL3	-.28c	REL3	-.24a
REL4	-.24c	REL4	-.31c
REL5	-.31c	REL5	-.19
ORTH	-.22c	ORTH	-.15
SevSx	.18b	SevSx	.10
Health	-.12a	Health	-.19a
RxVisits	.03	RxVisits	-.01

REL1=Personal Prayer
REL2=Church Beliefs
REL3=Church Nonworship Activities
REL4=Personal Religious Beliefs
REL5=Church Worship
ORTH=DeJong Belief, Practice, & Experience subscales
SevSx=Severity of physical symptoms
Health=General health status
RxVisits=Medical visits

a: $p<.05$ b: $p<.01$ c: $p<.001$

Table 17 Stepwise Regression Analyses for the Five Health Variables.

Females

	b	Beta	R	R2	F
Psychol. Well-Being			.72	.51	107.73
PIL	.46	.61			p<.001
Manyhas	-.15	-.26			
Psychol. Distress			.62	37	43.88
PIL	-.48	-.42			p<.001
Manyhas	.33	.39			
Meanups	6.68	.15			
Health Status			40	.15	14.61
PWB	.03	.24			p<.001
REL5	.08	.17			
Manyhas	-.01	-.17			
Severity of Physical Sx			.53	.28	42.74
DTRS	.51	.50			p<.001
Habits	.96	.14			
Medical Visits			.26	.06	10.04
ID-Mor	-.04	-.20			p<.001
ORTH	.02	.13			

PIL=Purpose-in-Life
Manyhas=Sum of Hassles
Meanups=Mean intensity of Uplifts
PWB=Psychological Well-being
DTRS=Dsychological Distress
Habits=Frequency of drug, alcohol, and tobacco use
ID-Mor=identity status-Moratorium
ORTH=DeJong Belief, Practice, & Experience subscales

Table 17 (cont'd).

Males

	b	Beta	R	R2	F
Psychol. Well-Being			.75	.55	55.28
PIL	.52	.71			p<.001
Meanups	6.26	.20			
ID-Ach	-.19	-.15			
Psychol. Distress			.71	.49	43.35
PIL	-.56	-.51			p<.001
Manyhas	.22	.36			
REL1	-.71	-.16			
Health Status			.27	.06	4.81
DTRS	-.02	-.21			p<.01
Habits	-.08	-.16			
Severity of Physical Sx			.60	.33	15.25
DTRS	.36	.40			p<.001
Meanhas	11.92	.28			
REL3	1.27	.20			
Medical Visits			.23	.05	7.35
ID-For	-.02	-.23			p<.01

PIL=Purpose-in-Life
Meanups=mean intensity of Uplifts
ID-Ach=identity status-Achievement
Manyhas=sum of Hassles
DTRS=Psychological Distress
Habits=frequency of drug, alcohol, and tobacco use
Meanhas=mean intensity of Hassles
ID-For=identity status-Foreclosure

variables. All variables were selected for entry into equations based on the magnitude of their zero-order correlations with the dependent variables. Highly intercorrelated independent variables were entered into separate equations to avoid problems of multicollinearity and the resulting equations were compared based on the above criteria. In all the equations presented in Table 17, the standardized beta coefficients are statistically significant. As apparent in the results, all the F values (representing the ratio of the Mean Square of the Regression to the Mean Square of the Residuals) are also significant.

Examining the regression equations, it is apparent that the religious variables measured in this study are not very predictive of the psychological and physical health measures especially in comparison to other variables. Church Worship (REL5) is one of three variables predictive of general health status for females and Personal Prayer (REL1) is also one of three variables predictive of Psychological Distress for males. While in these instances the religious variables are related in the expected direction to the health measures, Church Nonworship Activities (REL3) is positively related and predictive of the severity of physical symptoms for males. While the DeJong "Orthodoxy" subscale is predictive of the number of medical visits for females, its overall effect on this variable is limited.

As anticipated, the mental health variables are important predictor variables for general health status and severity of physical symptoms for both males and females. The Purpose-in-Life and Hassles and Uplifts variables, which were originally hypothesized to have a direct effect on the health measures, appear frequently in the equations for both samples. The Purpose-in-Life variable is a major predictor of the mental health variables for both samples and the Hassles and Uplifts variables are found in three equations for each of the subsamples. For the females in particular, the number of Hassles reported seems to be an important variable in predicting both physical and psychological health.

Discussion

This study examined the relationship of religion to both the physical and mental health of a late adolescent sample. Several hypotheses were made regarding the direct relationship of religious belief and involvement on health variables. Additional hypotheses were tested about the possibility of religion acting indirectly on health through the variables of perceived daily stress and purpose in life. Finally, hypotheses regarding the relationship of religious belief and psychosocial identity development were also tested.

The Sample

An important methodological concern, the nonrandomness of the sample, should be addressed at this time. As previously stated, given the intention of the current study to replicate some of this author's finidings in his previous research, a college undergraduate sample similar in demographic characteristics to the one used by this author in his previous research was chosen for the current study. As with many college-based samples, the initial restricted pool of subjects (limited to those students enrolled in introductory psychology classes) and the self-selection bias inherent in any volunteer recruitment procedure preclude random sampling in the strictest sense.

It can be argued that a general college undergraduate sample is particularly inappropriate when studying the effects of religion, given the general assumption that the

saliency of religion is inversely related to educational level. However, larger national surveys (e.g., Better Homes and Gardens, 1988; Gallup, 1987) do not support such a simple generalization but rather indicate that the relationship between religion and education varies with the specific questions asked about religious belief and involvement. For instance, in response to the question about the importance of religion in an individual's life, the response of "not very important" increased progressively along levels of educational achievement from 9% of those subjects without a high school diploma to 20% of subjects with a college degree (Gallup, 1987). However, in the same poll, in response to a question about attending church in the past week, 38% of those without a high school diploma and 42% of those with a college degree reported attending church. Additionally, for those in this same poll who reported praying, 22% of those with a college degree and 19% of those without a high school diploma reported praying three times a day or more. Thus based on national surveys, it does not appear that more educated samples like college undergraduates are inherently nonreligious.

Regarding the nonreligiousness of this particular sample, the only normative indicator was the percentage of subjects reporting no affiliation with any religion. For a national sample of a similar age group (Gallup, 1987), 14% reported no affiliation with any religious group in comparison to 15.7% for the current sample. Thus while the

current sample does not seem particularly nonreligious, a more adequate test of the hypotheses in the current study would require a sample that is deliberately stratified along some measure of religious salience which might necessitate additional sampling from organized religious groups. Using such a sampling procedure, Bernardo (1988) found that measures of religiosity were more strongly correlated with scores of trait anxiety and Hassles frequency for late adolescents selected from religious groups in comparison to similar age subjects from a general college undergraduate sample. Thus while the hypotheses in this study may have gained stronger support in a more religious sample, the aim of the current study was to provide generalizability across college undergraduate samples.

Hypotheses

In general, there was very little support for the major hypotheses in this study regarding the relationships of specific religious variables with psychological and physical health measures. Of the several hypotheses regarding the direct relationships of religion with health measures, only two received any support from the data. For females, Church Nonworship activities is positively related to Psychological Well-being and negatively to physical symptoms. While the these correlations are statistically significant, they are relatively low (r'=.15 and -.14). Although Personal Prayer for males is not positively associated with Psychological Well-being as hypothesized, it is negatively associated with

Psychological Distress (r= -.22).

Other nonspecified relationships between the religious and health variables were observed. For the female subsample, Church Worship is positively related to Psychological Well-being and general health status and negatively related to physical symptoms. While not anticipated, these relationships are reasonable since Church Worship along with Church Nonworship Activities are the two variables that tap the social aspects of religion.

For the males, the unanticipated direct relationships between the religious and health variables are contradictory to the general role argued for religion in this study. Both the religious belief subscales of the RIS (Church Beliefs and Personal Religious Beliefs) are significantly and positvely related to Psychological Distress. Personal Religious Beliefs and Church Nonworship Activities both have significant, positive relationships with reported physical symptoms.

There was no support for the hypotheses about the indirect influence of the religious variables acting through the perception of minor daily events and a sense of purpose in life. With regard to the Hassles and Uplifts scores, there was very little relationship between these and the religious variables for both subsamples. The significant relationship of Personal Religious Beliefs and Personal Prayer with the frequency of Uplifts reported that was observed in the previous research (Antosz, 1988) was not

replicated in the current study. Without this initial direct relationship between the religious variables and the Hassles and Uplifts scores, it is not likely that the perception of minor daily events is acting as an intervening variables for religion.

In contrast to the relationship between religion and Hassles and Uplifits, there are significant initial links between religion and Purpose-in-Life, especially for the female subsample. However, path analyses failed to confirm the model of religion acting on health measures through the Purpose-in-Life variable. This is reasonable considering the relatively high correlations of the Purpose-in-Life variable with the health measures, in particular the mental health variables, and the comparatively lower correlations between religion and the health measures. This pattern suggests that religion may be a relatively minor source of the overall variance in the relationship of purpose in life to health measures.

Since both physical and mental health are frequently assumed to be important aspects of an overall sense of well-being, these overall results of the current study are in line with Witter et al.'s (1985) review of the consistent findings in the literature that religion has a positive, but generally very small relationship to various aspects of well-being. Thus the current study seems to support the fact that although for some late adolescents religion may be associated with positive health outcomes, the relationship

of religion and well-being for this particular age and developmental group is not necessarily any stronger than for the general population.

While there is very little support for any of the original hypotheses of this study, additional analyses of the current data shed some light on other aspects of religion. While it is tempting to seek confirmation for some of these post-hoc speculations through further causal modeling of alternate models, Godwin (1988) presents a cogent case for the theoretical problems involved when using this particular type of analyses for "theory-trimming" or "data dredging" (p. 919). However, a more informal analysis of the data can reveal suggestions for further research.

Identity Status

The current study reveals some interesting information about the relationship of religion to general identity development in this age group, particularly pointing to gender differences. Additionally, the current data seems to offer some hints about the particular components of religion that are salient to this age group, which again seem to differ as the result of gender.

As previously discussed, there is considerable debate in the literature about whether religious development parallels general ego identity development (Fowler, 1981; Mischey, 1981) or whether the various domains of personal identity develop at uneven rates (Parker, 1985; Thorbecke & Grotevant, 1982; Coleman, 1978). The data from the current

sample indicate that the measure of the Achievement status of ego identity is more closely related to the religious variables for females. For males there is a much stronger relationship between the Foreclosure measure of identity status and the religious variables. Even the triad of the DeJong subscales which essentially measure adherance to orthodox Christian beliefs and practices is related to the Achievement measure for females and to the Foreclosure measure for males. In addition, the ANOVAs that examined the five RIS variables according to specific identity types found that females in the identity Achievement group scored highest on all the religious variables whereas males in this group scored highest only on the Personal Religious Beliefs subscale. For the males, the Foreclosure group scored highest on the triad of RIS subscales related to institutional religious beliefs and practices (Church Beliefs, Church Nonworship Activities, and Church Worship.

The relationship of identity status and religion for males is particularly interesting in light of other relationships found in this study. For instance, the Personal Religious Beliefs subscale for males is also positively related to physical symptoms and psychological distress. The identity Achievement measure is one of three variables in the regression equation for males predicting Psychological Well-being, and although it has a positive zero-order correlation with that variable, it becomes negatively weighted in the equation.

The relationship of the identity Achievement measure with the mental health variables for the males in this sample is contrary to the theoretical basis for this construct (Marcia, 1966; Erikson, 1968) and the relationships observed for the female subsample. Another series of ANOVAs were carried out for the male subsample to further investigate this finding. The results indicate that the Achievement status group scores higher on the Psychological Distress variable than all the other groups except the Moratorium/Diffusion transitional group. This same ranking occurs for the lowest score on the number of Uplifts reported. The Achievement status group scores the highest on the MHI subscale of the Loss of Behavioral/ Emotional Control and the average intensity of Hassles.

As previously noted, proportionately there are twice as many females than males categorized in the Achievement status group and about three times as many males than females in the identity Diffusion group. It would appear that at least for this sample, the females as a group are more developmentally advanced within the context of the measures used. Since it is not clear from the data why there are such negative outcomes associated with the identity Achievement status for males, there is room for some speculation.

As discussed earlier in this paper, it was observed in the previous research (Antosz, 1988) with a similar sample that the group scoring highest on the Personal Religious

Beliefs scale endorsed many items on both the Hassles and Uplifts scales that could be associated with the the various tasks and behaviors attributed to individuals who have attained some level of personal identity achievement. While some of these behaviors and accompanying feelings (e.g., concerns about financial security, getting ahead and regrets over past decisions) were viewed as hassles, proportionately more were viewed as uplifts or sources of joy and satisfaction. Apparently this comparable group of males in the current study is finding the similar developmental tasks to be more stressful with little accompanying satisfaction.

One source of this stress appears to result from the sense of having too many responsibilities without the necessary time to fulfill them. This conclusion is derived from the significantly positive correlation (r=.21, p<.01) between the Achievement measure and the "Pressure" factor of items derived from the Hassles subscale and described earlier. This same time pressure is associated with Church Nonworship Activities and Personal Religious Beliefs (r's=.21, .19, p<.05) and the DeJong Orthodoxy triad of subscales (r=.24, p<.01).

Another possible explanation for these results is that for this particular sample of late adolescent males, a personal sense of responsibility and defined values including strongly held personal religious beliefs may clash with the prevalent behaviors and mores of the larger peer group at college. Considerable internal conflict may arise

when such individuals are pulled by the strong opposing needs of remaining consistent with their internal values and beliefs and the desire for social approval and acceptance. In such cases, the possible personal benefits of identity Achievement status and strongly held religious beliefs may be considerably diluted for these individuals.

Components of Religious Involvement

The data from this study also provide a closer look at some of the components of religion that may be important for this age group. In the literature on religious conversion and particularly the attraction of young people to religious cults, there are some suggestions about these salient components of religion. For instance, Glock and Stark (1965) see cults as satisfying an individual's need for purpose and meaning in life. In addition to a sense of meaning in life, Parker (1985) also lists group support and solutions to current situational problems as factors influencing religious conversion experiences.

While religion appears to have little direct or indirect effect on health measures, fairly dramatic changes occur when the Purpose-in-Life variable is statistically controlled. For the female subsample, the social aspects of institutional religion (Church Nonworship Activities and Church Worship) are no longer significantly and postively related to Psychological Well-being and the two religious belief variables (Church Beliefs and Personal Religious Beliefs become positively related to psychological distress.

For males in the sample, partialling out the effects of personal meaning in the relationship between the religious and health variables results in positive increases in the correlations of four of the religious variables (REL2 to REL5) with the measures of both physical and psychological symptoms.

These results and those of Bernardo (1988) with a similar age sample suggest that for both males and females, personal meaning is a crucial element in religion for this age group. When this meaning is no longer a factor, the positive outcomes associated with religion are not only diminished but the various aspects of religion, particularly religious beliefs become associated with both physical and psychological symptoms. There is considerable support for the importance of the meaning in life provided by religious involvement and commitment and its impact on the relationships between religion and measures of general well-being (Kahoe, 1989; Zika & Chamberlain, 1988; Peterson & Roy, 1985.)

Because of the cross-sectional design and the correlational nature of this study, it cannot be determined to what extent holding meaning constant uncovers the reports of symptoms by those individuals who only have a superficial or extrinsic orientation (Allport, 1966) to religion or those who may be in either physical or psychological distress who are turning to religion for some comfort.

There appears to be at least some support that for the

male sample, Personal Prayer seems to provide this latter function of affective comfort. For instance, when Purpose-in-Life is held constant, the already significant, negative relationship between Personal Prayer and Psychological Distress increases. Additionally, in the ANOVAs analyzing the religious variables by the different identity status groups, it was observed that the Moratorium group had the highest group score on Personal Prayer. However, the Moratorium subscale as a continuous measure correlates negatively with Personal Prayer (r=-.21, p<.01). By definition, individuals experiencing the Moratorium stage of identity development are searching for meaning (Adams et al., 1987). Since the Moratorium subscale has significant positive relationships with physical and psychological symptoms and significant negative relationships with health status and Psychological Well-being, it would appear that this identity status is particularly uncomfortable for males. Thus it is possible that some of the males in the pure Moratorium stage, as identified in the ANOVAs, may find a measure of immediate relief in prayer. The identity Diffusion group, which by definition is not actively seeking personal meaning (Adams et al., 1987), has the second highest group score on Personal Prayer. The lack of any significant relationship between the Diffusion subscale and psychological and physical symptoms would suggest that when utilized by this status group, prayer also tends to serve a situational relief function as described by Parker (1985).

It is interesting to note that while the zero-order correlations of the social aspects of religion (Church Non-worship Activities and Church Worship) are significant and negative with physical symptoms and significant and positive with health status and psychological well-being for females, holding purpose in life constant removes these relationships. This combination of personal meaning and interpersonal relationships in religion for females would be consistent with more recent views of gender differences in ego identity development (Gilligan, 1982; Thorbecke & Grotevant, 1982; Josselson, Greenberger, & McConochie, 1977). In a somewhat oversimplification of these complex views, it might be said that interpersonal relationships are a primary source of personal meaning for adolesent females, a situation which appears to occur for adults of both genders (Klinger, 1977). If there is some truth in this statement, then the social apsects of organized religion can provide these late adolescent females with a source of personal meaning. When this meaning is partialled out of the equation, the saliency of the social dimensions of religion is removed and religious beliefs become positively related to Psychological Distress and negatively related to Psychological Well-being.

The difference between genders in the importance of the social dimensions of religion are further supported by looking at the relationship between the church social environment and the religious variables. Five items

suggested by Pargament et al. (1979) were used to measure the perceived organization of each subject's church or synagogue. High scores on the sum of these items indicates the perception of a more horizontally versus hiearchically organized religious environment. Such a religious context encourages member involvement and participation in all aspects of church activities including worship services and nonworship related decision-making. For the female sample, this measure of horizontal structure correlated significantly with all the RIS variables except Personal Prayer including Church Beliefs (r=.23), Church Nonworship Activities (r=.30), Personal Religious Beliefs (r=.31), and Church Worship (r=.33) as well as with the DeJong Orthodoxy triad (r=.37). All of these correlations are highly significant ($p<.001$). For males, this same variable was only significantly correlated with Church Nonworship Activities (r=.34, $p<.001$), Personal Religious Beliefs (r=.24, $p<.01$) and with the DeJong triad (r=.32, $p<.001$). This relationship of the social bases of religion with religious belief for females has been addressed by Cornwall (1987) who found that personal ties both within and outside the religious community has a more important influence on religious belief and commitment for females than earlier religious socialization.

Other Aspects of Religion

While several hypotheses about the indirect effects of religion were formally tested in this study, another type of

mediating variable can also be considered. It is quite likely that most mainstream religious institutions instill certain values about particular behaviors like drug and alcohol use which in turn may be related to certain health outcomes (Lorch and Hughes, 1988; Dudley, Mitch, and Cruise, 1987; Najman et al., 1988). This idea is supported by a *t* test analysis of the Habits measure which is a composite score of the drug, alcohol, and tobacco use in the past month. The comparison between the majority of the sample indicating some religious affiliation and the minority that report no current affiliation (often referred to in the literature as the Religious Nones) indicate that the unchurched group has a significantly higher average score on this measure (mean=5.97, t=2.29, p=.02). Also in the current study, negative relationships are found between the Habits measure and the religious variables. This Habits score in turn is related positively to physical symptoms and negatively with health status. The Habits score is one of two variables in the regression equation predicting physical symptoms for the females and it is one of two variables predicting health status for males. This informal analysis would suggest that religion may exert some indirect influence on health measures through general prohibitions on certain types of behaviors that are associated with poor health outcomes.

Other Methodological Issues

With regard to the physical health measures in particular, it appears from the final regression analyses that each of these variables is tapping a fairly distinct aspect of physical health. This highlights the need for multidimensional measurements of health constructs. It would appear from the regression equations as well as the pattern of intercorrelations that the measure of physical symptoms is more closely related to the mental health variables than the measure of overall health status and the number of medical visits. Although Cohen & Hoberman (1983) argue that the CHIPS inventory, which was used to measure physical symptoms in this study, does not overlap with psychologically-based symptoms, the strong association with the mental health variables in this study, especially with Psychological Distress, would suggest otherwise.

On the other hand, the general lack of relationships between the measure of medical visits and the other variables in the study, make it difficult to meaningfully interpret the role of this measure. The regression equations of both subsamples for this variable do little to clarify the picture. The relatively small amount of variance accounted for by these equations, suggests that the identified predictor variables may have only a spurious relationship to this measure and the relevant predictor variables have not been measured in this study.

Another methodological concern involves the Hassles and Uplifts Scale. It can be observed in the regression equation for Psychological Distress for the female subsample that the average intensity of Uplifts is one predictor along with the frequency of Hassles. While the frequency of Hassles is by far the stronger predictor, both scores are positively weighted in the equation which initially seems counter-intuitive. When initially developing the Hassles and Uplifts Scale, Kanner et al. (1981) discovered a similar relationship between both Hassles and Uplifts scores with psychological symptoms in their middle-aged female sample. At the time, they were unable to explain this apparent gender difference but suggested that the positive relationship of the frequency of Uplifts was a result of the shared variance with the score of Hassles frequency. To illustrate their point they partialled out the effects of Hassles frequency from the Uplifts frequency and psychological symptoms relationship, and found that this positive relationship between Uplifts and symptoms disappeared. However, in the current study this explanation is less appealing since the Hassles frequency and Uplifts mean intensity scores are involved. Even more interesting is that these two scores are negatively related (r=-.20, p<.001) for the female subsample.

This dilemma further underscores the more general issue about the differences between the frequency and intensity scores on the Hassles and Uplifts Scales. T tests by gender

on the four Hassles and Uplifts scores show that the females score significantly higher than males on the Hassles intensity (mean=1.74, t=2.83, p<.01) and the Uplifts intensity (mean=1.92, t=3.60, p<.001) scores. Kanner et al. (1981) found a similar gender difference only on the Uplifts intensity score.

Although Kanner and his collegues dismiss the idea that a possible response style may account for some of these results, this possibility was investigated in the current study. Partial correlations were carried out for each gender, controlling separately for the combined effects of Hassles and Uplifts frequency and intensity scores in the relationships between the religious and health variables. For both samples, controlling for the frequency scores tended to reduce any significant correlations between the religious and health variables. For the females, controlling for the intensity scores had less of an effect and generally left the relationships between the religious and health variables unchanged. For the males, however, controlling for the intensity scores tended to increase the size of the positive correlations between religion and Psychological Distress and physical symptoms. In addition, it uncovered a significant positive correlation between Personal Religious Beliefs and physical symptoms (r=.16, p<.05) and a significant negative correlation between Church Worship and general health status (r=-.21, p<.05). The different effects of the frequency and intensity scores

for the males raises the possibility of a response style accounting for some of the variance in the relationships between the Hassles and Uplifts scores and the other variables. However, the precise nature of the differences in the various categories of scores on the Hassles and Uplifts scale still remains unclear and will need to be further explained if the relationship between these scores and other variables are to be more meaningfully interpreted.

The RIS

Finally, the current study attempted to gather further psychometric support for the RIS. The initial subscales that were identified in the previous research (Antosz, 1988) held up fairly well with a similar, but larger late adolescent sample. While some modifications were made, the five subscales basically maintained their original conceptual identity. However, there were very clear differences between the current and previous samples in the structure and function of the Personal Prayer (REL1) scale. In the current sample, there was very little relationship between this scale and the other four RIS scales for both genders. Additionally, the pattern of relationships with this scale and the other variables in the study was quite different from the other RIS scales. While Personal Prayer had very few significant relationships with any of the other variables in the study for the female subsample, it proved to have important connections especially with the dependent variables for the male

subsample. These gender differences in the function of Prayer, which were not observed in the previous sample (Antosz, 1988), and this scale's significant relationship to other variables for males indicate that at least some of the differences in the Prayer scale across studies are more sample specific rather than suggestive of difficulties with the structure of the scale. As Poloma and Pendleton (1989) argue, prayer is probably a complex, multidimensional construct that needs to be more carefully measured.

While concurrent validity of the RIS was addressed earlier with regard to the DeJong subscales, there appears to be some other construct validity for some of the RIS subscales based on correlations with other variables in the study. For instance, the Personal Religious Beliefs (REL4) subscale had similar patterns of correlations for the identity Achievement scale for both genders. The highest positive correlation occurs between Personal Religious Beliefs and Achievement, with the next highest positive correlation between this religious variable and Foreclosure. Large negative correlations are seen between Personal Religious Beliefs for Diffusion, and a lower negative relationship (and in the case of the males, virtually a zero correlation) with Moratorium. These patterns would be expected if indeed Personal Religious Beliefs is measuring any strongly held religious beliefs, whether they may or may not conform to any institutional religious beliefs.

The observed advantages of the RIS over the DeJong Religiosity Scale and the Allport's (1966) Religious Orientiation Scale that was used in the earlier research (Antosz, 1989) are its broader scope and its more useful discrimination of various aspects of religion. Both the DeJong and Allport scales are basically geared to mainstream Christian subjects which severely limit their utility with other populations. The revised wording of the RIS items and instructions and the higher level factor structure of personal and institutional religion, allow for a variety religious orientations, including those individuals that may report some personal religious belief and experience without indicating any affiliation with a formal religion. In the two studies in which the RIS has been used with a total of 790 subjects, the five subscales have proven to effectively discriminate among various aspects of religion.

Summary

In summary, this study attempted to examine the role of religion as a potential resource for helping late adolescents cope with the stresses common to this developmental period. Results of previous research by this author (Antosz, 1988) suggested that religion may be a more salient and available resource for this age group than for adults who have developed or gained access to a wider variety of coping resources. Thus it was expected that religion, as an effective coping resource, would relate to positively to health measures. Even though many of the

hypothesized relationships between religion and physical and mental health measures were not supported in this study, the results in general were consistent with the findings in the literature for adult samples that religion has a positive but small relationship to measures of well-being (Witter et al., 1985).

Further analyses in this study uncovered clear gender differences in the structure and function of religion in this late adolescent group and provided empirical support for the relationship between identity and religious development which has been theorized by others (e.g., Parker, 1985; Fowler, 1981). Additionally, this study analyzed some of the components of religion and found that purpose or meaning in life is one of the salient factors in religion's role as a coping resource for this age group. In fact, partialling out the effects of this variable from religious belief and involvement not only removes the positive aspects of religion as a coping resource but reduces religion to another source of distress.

Given the results of this study, of the many studies previously reviewed by Witter et al. (1985), as well as more recent work on religion and mental health (e.g., Crawford, Handal, and Wiener, 1989; Chamberlain & Zika, 1988), there seems to be more than ample evidence to support the role of religion as one of many important variables associated with positive mental health and general well-being. As a result, future research in this area probably

should move away from measuring effect sizes for religion in relationship to various outcome variables and rather concentrate on precisely how religion exerts its influence on these variables. Pargament's work on religion and coping (Pargament et al., 1988; Pargament, 1987; Pargament and Hahn, 1986) is a good example of this new direction. At this time, an even more precise look at the functioning of religion might combine the best features of a longitudinal study and individual case history in the form of a modified single case design format that is frequently used in psychotherapy outcome research.

Finally, the current study has provided further psychometric support for the RIS and demonstrated its utility in effectively isolating different aspects of religious belief and involvement. To date the RIS has been used with two similar samples of college undergraduates and a sample of adults. This measure needs to be further tested with a larger variety of samples that will provide more variance in areas of education, religious involvement, and geographical location.

APPENDIX A

APPENDIX A

Religious Involvement Survey (RIS)

Below are a number of questions and statements about religion. Please respond to each item in a way that best describes your current religious beliefs, feelings, and practices. When it appears, the term "church" is being used in a generic sense. If it is more applicable, substitute a more appropriate word like "temple," "synagogue," "religious group," etc. If you are not at all affiliated with any formal religious organization and are unable to answer some of the questions referring to "your church," use the NC (No Church) response choice on those items.

1) How often would you say that you have the feeling that God has answered your prayers?
Frequently____Sometimes____Seldom____Never____Don't pray____

2) The church is not a very important part of my life.
Strongly agree____Agree____Disagree____Strongly disagree____
NC____

3) How much help has your church or religious group membership been in meeting the right kind of people?
much help____some help____little help____no help at all____

4) I attend Bible instruction classes, prayer groups, or other such groups sponsored by my church that help me grow in my religious faith.
Frequently____Sometimes____Seldom____Never____NC____

5) I encourage others to accept God (or Jesus) in their lives.
Frequently____Sometimes____Seldom____Never____

6) I would say that I have been born again or have had a born again experience.
Strongly agree____Agree____Disagree____Strongly disagree____

7) List the church offices, committees, or jobs of any kind in which you served during the past twelve months.

---NC____

8) My personal religious beliefs are not very helpful to me in figuring out what life is all about.
Strongly agree____Agree____Disagree____Strongly disagree____

9) I have been driven to ask religious questions out of a growing awareness of the tensions in my world and in my relation to my world.
Strongly agree____Agree____Disagree____Strongly disagree____

10) The teachings of my church are a source of comfort to me.
Strongly agree____Agree____Disagree____Strongly disagree____
NC____

11) As a rule, I do not share my personal religious beliefs with others.
Strongly agree____Agree____Disagree____Strongly disagree___

12) I experience peace and joy during my private prayers or meditations.
Frequently____Sometimes____Seldom____Never____Don't Pray____

13) I read the Bible at home by myself or with my family.
Frequently____Sometimes____Seldom____Never____

14) I would say that my personal religious beliefs affect the way I look at everyday events.
Strongly agree____Agree____Disagree____Strongly disagree____

15) How well do you think you fit in socially with the group of people who attend your church?
Don't fit in____fit in, but not too well____fit in quite well____fit in very well____ NC____

16) I do not think about my personal religious beliefs very often.
Strongly agree____Agree____Disagree____Strongly disagree____

17) My personal religious faith helps me get through stressful times or times of crises.
Frequently____Sometimes____Seldom____Never____

18) I spend time working with children, the elderly, or donating my time to some other needy group.
regularly & frequently____occasionally____rarely____never____

19) Overall, the teachings of my church make me feel that my life is worthwhile.
Strongly agree____Agree____Disagree____Strongly disagree____
NC____

20) I believe in what my church teaches about the nature of God.
Strongly agree____Agree____Disagree____Strongly disagree____
NC____

21) I have had an experience which to me seemed to be holy.
Never____Once____A few times____Many times____

22) Overall, I find that the teachings of my church do not help me make sense of various life events.
Strongly agree____Agree____Disagree____Strongly disagree____
NC____

23) My personal religious beliefs do not effect my decisions in the various areas of my life (e.g., work, family, friends).
Strongly agree____Agree____Disagree____Strongly disagree____

24) My religious development has grown out of my growing sense of personal identity.
Strongly agree____Agree____Disagree____Strongly disagree____

25) My church's worship services help me to feel close to God.
Strongly agree____Agree____Disagree____Strongly disagree____
NC____

26) Based on what I know about the major doctrines of my church, I would say I strongly believe
All of them____Many____Some____one or two____none____NC____

27) My personal religious beliefs are reflected in the way I treat the people around me, both friends and strangers.
always_____very frequently_____sometimes_____hardly ever_____

28) I do not enjoy attending the worship services at my church.
Strongly agree____Agree____Disagree____Strongly disagree____
NC____

29) I try to carry my personal religious beliefs over into all my dealings in life.
Strongly agree____Agree____Disagree____Strongly disagree____

30) If not prevented by unavoidable circumstances, I attend church services:
More than once a week____Once a week____once or twice a month____twice a year or less____NC____

31) About how many times in a <u>week</u> do you pray at home privately or with your family (other than grace before meals)?
daily____ a few times____a couple of times____about once____
Don't pray____

32) My private prayer is one of the most important and satisfying aspects of my religious experience.
Strongly agree____Agree____Disagree____Strongly disagree____
Dont' pray____

33) Of your closest friends, how many are members of your church?
none____one____two____three or more____NC____

34) I have a strong, clear set of personal religious beliefs.
Strongly agree____Agree____Disagree____Strongly disagree____

35) Without my religious faith, I would feel like my life was missing something.
Strongly agree____Agree____Disagree____Strongly disagree____

36) My personal religious beliefs provide my life with direction.
Strongly agree____Agree____Disagree____Strongly disagree____

37) I believe my church's teachings about what is required to gain salvation.
Strongly agree____Agree____Disagree____Strongly disagree____
NC____

38) Church activities (meetings, committee work, etc.) are a major source of satisfaction in my life.
Strongly agree____Agree____Disagree____Strongly disagree____
NC____

39) I discuss the teachings of my church with others.
Frequently____Sometimes____Rarely____Never____NC____

40) I believe my church is the true religion.
Strongly agree____Agree____Disagree____Strongly disagree____
NC____

41) I rely on the teachings of my church to help me make important decisions in other areas of my life.
Strongly agree____Agree____Disagree____Strongly disagree____
NC____

42) In the past few weeks, I have helped a friend, roommate, or relative by listening or offering advice, driving, shopping, running errands, etc.
many times____a few times____once or twice____didn't have the chance____

APPENDIX B

APPENDIX B

PERSONAL BACKGROUND QUESTIONNAIRE

I am: female____ male____

What is your age?_____

What is your race? Black____ White____ Hispanic____
Asian____ American Indian____
Other (specify)_____

Are you currently employed? no____ yes____
If yes, how many hours per week_____

How long have you been in college? (include community college experience)_____
What is your major?_____
How many courses are you taking this term?_____
How many courses last term?_____

What is your current living situation?
Dormitory___ Apartment____ Home____ Other_____

Do you belong to any campus organizations like fraternities, sororities, academic or athletic clubs? (specify)_____

Do you belong to any off-campus groups? (specify)_____

In what religion were you raised as a child?
Protestant____(please specify denomination)_____
Roman Catholic____ Eastern Orthodox____ Mormon_____
Jewish____ (please specify:Orthodox___ Conservative___ Reformed___)
Moslem____ Interdenominational____
Other (specify)_____ None____

What is your current religious affiliation?
Protestant____(please specify denomination)_____
Roman Catholic____ Eastern Orthodox____ Mormon_____
Jewish____ (please specify:Orthodox___ Conservative___ Reformed___)
Moslem____ Interdenominational____
Other (specify)_____ None____

Do you attend religious services of more than one denomination? no____
yes____ If so, how many?_____

(Please answer the following about your particular parish church, temple, or religious group. If you belong to more than one, answer for the one you attend most frequently.)

My church/temple/group encourages lay participation in religious services: (e.g., giving readings, leading prayers, group singing, group prayer responses)
strongly agree____ agree____ disagree____ strongly disagree____

My church/temple/group encourages lay involvement in policy decisions regarding religious services: (e.g., planning music, prayers, readings)
strongly agree____ agree____ disagree____ strongly disagree____

My church/temple/group encourages lay participation in non-worship activities: (e.g., fund-raisers, socials, committees)
strongly agree____ agree____ disagree____ strongly disagree____

My church/temple/group encourages lay involvement in non-worship policy decisions (e.g., administrative or budgetary decisions) strongly agree____ agree____ disagree____ strongly disagree____

My church/temple/group provides programs and services for its members:
many____ a few____ one or two____ none____

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