

THE RELATIONSHIP BETWEEN DIMENSIONS
OF RELIGION, STATE-TRAIT ANXIETY
AND STATE-TRAIT ANGER

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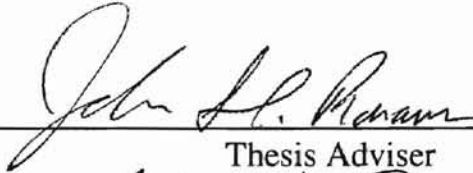
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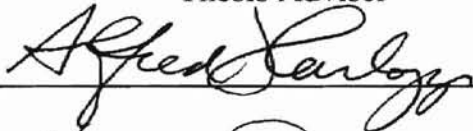
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AND STATE-TRAIT ANGER


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TABLE OF CONTENTS

Chapter	Page
I. INTRODUCTION.....	1
BACKGROUND	1
PURPOSE OF THE STUDY	3
DEFINITION OF TERMS	5
SIGNIFICANCE OF THE STUDY.....	7
ASSUMPTIONS.....	7
LIMITATIONS.....	8
II. THE REVIEW OF THE LITERATURE	9
RELIGIOUS DIMENSION AND MENTAL HEALTH.....	9
Anxiety.....	12
Anger.....	19
SUMMARY	20
HYPOTHESES	21
III. METHOD.....	22
PARTICIPANTS.....	22
INSTRUMENTS.....	23
RESEARCH DESIGN AND PROCEDURE	26
IV. RESULTS.....	28
DEMOGRAPHIC DATA	29
RELIGIOUS ORIENTATION SCALE	30
STATE-TRAIT ANXIETY INVENTORY	31
STATE-TRAIT ANGER EXPRESSION INVENTORY	32
CORRELATIONS.....	33
V. DISCUSSION.....	35
OVERVIEW	35
SUMMARY OF THE RESULTS.....	35
CONCLUSIONS.....	39
WEAKNESSES OF THE STUDY	41
RECOMMENDATIONS.....	41
BIBLIOGRAPHY	43
APPENDIX A--OKLAHOMA STATE UNIVERSITY INSTITUTIONAL REVIEW BOARD HUMAN SUBJECTS REVIEW	53

APPENDIX B--INSTRUCTIONS TO PARTICIPANTS	55
APPENDIX C--CONSENT FORM.....	57
APPENDIX D--DEMOGRAPHIC QUESTIONNAIRE	60
APPENDIX E--RELIGIOUS ORIENTATION SCALE	62

LIST OF TABLES

I. SUMMARY OF AVERAGE SCORES AND STANDARD DEVIATIONS OF VARIABLE INSTRUMENTS.....	28
II. CORRELATIONS.....	34

NOMENCLATURE

AX	Anger Expression Scale
Anger/Control	State Anger that is otherwise controlled
Anger/In	State Anger that is suppressed
Anger/Out	State Anger that is expressed in behavior
Anger/Total	Total score of Anger/Control, Anger/In, and Anger/Out
ROS	Religious Orientation Scale
STAI	State-Trait Anxiety Inventory
STAS	State-Trait Anger Scale
STAXI	State-Trait Anger Expression Inventory
S-Anger	State Anger
S-Anxiety	State Anxiety
T-Anger	Trait Anger
T-Anger/R	Angry Reaction
T-Anger/T	Angry Temperament
T-Anxiety	Trait Anxiety

CHAPTER ONE

INTRODUCTION

Background

While religion has not been totally ignored by social scientists, only recently have numerous studies begun to be conducted and published on the subject of religion and its interaction with other fields (Wood, 1994). One of these fields is mental health. For example, a meta-analysis was undertaken to review conducted studies to determine whether and to what degree religion is related to mental health. Results of the meta-analysis show very few such studies. Indeed, only twenty-four such studies were conducted between 1951 and 1979 (Bergin, 1983). However, the relationship between religion and mental health has begun to be more fully explored.

Evidence from conducted studies reveals that, as with the subject of mental health, religion is an extremely complicated subject. For example, King & Hunt (1975) identified twenty-one distinct factors in religiosity. First, religiosity appears to be polarized. Allport & Ross (1967) discovered that there are at least two types of religious persons. One type, extrinsic, is said to "use" religion. In other words, an extrinsically motivated person will use religion to obtain some form of security, self-justification, or status. This has been termed the unhealthy side of the religious dimension because of its perceived connection with several negative aspects of mental health (Batson, Schoenrade, & Ventis, 1993). As an example, a politician may claim religion and involve him or herself in a church in order to "look good" in the eyes of

potential voters. The other type, intrinsic, is said to "live" religion. Other needs are secondary and are brought into agreement with the beliefs by which the person lives. An example of an intrinsic person is one who involves him or herself in a church because of the desire to serve, learn about, and obey God or some higher power. This dimension of religiosity is operationalized as healthy because of its perceived connection with several positive aspects of mental health (Batson, Schoenrade, & Ventis, 1993). This typology as related to mental health has been supported by several studies (Batson, Schoenrade, & Ventis, 1993; Bergin, Stinchfield, Gaskin, Masters, & Sullivan, 1988; Bergin, Masters, & Richards, 1987; Richards, 1991; and Stifoss-Hanssen, 1994).

Second, religion can be used for good and bad purposes and every purpose in between. Some consider religion to be the panacea of all evils while others consider it to be the root of all evils. An examination of some uses of religion will shed further light on the issue. We are all familiar with the cases of Jim Jones and, more recently, David Koresh. Religions which elevate a people over another; religions which are legalistic and place tradition over faith; religions which place their sole emphasis on one of the three natures of man (mind, body, spirit); and religions which place their entire emphasis on the self with gratification as the primary goal have all been classified as examples of a neurotic use of religion (Koenig, 1994). On the other hand, religion has a tremendous capacity to be used for good. Religion, when viewed simply as a social construct, can be viewed as a "framework for meaning and purpose" (Alcock, 1992, p. 123). In an existential sense, when a person believes, both life and death are easier to

understand. Of course, this short discussion is not meant to be all-inclusive of the good and bad uses of religion.

As opposed to religion, mental health and its causes have, obviously, long been of interest to individuals in the mental health field. For the purposes of this study, two aspects of mental health will be examined, anxiety and anger. Anxiety has proven to be either the least examined or the most conflictual of the seven conceptions of mental health identified by Batson, Schoenrade, & Ventis (1993) as they relate to dimensions of religiosity. Likewise, anger, not a part of the Batson study, has, apparently, only been examined in one study (Acklin, Brown, & Mauger, 1983) as it relates to dimensions of religiosity.

Anxiety as a mental health conception contends that when anxiety is the focus of an individual, poor mental health results (Horney, 1951). Anxiety is different from fear in that fear is a response to a known threat, whereas anxiety is a response to a less easily specified threat. It is also important to note that anxiety is not always negative (Koenig, 1994). Anger, like anxiety, can be helpful. In fact, it is helpful for building healthy relationships with others. However, anger is destructive and unhealthy when individuals either underreact or overreact. Underreacting involves repressing or suppressing anger, while overreacting is anger out of control (Padovani, 1987).

Purpose of the Study

Researchers and laymen alike have often wondered what factors impact anxiety and anger. One suggestion has been religiosity. There are three main hypotheses

concerning religion and its impact on anger and anxiety (Koenig, 1994; & Leming, 1979-80). The first hypothesis contends that religion can "heal the soul" and give an "inner peace" to believers that the less or non-religious simply do not have. The second hypothesis states the opposite: religion is linked with anxiety and anger in its' followers. Proponents of this second hypothesis say that many religions call on their followers to fear their god. They say that fearing a god could hardly calm someone's nerves. They also hold the view that religions do not provide concrete, visible help in the time of an individual's need. If an individual has relied on religion all their life, and, suddenly, a crisis appears, the individual may feel "let down". This can, obviously, cause quite a bit of anger, confusion, and anxiety (Koenig, 1994). Finally, there is a third alternative. George Homans posits that religion causes and then alleviates anxiety in the believer (Leming, 1979-80). Homans' thesis is mainly concerned with death anxiety, but it could obviously be applied to a number of life emotions such as anger.

Which of these hypotheses has support? This is difficult to clearly answer because there seems to be some conflicting data on the relationship between religion and anxiety and no data on the relationship between religion and anger. Moreover, as discussed earlier, there appears to be different ways of utilizing or viewing religion. A college population, with its cultural and religious diversity, provides an excellent opportunity to examine this relationship between religion and both anxiety and anger. Therefore, the purpose of this study is to determine the relationship between a college student's varying dimensions of religiosity and his/her index of both anxiety and anger.

Of course, this study will also add to the body of knowledge on mental health and help mental health practitioners be more effective. To this end, it is important for

mental health practitioners, who Marx & Spray (1969) found to be less religiously involved than the general public, to be aware of religion's relationship to their client's lives and well-being. Though this citation is relatively old, it appears to have remained as constantly true through the years. As Kroll & Sheehan (1989, p. 67) put it, "Surveys have reported that more than 90% of the general public (American Institute of Public Opinion, 1981) profess a belief in God, compared with 40%-70% of psychiatrists (American Psychiatric Association, 1975) and 43% of psychologists (Ragan, Malony, & Beit-Hallahmi, 1980)". It is also important for those concerned to be aware of any potential mental health problems that may be correlated with religion.

Definition of Terms

Religion - Religion is "(1) an individual's beliefs, attitudes, and patterns of behavior, in relation to (2) the supernatural, and usually includes (3) a community of believers" (Mickley, Carson, & Soeken, 1995, p. 346).

Extrinsic religiosity - Extrinsic is the dimension of religion in which the individual uses religion for self-serving purposes. Allport & Ross (1967, p. 434) describe the dimension in this way: "The embraced creed is lightly held or else selectively shaped to fit more primary needs." This approach to religion is utilitarian. An extrinsic person "turns to God, but without turning away from self" (p. 434).

Intrinsic religiosity - Intrinsic is the dimension of religion in which the individual lives religion. An intrinsic person finds their master motive in religion. This individual's "other needs ... are regarded as of less ultimate significance, and they are ...

brought into harmony with the religious beliefs and prescriptions" (Allport & Ross, 1967, p. 434). This person internalizes the creed and follows it completely.

State-anxiety (S-Anxiety) - A brief and temporary emotion consisting of, but not limited to, feelings of tension, worry, nervousness, and apprehension. State anxiety varies in intensity and fluctuates over time (Spielberger & Sydeman, 1994). It is a snapshot in time of a person's anxiety level.

Trait-anxiety (T-Anxiety) - Differences within individuals concerning anxious tendencies. Spielberger & Sydeman (1994) describe this as "differences between people in the tendency to perceive stressful situations as dangerous or threatening, and in the disposition to respond to such situations with more frequent and intense elevations in S-Anxiety" (p. 295-296). It is a pattern of being anxious.

State-anger (S-Anger) - "(D)efined as a psychobiological state or condition consisting of subjective feelings of anger that vary in intensity, from mild irritation or annoyance to intense fury and rage" (Spielberger & Sydeman, 1994, p. 302). State-anger fluctuates over time.

Trait-anger (T-Anger) - Hong & Withers (1982, p. 941) describe trait anger as "the individual's internalized predisposition to respond with anger across a variety of situations as opposed to situational expressions of anger." Spielberger & Sydeman (1994) describe it as "individual differences in the frequency that S-Anger was experienced over time" (p. 302). Individuals high in trait anger will have more frequent and intense peaks in state anger.

Significance of the Study

This study is designed for mental health practitioners and theorists and those with an interest in religious and mental health matters. The significance and importance of this study is to further develop the shaky, undetermined relationship between dimensions of religion and anxiety, and to determine the only once studied (Acklin, Brown, & Mauger, 1983) relationship between dimensions of religion and anger. Many previous studies, especially those delineating religious dimensions, have involved subjects that are more religious than the general public (Bergin, Masters, & Richards, 1987; Bergin, Stinchfield, Gaskin, Masters, & Sullivan, 1988; and Masters, Bergin, Reynolds, & Sullivan, 1991). The present study will use participants from a non-denominational public university.

Assumptions

There are two basic assumptions involved in the interpretation of this study. First, though the setting of the study is in what many might call the "Bible Belt", it is assumed that the subjects will answer honestly without concern for what might be socially acceptable. To this end, subjects will be assured of complete anonymity. Second, it is assumed that those who respond to the study are not solely proreligious or antireligious. To further assure this, university classes will be approached for possible participation rather than individual students.

Limitations

There are limitations involved in the interpretation of this study. These limitations include: first, since the subjects are, to the researcher's knowledge, not seeking counseling, research can only limitedly be applied to mental illness. Second, this study is short-term. A longitudinal study would be more helpful in determining the relationship over time. Third, the study is correlational in nature. Of course, this results in non cause-effect findings. Fourth, the subjects in this study may have more knowledge of religion than would a sample of college students that is outside the "Bible Belt". Fifth, it is expected that participants will espouse a wide range of denominations. While there is no evidence of denominational bias in the measure of religiosity, the Religious Orientation Scale, (Donahue, 1985b), all participants were treated equally regardless of their stated denomination. In other words, this study was conducted with participants of Catholic, Jewish, Muslim, Protestant, and other faiths (or lack of) treated the same. Finally, most of the participants in this study are entering into a "helping" profession, primarily education and counseling. Future studies should incorporate a more diverse population, specifically in the areas of educational and occupational status.

CHAPTER TWO

THE REVIEW OF THE LITERATURE

The review of the literature to follow will examine the data concerning intrinsic and extrinsic religiosity to determine how these typologies relate to anxiety and anger.

Religious Dimension and Mental Health

Religions and mental health have long been intertwined. "Scientists and philosophers have often viewed religious belief as little more than magical thinking employed in the pathetic attempt to understand nature and to influence natural forces that are otherwise beyond our control" (Alcock, 1992, p. 122). As a result, many view religion as irrational and mentally unhealthy. Likewise, religious leaders have often viewed mental health professionals as charlatans who meddle in matters that should be left to religious leaders. In sum, many in the mental health field have been wary of religion's effect on mental health while many active in religion have been wary of the mental health field's effect on the perception of religion (Ellis, 1980; Walls, 1980; & Bergin, 1983). This type of stand-off has been in effect without any empirical data to support either position for many years. Recently, however, this oversight is beginning to be corrected.

William James was among the first to discuss religion and mental health. In his book, *Varieties of Religious Experience*, James (1902) writes on healthy minded religion and the religion of the "sick soul". He quoted widely from individuals of all

persuasions. Some said that a separateness from God was the cause for any individual's sickness, mental or otherwise, and conversely, closeness to God produced health.

Others stated the opposite: Those who believe they are close to a god are the ones more prone to poor mental health, and those who are not close to a god are healthy. Still others were at every point in between.

As an example of the dichotomous thinking, James states that the Catholic practice of confession and absolution is grounded in a philosophy of healthy-mindedness: After confession, an individual starts over with a clean slate. Repentance is very similar to confession and absolution in other Christian denominations. On the other hand, critics have said that guilt (and thereby anxiety and anger) can thrive within a religious framework.

Other researchers eventually followed in the footsteps of William James. Two of the most noteworthy were Allport & Ross (1967). They were the first to characterize a person's religious dimension into the categories of intrinsic and extrinsic religiosity. Their study was intended to determine whether churchgoers are more prejudiced against ethnic minorities than non church attenders. Instead of finding a linear relationship where low attenders had low prejudice scores and high attenders had high prejudice scores, Allport and Ross found a curvilinear relationship. To explain this, a person's religious motivation was called into question. In essence, they found that an extrinsically religious person is motivated to use religion for personal gain. The religious beliefs are shaped into whatever form for which the person's primary needs call. An intrinsically religious person finds their "master motive in religion" (Allport & Ross, 1967, p. 434). They internalize the rules, laws, and beliefs of their religion.

There is some conflicting evidence concerning the relationship between religion and mental health (Batson, Schoenrade, & Ventis, 1993). Perhaps the greatest cause of this conflicting evidence is the conceptualization of mental health. From a review of the literature, Batson, Schoenrade, & Ventis (1993) identified seven different conceptions of mental health. These seven conceptions are: absence of mental illness, appropriate social behavior, freedom from worry and guilt, personal competence and control, self-acceptance or self-actualization, personality unification and organization, and open-mindedness and flexibility.

Using these seven conceptions, the authors examined research concerning the relationship between religion and mental health. For the extrinsically motivated individual, a negative relationship was found in the clear majority of the eighty studies. Indeed, only one study (Park, Cohen, & Herb, 1990) found a positive relationship between any conception of mental health (absence of illness) and the extrinsic dimension. For the intrinsically motivated individual, the results were not as clearly delineated. Just over half of the studies showed a positive relationship with good mental health (e.g., Chamberlain & Zika, 1988; Crandall & Rasmussen, 1975; & Jackson & Coursey, 1988) while approximately fifteen percent showed a negative relationship with good mental health (e.g., Watson, Morris, & Hood, 1988a; & Watson, Morris, & Hood, 1988b). The remainder showed no clear relationship with good mental health (e.g., Bergin, Masters, & Richards, 1987; Hathaway & Pargament, 1990; & Watson, Hood, & Morris, 1984).

Freedom from worry, or absence of anxiety, proved to be one of the most conflicting conceptions of mental health as related to religiosity. In addition, anger has

rarely been studied. The following pages of the literature review will reveal what the literature has to say about anxiety and anger and their relationship to religion.

Anxiety

While there are many studies, discussed below, involving religion and anxiety, there is not a wealth of hard evidence concerning the different dimensions of religion. In fact, only a handful of studies were conducted involving the relationship between intrinsic and extrinsic dimensions to religion and anxiety. Moreover, many of the studies conflict. There is no clear consensus on the relationship between religion and anxiety.

Death anxiety was a fairly popular construct for researchers to relate to religion. Death anxiety refers to anxiety experienced over the fear of one's death or the death of others (Kraft, Litwin, & Barber, 1987). Adams (1974) interviewed 387 Asian adults of various religions living in Uganda. Asians living in Uganda were under increasing pressure as minorities during the summer of 1971 when the interviews were conducted. Subjects were divided into religious and non-religious groups and measured in terms of death anxiety. Results show that "religious orientation, especially as manifested in Muslim faith, a strong leader and community, reduces anxiety or insecurity, but tends to be accompanied by greater feelings of empirical fatalism in a stressful situation" (p. 38).

Downey (1984) administered a test of religiosity and Boyar's Fear of Death Scale to 237 men between the age of forty and fifty-nine years of age. No evidence of a linear relationship between religiosity and death anxiety was found. This supports a study by

Chaggaris & Lester (1989). However, the moderately religious had a significantly higher fear of death than either those who were little religious or highly religious in the latter study.

Leming (1979-80) found that religion was only one of many socialization agents responsible for death anxiety. Though he did find that the highly religiously committed individual had less death anxiety, he hypothesized that it was the strength of commitment and not religion that explains the relationship between religion and death anxiety. This could, of course, be generalized to other forms of anxiety.

In a study of older adults, conflicting results were found (Koenig, 1994). A random sample of 1,299 community-dwelling adults over the age of sixty was surveyed in North Carolina. Koenig found that those who were not members of a religious denomination had less anxiety, but he also found that anxiety symptoms were lowest among high church attenders. These and other results led Koenig to conclude that there was no evidence found for any of three hypotheses: religion causes an increase in anxiety among the devout; religion protects elders from anxiety or else relieves anxiety; and, either moderately, strongly, or nonreligious individuals will experience greater anxiety. However, the author hypothesized that the "therapeutic effects of religion were masked by the fact that elders who were stressed frequently turned to religion for comfort when other resources were lacking" (p. 274).

Koenig also suggested that those that are prone to anxiety might be "drawn" to religion thereby hindering researcher's efforts to see religion's effects. This is in concert with an earlier finding by Hassan (1975), though Hassan extended his conclusion to religious dimensions.

There are some ambiguous findings. For example, Shaver, Lenauer, & Sadd (1980) in their survey of 2,500 American women found that those who were slightly or moderately religious admitted to having more problems with worry and anxiety than those who were very religious or anti-religious.

In a study of almost 600 high school seniors in New Zealand, Barton & Vaughan (1976) administered Cattell's Sixteen Personality Factor Questionnaire (16 PF) twice during a five year period. One of the factors measured on the 16 PF was anxiety. Of these seniors, 108 described themselves as active church members while fifty-three reported that they had never belonged to a church. In the first testing, the active group was significantly higher on the factor of anxiety than the non-member group. The second testing resulted in no significant difference.

In another study by Koenig, Ford, George, Blazer, & Meador (1993) comparing the young, the middle aged, and the elderly, religious variables were related to anxiety disorders only among young adults. In this category of subjects, religious attendance was negatively correlated with anxiety disorders, while Bible reading, prayer, and participating in media programs were positively correlated with anxiety disorders. Also concerning young adults, "persons with no religious affiliation had the highest rates of disorder, followed closely by persons affiliated with fundamentalist Pentecostal religious groups; persons from mainline Protestant denominations and those considering themselves 'born again,' on the other hand, had the lowest rates of anxiety disorder" (p. 337).

Some studies have found no relationship between anxiety and religion. In addition to the studies discussed above and below, Bergin's (1983) meta-analysis of

studies relating religion to psychopathology shows six such studies involving anxiety. These six studies show very slight correlations but none are statistically significant.

Bylski & Westman (1991) examined the relationship between existential anxiety and religion. Sixty-three college students and friends and family of the students completed questionnaires. Religiosity was found to be unrelated to existential anxiety. This finding was supported in a later study (Westman, 1992).

Several studies have found a positive relationship between anxiety and religion. In a study involving gay men diagnosed with AIDS, higher death anxiety was associated with several religious variables. These religious variables included more church attendance, having never converted from the religion of one's childhood, and "not adhering to a spiritual-belief system independent of formal religion. That is, the gay men with AIDS who manifested more practice of or affiliation with formal religion had higher death anxiety" (Franks, Templer, Cappelletty, & Kauffman, 1990-91, p. 48).

Two other studies also show a positive relationship between religion and anxiety. Rokeach (1960) found that individuals with a formal religious affiliation are more anxious than those expressing no affiliation. This is in concert with another finding in which Dunn (1965) concluded that religious individuals are more worrisome than their nonreligious counterparts.

In a study of 313 Tibetan adolescents, Gupta (1983) found that high faith in rituals, including religious rituals, was linked significantly to higher rates of anxiety and anger. Gupta also found similar correlations between anxiety and both faith in god and faith in heaven and hell.

Gibbs & Achterberg-Lawlis (1978), in a study of death anxiety in cancer patients, found that the more religious cancer patients had significantly lower death anxiety. Likewise, other studies have found lower death anxiety in "born-again" Christians (Young & Daniels, 1980), in those who expressed more belief in an afterlife (Minean & Brush, 1980-81), and in people who attended church more frequently (Aday, 1984-85).

Likewise, Kirkpatrick & Shaver (1992) studied individuals who answered a survey in a Sunday newspaper. They found that those with a secure attachment relationship with God had less anxiety than those without one. Also, Krause & Van Tran (1989) found that religious involvement can counteract the effects of stress on an individual's self-esteem. Using different measures of religion, such as religious maturity, religious involvement, and religious attendance, than the Allport & Ross dimensions, several studies found similar findings (Ness & Wintrob, 1980; Tilley, 1985; and Williams, Larson, Buckler, Heckmann, & Pyle, 1991).

In contrast to the Gupta (1983) study, Jacobs (1992) found that religious rituals and ceremonies may provide a form of anxiety dampening. Rituals provide an individual the opportunity to involve him or herself in feeling while distancing him or herself from the intensity of the anxiety-arousing emotions. In this way, rituals of confession and mourning, which are heavily entwined in many religions, can reduce anxiety. Ritual expressions of anger have been researched less, but many Native American religions provide for the ritual expression of anger with anxiety reducing results. Prayer, which many would consider a religious ritual, was also found to reduce trait anxiety in individuals (Finney & Malony, 1985).

One hundred fourteen cancer patients participated in a study examining the link between state-trait anxiety measured by Spielberger's State-Trait Anxiety Inventory and an individual's spiritual well-being measured by the Spiritual Well-Being Scale.

Kaczorowski (1989) found that there was a significant inverse relationship between state-trait anxiety and spiritual well-being. Also of note, the study found a difference between state and trait anxiety. State anxiety was not correlated as negatively with spiritual well-being as was trait anxiety.

As for those individuals with anxiety disorders, a study by Kroll & Sheehan (1989) revealed some useful information. Their study of fifty-two patients on a locked psychiatric ward showed that the patients with anxiety disorders had a lower percentage of believers in God than any other diagnostic group. In fact, they were the only diagnostic group that did not report 100% belief in God.

Anxiety and Dimensions of Religion

Using an older measure of intrinsic and extrinsic religiosity, Kraft, Litwin & Barber (1987) found a significant inverse relationship between intrinsicness and death anxiety of self and others as well as total death anxiety in a study of 107 undergraduates. A significant positive relationship between extrinsicness and death anxiety was also found. This finding is in concert with a study examining intrinsic religiosity and death anxiety (Thorson & Powell, 1990). In this study, a wide age-range of subjects were given Hoge's Intrinsic Religious Motivation Scale and a measure of death anxiety. The data reveals that those high in intrinsicness were lower in fear of death while those low in intrinsicness were higher in death anxiety.

In contrast, Frenz & Carey (1989) found no relationship between dimensions of religion and trait anxiety. The subjects were 175 undergraduate students at a private university. Contrary to previous research, religious dimensions and trait anxiety were unrelated. Religious sect and sex of the individual did not differ on trait anxiety.

In one of two studies on grace and guilt, Watson, Morris, & Hood (1988a) found that extrinsic religiosity was significantly related to anxiety in college students. Neither intrinsic religiosity nor either of the dimensions of religion in the second study provided any evidence of a link between dimensions of religion and any form of anxiety.

As mentioned earlier, Hassan (1975) suggested that individuals prone to anxiety might be attracted to religion. After conducting a study of 400 Hindu male students, Hassan concluded that a personality characterized by anxiety, among other traits, tends to be more attracted to an extrinsic religious orientation.

Sturgeon and Hamley (1979) conducted a study of 148 students attending a conservative, Protestant church affiliated college. Tests administered included the Existential Anxiety Scale, Spielberger's State-Trait Anxiety Inventory, and the Religious Orientation Scale. They found that the intrinsic group had significantly less existential and trait anxiety; however, they did not differ in state anxiety.

Baker & Gorsuch (1982) administered the IPAT Anxiety Scale, which measures trait anxiety, to fifty-two subjects from a religious wilderness camping organization. Trait anxiety was significantly negatively related to religious intrinsicness while being significantly positively related to religious extrinsicness.

Bergin, Masters, & Richards (1987) administered the Manifest Anxiety Scale to sixty-one junior and senior psychology students at Brigham Young University. Though

there was not a strong relationship, students who scored as intrinsic on Allport & Ross' Religious Orientation Scale were negatively correlated to anxiety while those who scored as extrinsic were positively correlated. It should be noted that students at Brigham Young University are most probably not typical of students at other universities in terms of religiosity. Another study found a negative correlation between intrinsic individuals and trait anxiety and a positive correlation between extrinsic religiosity and anxiety in general (Lovekin & Malony, 1977).

Anger

Anger is a relatively new research area. Kassinove & Sukhodolsky (1995) report approximately 4,000 references to anger in the psychological literature in the past twenty-five years. In contrast, anxiety, depression and aggression have at least 10,000 references each during the same time period. Consequently, few studies have been conducted concerning the relationship between religion and anger. In fact, in the three studies found, anger and religion was not the primary focus.

Bohannon (1991) conducted a study involving grieving parents. The subjects were 143 mothers and 129 fathers who had lost a child during the past eighteen months. Though the focus of the study was not entirely on anger, Bohannon found that grieving mothers and grieving fathers who attended church on a regular basis did have significantly lower levels of grief related to anger than their counterparts who were not regular church attendees.

Morgan (1983) conducted a study to determine whether religious people are "nicer" than non-religious people. Morgan utilized the National Opinion Research Center's 1974 interview of 1,476 noninstitutionalized adult citizens of the United States. Results of the analysis of the interviews show that the prayerful are less likely to get very angry, i.e., "feel like smashing things" (p. 690).

Finally, Acklin, Brown, & Mauger (1983) conducted a study partially concerning anger measured by one subscale of the Grief Experience Inventory and dimensions of religion measured by the Religious Orientation Scale. Subjects for their study were adult cancer patients at a Baptist medical center. The authors found intrinsic religiosity and church attendance to be inversely related to anger and hostility in cancer patients.

Summary

The review of the literature reveals the need for a study examining the relationship between Allport & Ross' (1967) religious dimensions and anxiety and anger. A few studies have been conducted in this area, but most involve a more religious sample than the population (Bergin, Masters, & Richards, 1987; Bergin, Stinchfield, Gaskin, Masters, & Sullivan, 1988; and Masters, Bergin, Reynolds, & Sullivan, 1991). Likewise, most studies do not examine dimensions of religion. Of those studies examining dimensions of religion, extrinsic subjects generally relate positively to anxiety. For intrinsic subjects, there is a negative relationship to anxiety. The relationship of anger to intrinsic and extrinsic subjects must be more clearly examined.

Hypotheses

Based on research conducted by Acklin, Brown, & Mauger (1983); Baker & Gorsuch (1982); Bergin, Masters, & Richards (1987); Bohannon (1991); Lovekin & Malony (1977); Morgan (1983); Sturgeon & Hamley (1979); and others, the following hypotheses were formulated:

Hypothesis One: Extrinsic Religious Orientation Scale (ROS) scores will correlate positively with the trait anxiety portion of the State-Trait Anxiety Inventory (STAI).

Hypothesis Two: Intrinsic ROS scores will correlate negatively with the trait anxiety portion of the STAI.

Hypothesis Three: There will be no significant correlation between ROS scores and the state anxiety portion of the STAI.

Hypothesis Four: Extrinsic ROS scores will correlate positively with the trait anger portion of the State-Trait Anger Expression Inventory (STAXI).

Hypothesis Five: Intrinsic ROS scores will correlate negatively with the trait anger portion of the STAXI.

Hypothesis Six: There will be no significant correlation between ROS scores and the state anger portion of the STAXI.

CHAPTER THREE

METHOD

This chapter describes the study conducted to determine the relationship between religious dimensions and both anxiety and anger. The first section details the participants of this study, the population from which they came, the selection of the sample, and the characteristics of the sample. The second section describes the instruments chosen to measure religious dimension and the selected aspects of mental health. Information on each instrument's validity and reliability is also presented. The third section details the design selected to test the research hypotheses.

Participants

The participants for this study are undergraduate students in introductory psychology classes and graduate students in counseling psychology on the campus of a comprehensive land-grant university in a mid-western city. Professors from these classes were approached with the opportunity to allow their students to take part in research. Participation was voluntary and opportunities for extra credit were left to the discretion of the instructor. The student population is represented by many different cultures, though the majority of the students on campus would be defined as Caucasian. It should also be mentioned that the university is in the middle of what many call the "Bible Belt". It follows that most of the participants will have both a familiarity with and knowledge about religion.

Instruments

Allport & Ross' (1967) Religious Orientation Scale (ROS) was designed to measure an individual's orientation to religion. It consists of twenty questions, nine in the intrinsic section and eleven in the extrinsic section. Testing time is approximately ten minutes (Batson, Schoenrade, & Ventis, 1993). Responses are measured by a five-point Likert scale with the responses ranging from strongly disagree to strongly agree (Leong & Zachar, 1990). The intrinsic/extrinsic scale is "perhaps the most frequently-used measure of religiousness aside from church attendance" (Donahue, 1985b, p. 422).

Reported reliabilities have ranged from .69 to .85 for extrinsic religiousness and .81 to .93 for intrinsic religiousness (Donahue, 1985b). There is also strong evidence to support the validity of this scale. Donahue (1985a) reported that intrinsicness had an average correlation of .76 with measures of religious commitment while extrinsicness correlated .03 with these measures. This is evidence of concurrent validity for intrinsicness and discriminant validity for extrinsicness. Also of note, Donahue (1985b) found no evidence that the scale is denominationally biased.

The State-Trait Anxiety Inventory (STAI) (Spielberger, 1983) is an extensively tested and utilized instrument. It has been used in more than 6,000 studies (Spielberger & Sydeman, 1994). The STAI consists of forty items that are answered using a four-point Likert scale. The same twenty items are used for both the state and trait sections. Only the instructions are different. Twenty of the items are used to determine how an individual feels "right now, at this moment" (state anxiety) (p. 296), while twenty are used to determine how an individual usually feels (trait anxiety).

As this is an extensively used and researched instrument, information on reliability and validity is readily available. Test-retest stability coefficients range from .73 to .86 for college students. Alpha coefficients were .93 for S-Anxiety and .90 for T-Anxiety. There is also a high amount of concurrent validity as correlations ranging from .73 to .85 have been found between the STAI T-Anxiety Scale and the Anxiety Scale Questionnaire and the Manifest Anxiety Scale. Evidence of the construct validity of the T-Anxiety Scale is provided as Spielberger's study (1983) (cited in Spielberger & Sydeman, 1994) found that the STAI significantly discriminates between normal individuals and psychiatric patients with a major symptom of anxiety. Construct validity of the S-Anxiety Scale is evidenced by the same Spielberger study (1983) (cited in Spielberger & Sydeman, 1994). It shows that S-Anxiety scores for college students are "significantly higher under examination conditions and lower after relaxation training than when the students were tested in a regular class period" (Spielberger & Sydeman, 1994, p. 299).

The State-Trait Anger Expression Inventory (STAXI) (Spielberger, 1988) consists of the State-Trait Anger Scale (STAS) and the Anger Expression Scale (AX). The STAS measures S-Anger and T-Anger. It consists of twenty items (ten for each type of anger) which are answered using a four-point Likert scale. Alpha coefficients for the S-Anger portion of the STAS were .93, while alpha coefficients for T-Anger were .87. Test-retest reliabilities over a two-week period on T-Anger were .70 for males and .77 for females. "In contrast, the stability coefficients for the STAS S-Anger Scale of .27 for males and .21 for females were much lower, as would be expected for a measure of transitory anger" (Spielberger & Sydeman, 1994, p. 303). Also worth

noting, while the S-Anger scale measures a solitary emotion state, factor analyses reveal two T-Anger types. These are Angry Temperament (T-Anger/T) which measures an individual's propensity to express anger, without describing the situation in which this might occur, and Angry Reaction (T-Anger/R) which measures angry reactions in certain, defined provoking situations (Spielberger & Sydeman, 1994).

The validity of the STAS is also quite good. In the Westberry study (1980) (cited in Spielberger & Sydeman, 1994), concurrent validity for T-Anger was established by the positive correlation of the T-Anger scale with three measures of hostility. Evidence of discriminant validity was provided by factor analyses of the T-Anger scale and several hostility and anxiety scales. Results showed that "measures of anger and hostility assess different, but related constructs, and that measures of anger and hostility correlate substantially with anxiety" (Spielberger & Sydeman, 1994, p. 304). Evidence of good predictive and construct validity is also provided (Deffenbacher, 1992; & Spielberger, Johnson, Russell, Crane, Jacobs, & Worden, 1985).

The Anger Expression Scale (AX) measures differences in the "frequency that S-Anger is expressed in behavior (anger-out), suppressed (anger-in), or otherwise controlled" (anger control) (Spielberger & Sydeman, 1994, p. 306). The AX Scale consists, in part, of eight items measuring Anger/In and eight items measuring Anger/Out. Alpha coefficients ranged from .73 to .84 (Spielberger & Sydeman, 1994). Test-retest reliabilities were computed by Jacobs, Latham & Brown (1988) and found coefficients ranging from .64 to .86. Johnson's (1984) and Pollan's (1983) studies (cited in Spielberger & Sydeman, 1994) found no correlations between the Anger/In and the

Anger/Out subscales in samples of high school and college students. The Anger/Control subscale of the AX also consists of eight items. An alpha coefficient ranging from .84 to .87 has been established (Retzlaff, 1992; & Kroner & Reddon, 1992). Concurrent and discriminant validity of the subscales is evident in their correlations with anger and personality measures (Spielberger & Sydeman, 1994).

Research Design and Procedure

Because this is a correlational study, the scores on the STAI and STAXI were obtained from each participant and correlated with the participant's score on the ROS (Gay, 1996). This type of study was utilized because it would be much more difficult to study and determine whether religious dimensions cause aspects of mental health. Through this design, results should be generalizable to students at the same or similar university.

During the course of the spring semester of 1997, undergraduate and graduate classes were contacted about the opportunity to participate in a research study. They were informed that the purpose of the study is to learn more about mental health and religion. Following ethical guidelines, participation was voluntary. Students who volunteered for the study were then tested in class. Participants were given a packet composed of a consent form, a demographic questionnaire asking for information on characteristics such as gender, age, and religious affiliation, and the various dependent measures on religion, anxiety, and anger. With the exception of the consent form, which will be first, the questionnaire and measures were randomly presented.

Participants were asked to read and sign the consent form and questions were answered. After the consent form was signed and received, participants were asked to complete the questionnaire and measures. Upon completion of these items, the questionnaire and measures were collected and scored.

Once the scores from the mental health measures were tabulated and correlated with scores from the religious measures, answers to the hypotheses were evident. Basically, a positive association between intrinsic religiousness and anxiety and anger and a negative association between extrinsic religiousness and anxiety and anger was expected.

CHAPTER FOUR

RESULTS

This study examined the relationship between scores on the Intrinsic and Extrinsic scales of the Religious Orientation Scale (ROS) and the state and trait portions of both the State-Trait Anxiety Inventory (STAI) and the State-Trait Anger Expression Inventory (STAXI). **Table 1** presents the average score and standard deviation for all of the instruments in this study.

TABLE 1: Summary Of Average Scores and Standard Deviations of Variable Instruments

Variable	Average Score	Standard Deviation
Extrinsic Religious Orientation Scale	28.203	6.507
Intrinsic Religious Orientation Scale	22.056	8.081
State Anxiety Subscale of the State-Trait Anxiety Inventory	34.452	10.847
Trait Anxiety Subscale of the State-Trait Anxiety Inventory	36.463	9.896
State Anger Subscale of the State-Trait Anger Expression Inventory	11.010	2.936
Trait Anger Temperament Subscale of the State-Trait Anger Expression Inventory	6.416	2.476
Trait Anger Reaction Subscale of the State-Trait Anger Expression Inventory	8.604	2.541
Trait Anger Total Subscale of the State-Trait Anger Expression Inventory	18.137	4.869
Anger/Out Subscale of the State-Trait Anger Expression Inventory	15.254	3.706
Anger/In Subscale of the State-Trait Anger Expression Inventory	15.614	3.911
Anger/Control Subscale of the State-Trait Anger Expression Inventory	24.020	4.758
Anger/Total Score of the State-Trait Anger Expression Inventory	22.848	8.854

Six hypotheses were tested:

Hypothesis One: Extrinsic Religious Orientation Scale (ROS) scores will

correlate positively with the trait anxiety portion of the State-Trait Anxiety Inventory (STAI).

Hypothesis Two: Intrinsic ROS scores will correlate negatively with the trait anxiety portion of the STAI.

Hypothesis Three: There will be no significant correlation between ROS scores and the state anxiety portion of the STAI.

Hypothesis Four: Extrinsic ROS scores will correlate positively with the trait anger portion of the State-Trait Anger Expression Inventory (STAXI).

Hypothesis Five: Intrinsic ROS scores will correlate negatively with the trait anger portion of the STAXI.

Hypothesis Six: There will be no significant correlation between ROS scores and the state anger portion of the STAXI.

Demographic Data

There were 197 student participants in this study. Demographic data revealed that the participants ranged in age from eighteen to fifty-six years old with an average age of 27.34. Also, over half of the participants were twenty-three years old or younger with twenty-one being the most common age.

There were seventy-three males and 123 females (with one choosing not to respond) represented in this study. The vast majority (82%) identified themselves as Caucasian while the next most frequent selection was Native American (5.6%). African-Americans, Asian-Americans, Hispanics, and International students were also represented. There were also a small handful who were categorized as having a multiple ethnic background.

Over half of the participants were single while a full quarter were married. The remainder were either divorced or marked more than one of the choices (e.g., *Married and Divorced*). Thirty-eight percent of the participants were graduate students. Of the undergraduates, the most represented class of students was juniors with twenty-six percent followed by seniors, sophomores, and freshman.

Students were also asked to write their school major on the demographic sheet. After the data collection was completed, these majors were divided into nine categories: Agriculture Related, Business Related, Counseling Related, Education, Math and Engineering, Pre-Medical, Secondary Education, Speech Pathology, and Undecided. Nearly one-third of the participants were in a counseling related field. These were followed closely by those in secondary education and education. These three fields together encompassed nearly three-fourths of the participants.

Over ninety-five percent of the participants reported identifying with a religious affiliation. The remainder identified themselves as agnostic or atheistic. A full quarter of participants identified themselves as Baptist. This group was followed in frequency by Non-Denominational Christian (16.8%) and Methodist (15.7%).

Religious Orientation Scale

For the extrinsic scale of the ROS, an individual can score between eleven and fifty-five. Participants in this study scored in a range of twelve and forty-four. A score of fifty-five means that an individual scored as extremely extrinsically religious. In other words, they would tend to view religion as a means to economic and social well-

being. In this study, participants scored between twelve and forty-four with an average score of 28.2.

For the intrinsic subscale of the ROS, scores can range from nine to forty-five with a score of forty-five meaning that an individual scores as extremely intrinsically religious. In other words, they would probably live their religion. Participants scored between nine and forty-five with an average score of 22.1.

State-Trait Anxiety Inventory

Scores between twenty and eighty are possible on the S-Anxiety portion of the STAI. Participants' scores ranged from twenty to seventy-seven. Most of the scores (50.3%) were in the twenty to thirty-two range with an average of thirty-four. This was as expected because the S-Anxiety subscale measures an individual's level of anxiety "right now, at this moment" (Spielberger & Sydeman, 1994, p. 296). The participants were under very little pressure during the actual study and were focusing on completing the STAI rather than on any anxiety they might have been experiencing.

Scores on the T-Anxiety portion of the STAI can also range from twenty to eighty. Scores in this study ranged from twenty-one to seventy. Unfortunately, due to an error in communication, twenty participants did not complete the T-Anxiety portion of the STAI. However, of the 177 participants who completed the STAI, the majority (50.8%) scored between twenty-one and thirty-five with an average of thirty-six. This indicates that most participants believed themselves to usually feel rather relaxed and

calm. Only approximately ten percent rated above fifty, the midway point, on the T-Anxiety scale.

State-Trait Anger Expression Inventory

As stated earlier, the STAXI consists of the State-Trait Anger Scale (STAS) and the Anger Expression Scale (AX). The STAS measures state and trait anger while the AX measures only state anger.

A range of ten to forty is possible on the S-Anger portion of the STAS. Over seventy-five percent of the participants scored a ten. Like the STAI, this was as expected since S-Anger is defined as the level of anger an individual feels at that moment.

There are two types of T-Anger measured by the STAS, Angry Temperament (T-Anger/T) and Angry Reaction (T-Anger/R). T-Anger/T weighs an individual's tendency to experience anger without specifying a certain situation. T-Anger/R measures an individual's angry reactions in a specified provoking situation (Spielberger & Sydeman, 1994). In both scales, a range of four to sixteen is possible. Participants scored slightly higher on T-Anger/R (average of 8.6) than on T-Anger/T (average of 6.4). Overall, a range of ten to forty is possible for T-Anger. Participants scored in the low range with over half scoring seventeen or lower on a range of ten to thirty-eight.

The AX measures differences in the "frequency that S-Anger is expressed in behavior (Anger/Out), suppressed (Anger/In), or otherwise controlled" (Anger/Control) (Spielberger & Sydeman, 1994, p. 306). Each measure (Anger/Out, Anger/In, and

Anger/Control) consists of eight items with a possible range of eight to thirty-two. Participants scored low, generally, in the Anger/Out and Anger/In subscales with over sixty percent scoring in the bottom third of each subscale. Participants, however, scored relatively high in the Anger/Control subscale with over half scoring in the top third of the subscale. This leads to the thought that participants use methods other than acting out or suppressing to control their anger. Anger/Total was determined by summing Anger/Out, Anger/In and the integer sixteen and subtracting Anger/Control. Scores in this study ranged from two to forty-seven.

Correlations

Pearson correlation coefficients were computed to determine the above scales and subscales relation to the Extrinsic and Intrinsic scales of the Religious Orientation Scale. Several significant relationships were found, specifically with the Extrinsic scale of the ROS. **Table 2** presents all of the correlations (alpha levels were at 0.05 and 0.01 as listed). In sum, Anger/Control was found to be negatively correlated with extrinsic religiosity ($\alpha = 0.05$) while T-Anxiety ($\alpha = 0.05$), S-Anxiety ($\alpha = 0.05$), T-Anger/R ($\alpha = 0.05$), and Anger/Total ($\alpha = 0.01$) were found to be positively correlated with extrinsic religiosity. Intrinsic religiosity was found to be positively correlated with Anger/Total ($\alpha = 0.05$).

TABLE 2: Correlations

	EXTRINSIC	INTRINSIC
	ROS	ROS
Age	-0.0954	0.0153
State Anxiety Subscale of the State-Trait Anxiety Inventory	0.1793 *	0.0834
Trait Anxiety Subscale of the State-Trait Anxiety Inventory	0.1911 *	0.1432
State Anger Subscale of the State-Trait Anger Expression Inventory	0.1241	0.0535
Trait Anger/Temperament Subscale of the State-Trait Anger Expression Inventory	0.0273	-0.0529
Trait Anger/Reaction Subscale of the State-Trait Anger Expression Inventory	0.1521 *	0.0135
Trait Anger/Total Subscale of the State-Trait Anger Expression Inventory	0.1083	0.0148
Anger/Out Subscale of the State-Trait Anger Expression Inventory	0.1290	0.1242
Anger/In Subscale of the State-Trait Anger Expression Inventory	0.1368	0.0546
Anger/Control Subscale of the State-Trait Anger Expression Inventory	-0.1410 *	-0.1262
Anger/Total Score of the State-Trait Anger Expression Inventory	0.1902 **	0.1440 *

* $\alpha = 0.05$ ** $\alpha = 0.01$

CHAPTER FIVE

DISCUSSION

Overview

The purpose of this study was to explore the relationship between dimensions of religion, namely intrinsic and extrinsic religiosity, and both state-trait anxiety and state-trait anger. The participants were 197 graduate and undergraduate students at a large, comprehensive land-grant university in a mid-western city. Participants completed a demographic questionnaire, the Religious Orientation Scale (ROS), the State-Trait Anxiety Inventory (STAI), and the State-Trait Anger Expression Inventory (STAXI). Pearson correlation coefficients were computed by the Statistical Package for the Social Sciences (SPSS) computer program between the intrinsic and extrinsic scales of the ROS and the varying scales of the STAI and the STAXI.

Summary of the Results

Six hypotheses were tested. The first hypothesis reads:

Hypothesis One: Extrinsic Religious Orientation Scale (ROS) scores will correlate positively with the trait anxiety portion of the State-Trait Anxiety Inventory (STAI).

As can be seen in **Table 2**, Extrinsic ROS scores were found to be significantly positively correlated (at the 0.05 level of confidence) with T-Anxiety. This finding tends to support results found in several studies. As discussed earlier, Kraft, Litwin, &

Barber (1987) found a significant positive correlation between extrinsic religiosity and death anxiety. Likewise, Watson, Morris, & Hood (1988a), Bergin, Masters, & Richards (1987), and Lovekin & Malony (1977) found a positive relationship between extrinsic religiosity and anxiety.

In the only statistically significant study involving trait anxiety and extrinsic religiosity, Baker & Gorsuch (1982) found that trait anxiety was significantly positively correlated with extrinsic religiosity in subjects from a religious wilderness camping organization. The findings in the current study support Baker & Gorsuch's study and further it by utilizing a non-religiously affiliated sample. It is important to realize that, in this study, trait anxiety is related to extrinsic religiosity because it may reveal important aspects about individuals' personalities. For instance, it could be argued that those who are extrinsically religious, i.e. use religion for social and/or economic well-being, are more prone to anxiety because they do not have a higher source of strength to draw upon that many say religion affords them (Koenig, 1994). Still others might suggest, as Hassan (1975) did, that an individual who seems to come naturally by a high level of anxiety is attracted to an extrinsic religious orientation. It could also be that the extrinsically religious are more self-focused (i.e., using religion for their own gain). If this is the case, they may be either more aware of their anxiety or simply unable or unwilling to take the focus off of themselves and their problems and place it on something less anxiety inducing. Whatever the answer may be, in this study, extrinsic religiosity was correlated with trait anxiety in college students.

Hypothesis two reads:

Hypothesis Two: Intrinsic ROS scores will correlate negatively with the trait anxiety portion of the STAI.

Though Intrinsic ROS scores were not as strongly correlated with trait anxiety as was Extrinsic ROS scores, Intrinsic ROS scores did not correlate negatively with trait anxiety. In fact, Intrinsic ROS scores correlated positively, though not significantly, with trait anxiety. This finding is in concert with other studies (Frenz & Carey, 1989; Sturgeon & Hamley, 1979; & Watson, Morris, & Hood, 1988a) that have found no significant relationship between intrinsic religiosity and trait anxiety. However, it disputes two other studies (Baker & Gorsuch, 1982; & Lovekin & Malony, 1977) that found a significant inverse relationship. More research must be conducted in this area to further determine the relationship between trait anxiety and intrinsic religiosity.

The third hypothesis is stated:

Hypothesis Three: There will be no significant correlation between ROS scores and the state anxiety portion of the STAI.

Surprisingly, Extrinsic ROS scores were found to be significantly positively correlated with state anxiety, though Intrinsic ROS scores were not. Because of the transitory nature of state anxiety, it had been expected that religious dimensions would not be related, or, at the very least, not strongly related, to an individual's level of state anxiety. This assumption was supported by studies conducted by Sturgeon & Hamley (1979) and Watson, Morris, & Hood (1988a).

The finding in this study tends to support the theory reported by Koenig (1994) and others that "true" religion, i.e. intrinsic religiosity, offers an "inner peace" to

followers that extrinsically religious individuals do not have. Further research would need to be conducted to determine whether state anxiety is related to extrinsic religiosity in other populations.

The fourth hypothesis is stated:

Hypothesis Four: Extrinsic ROS scores will correlate positively with the trait anger portion of the State-Trait Anger Expression Inventory (STAXI).

With the STAXI, there are three trait anger scores. Angry Temperament (T-Anger/T) measures an individual's tendency to experience anger without giving the instrument taker a specific situation, while Angry Reaction (T-Anger/R) measures an individual's tendency to react angrily given a defined provoking situation. The third trait anger score is a total score (T-Anger Total).

Findings show that, of the three trait anger scores, only T-Anger/R was significantly positively correlated to Extrinsic ROS scores. This would tend to show that extrinsically religious individuals react angrily in a provoking situation. Since anger is often external (T-Anger/R especially), it would make sense that it would be related to other external motivations. Perhaps this would explain its relation to extrinsic religiosity. However, as there have been only three studies conducted concerning religion and anger (though religion and anger was not the main focus of any of the studies), this area of research is sorely in need of further study.

The fifth hypothesis reads:

Hypothesis Five: Intrinsic ROS scores will correlate negatively with the trait anger portion of the STAXI.

This hypothesis was formulated based on a study conducted by Acklin, Brown, & Mauger (1983). They found that intrinsic religiosity and church attendance was negatively related with anger and hostility in cancer patients. In this study, none of the three trait anger scores was found to be significant; however, T-Anger/T was in the negative range.

Much like the findings concerning anxiety, the above findings would tend to support what many believe about religion (Koenig, 1994). That is, those who are truly religious, i.e. live their religion and do not use it for gain, have an "inner peace" that is able to heal or protect them from feelings of anxiety or anger. Presumably, extrinsically religious individuals do not have this resource.

The sixth and final hypothesis states:

Hypothesis Six: There will be no significant correlation between ROS scores and the state anger portion of the STAXI.

Much like the findings in the third hypothesis, it was surprising to see that religious dimensions were related to state anger. Of the five measures of state anger (S-Anger, Anger/Control, Anger/In, Anger/Out, and Anger/Total), Extrinsic ROS scores were correlated with two measures while Intrinsic ROS scores were correlated with one measure. Because state anger is transitory, it had been expected that it would not be related to dimensions of religion.

Extrinsic ROS scores were negatively correlated with Anger/Control. It could be concluded that the extrinsically religious are not able to control their anger through means other than expressing anger in behavior (Anger/Out) or suppressing anger (Anger/In); however, they are positively correlated with Anger/Total ($r=0.01$). Intrinsic ROS scores were also positively correlated with Anger/Total, though not as strongly.

Conclusions

Statistical analyses of the data in this study leads to the following conclusions:

1. College students who score as extrinsically religious are prone to score high in trait anxiety. In other words, college students who use religion for their own personal gain have personalities that tend to be characterized by anxiety.

2. College students who score as intrinsically religious are not correlated, either positively or negatively, with high scores in trait anxiety. They, overall, do not prove to be characteristically anxious.

3. Individuals in this study who scored as extrinsically religious also tended to score high in state anxiety; however, intrinsically religious individuals did not. That is, the extrinsically religious were more anxious while completing the STAI than were the intrinsically religious.

4. Those who scored as extrinsically religious also scored high in one of the three trait anger scores, T-Anger/R. The extrinsically religious reported that they will react with anger in a provoking situation. However, they will not react in anger in a non-specified situation (T-Anger/T) or in total (T-Anger Total).

5. There was no correlation between college students who scored as intrinsically religious and those who scored high in trait anger.

6. Those who scored as extrinsically religious were correlated negatively with Anger/Control and positively with Anger/Total. Individuals who scored as intrinsically religious were correlated positively with Anger/Total.

7. Overall, it would appear that extrinsic religiosity is correlated positively with state and trait anxiety and state and trait anger while intrinsic religiosity is not correlated with state or trait anxiety or trait anger and correlated with only one of the five measures of state anger. In other words, those who use religion, the extrinsically religious, are, overall, more anxious and more angry than those who live their religion, the intrinsically religious.

Weaknesses of the Study

The weaknesses in this study are related to the nature of the demographics. This study was characterized by a young population, expected in a college setting, and a lack of diversity in religious affiliation, also expected in the "Bible Belt". If one wanted to draw conclusions beyond this college setting, a more diverse population must be examined.

Likewise, many of the participants in this study were students in fields that many would call helping professions, e.g. counseling, secondary education. Very few participants were from the "hard sciences" such as engineering, math, and the biological

sciences. A further study examining a wider range of either student majors or individual careers would be appropriate.

Recommendations

The findings in this study have allowed for a few suggestions. First, this study has only determined that both state and trait anxiety and state and trait anger are correlated with extrinsic religiosity among college students. It is still uncertain what the nature of this relationship is or whether this relationship also applies to other populations. It could be that those who are predisposed to anger and anxiety have an outlook on life that leads them to be extrinsically religious. It may be that religiosity is the trigger for anger or anxiety. Or, it may be a mixture of the two or neither. A further study exploring these variables more fully would be in order.

It would also serve to see that this study is replicated at this university for cross-validation purposes. In addition, replicating this study at other colleges or universities would also witness to the suitability of these findings for college students in general. As was said earlier, studies of other populations would bring the generalizability more fully into focus.

Finally, it would seem that it would be helpful for university counselors and other university officials that work with and around students to know that the extrinsically religious are prone to be characterized by anxiety and anger. Certainly, then, counselors and others could be more effective in helping or treating college students.

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OKLAHOMA STATE UNIVERSITY
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APPENDIX A

OKLAHOMA STATE UNIVERSITY
INSTITUTIONAL REVIEW BOARD

HUMAN SUBJECTS REVIEW

**OKLAHOMA STATE UNIVERSITY
INSTITUTIONAL REVIEW BOARD
HUMAN SUBJECTS REVIEW**

Date: 02-28-97

IRB#: ED-97-065

Proposal Title: A STUDY OF THE RELATIONSHIP BETWEEN
DIMENSIONS OF RELIGIOSITY, STATE-TRAIT ANXIETY, STATE-
TRAIT ANGER, COPING RESOURCES AND LIFE SATISFACTION

Principal Investigator(s): John S.C. Romans, Donald L. Boswell, Theresa Horton,
Tad Skinner

Reviewed and Processed as: Exempt

Approval Status Recommended by Reviewer(s): Approved

ALL APPROVALS MAY BE SUBJECT TO REVIEW BY FULL INSTITUTIONAL REVIEW BOARD
AT NEXT MEETING, AS WELL AS ARE SUBJECT TO MONITORING AT ANY TIME DURING
THE APPROVAL PERIOD.
APPROVAL STATUS PERIOD VALID FOR DATA COLLECTION FOR A ONE CALENDAR YEAR
PERIOD AFTER WHICH A CONTINUATION OR RENEWAL REQUEST IS REQUIRED TO BE
SUBMITTED FOR BOARD APPROVAL.
ANY MODIFICATIONS TO APPROVED PROJECT MUST ALSO BE SUBMITTED FOR
APPROVAL.

Comments, Modifications/Conditions for Approval or Disapproval are as follows:

Signature:



Chair of Institutional Review Board

Date: March 3, 1997

cc: Tad Skinner

Theresa Horton

...and religion, I'd like to
...at the discretion of the

APPENDIX B

INSTRUCTIONS TO:

PARTICIPANTS

In this study we are examining anger, anxiety, and religion. I'd like to emphasize that your participation in this study is voluntary. It is at the discretion of the instructor as to the availability of extra credit provided for your assistance with this study.

Please pull the instruments from the packet. You will find two copies of the consent form on the top. Please sign one and return it to me when you hand in the packet. Keep the other for your own records. You are asked to complete the enclosed assessment instruments. Be aware that some sheets are two-sided while others are only one-sided. Completion will take from 30-45 minutes.

Confidentiality is assured so please answer all items honestly. The consent form is the only form with your name on it, and it is to be handed in separate from the packet. When you have finished answering all of the instruments, hand the consent form in separately and place all other materials inside the packet. I want to thank you for your participation in this study.

Consent Form

Name of author(s), or (if not Ted Skirrow)

Name of the author(s) to perform the

Administrative

Name

Address

Name
Address

APPENDIX C

CONSENT FORM

Name of author(s), or (if not Ted Skirrow)

Name of the author(s)

Name

Name of the author(s) to perform the

Consent Form

"I _____, hereby authorize or direct Tad Skinner, Theresa Grubb Horton, or associates or assistants of their choosing to perform the following procedures:"

Procedure: You will be asked to complete a packet of assessment instruments, including a brief demographic data sheet; the Spielberger State-Trait Anxiety Inventory; the Spielberger State-Trait Anger Inventory; Allport & Ross Religious Orientation Scale; Hilty, et al Religious Involvement Inventory; Diener, et al Satisfaction With Life Scale; and the Hammer & Marting Coping Resources Inventory.

Duration: The completion of the aforementioned assessment scales should take approximately 45 minutes.

Confidentiality: In an effort to gain open and honest responses, confidentiality will be maintained. Request for name will not be made on any of the self-report measures. This informed consent will be the only time identification will be requested, and these forms will later be withdrawn from the packets and filed under separate cover. The research material will only be available to the principle investigators.

Possible Discomforts or Risks: The completion of the above mentioned self-report scales will require a certain level of introspection. Self-examination may lead to temporary change in mood/affect which may be either positive or negative.

Possible Benefits for Society: The results of this study may lead to the introduction of new variables which may be assessed for and integrated into psychotherapy.

This study is being completed as part of an investigation examining the relationship between dimensions of religiosity, state-trait anger, state-trait anxiety, coping styles, and life satisfaction.

I understand that participation is voluntary, that there is no penalty for refusal to participate, and that I am free to withdraw my consent and participation in this project at any time without penalty after notifying the project directors.

I may contact Tad Skinner or Theresa Grubb Horton at (405) 744-6036 should I wish further information about the research. I may also contact Jennifer Moore, IRB Executive Secretary, 305 Whitehurst, Oklahoma State University, Stillwater, Oklahoma 74078; Telephone: (405) 744-5700.

I have read and fully understand the consent form. I sign it freely and voluntarily. A copy has been given to me.

Date: _____

Time: _____

Subject Signature: _____

I certify that I have personally explained all elements of this form to the subject before requesting the subject to sign it.

Tad Skinner or Theresa Horton
or authorized representative

APPENDIX D

DEMOGRAPHIC
QUESTIONNAIRE

DEMOGRAPHIC QUESTIONNAIRE

AGE _____

MAJOR _____

GENDER Female Male

CLASSIFICATION (please check one)

Fr. So. Jr. Sr. Gr.

RELIGIOUS AFFILIATION (please check one)

<input type="checkbox"/> Agnostic	<input type="checkbox"/> Jehovah's Witness	<input type="checkbox"/> Non-Denominational Christian
<input type="checkbox"/> Atheist	<input type="checkbox"/> Jewish	<input type="checkbox"/> Pentecostal
<input type="checkbox"/> Baptist	<input type="checkbox"/> Lutheran	<input type="checkbox"/> Presbyterian
<input type="checkbox"/> Catholic	<input type="checkbox"/> Methodist	<input type="checkbox"/> Unitarian
<input type="checkbox"/> Episcopalian	<input type="checkbox"/> Mormon	<input type="checkbox"/> Other _____
<input type="checkbox"/> Hindu	<input type="checkbox"/> Muslim	(please specify)

ETHNICITY (please check all that apply)

<input type="checkbox"/> African-American	<input type="checkbox"/> International
<input type="checkbox"/> Asian-American	<input type="checkbox"/> Native American
<input type="checkbox"/> Caucasian	<input type="checkbox"/> Other _____
<input type="checkbox"/> Hispanic	(please specify)

MARITAL STATUS (please check all that apply)

<input type="checkbox"/> Divorced	<input type="checkbox"/> Single
<input type="checkbox"/> Married	<input type="checkbox"/> Widowed

APPENDIX E

RELIGIOUS ORIENTATION SCALE

Questions in the extrinsic subscale are marked E while questions in the intrinsic subscale are marked I.

The following items deal with various types of religious ideas and social opinions. We should like to find out how common they are. Please indicate the response you prefer, or most closely agree with by circling the letter next to your choice. If none of the choices expresses exactly how you feel, then indicate the one which is closest to your own views. If no choice is possible you may omit the item. There are no "right" or "wrong" choices. There will be many religious people who will agree with all the possible alternative answers.

- E1.** What religion offers me most is comfort when sorrows and misfortunes strike.
- a) I definitely disagree
 - b) I tend to disagree
 - c) I tend to agree
 - d) I definitely agree
- I2.** I try hard to carry my religion over into all my other dealings in life.
- a) I definitely disagree
 - b) I tend to disagree
 - c) I tend to agree
 - d) I definitely agree
- E3.** One reason for my being a church member is that such membership helps establish a person in the community.
- a) definitely not true
 - b) tends not to be true
 - c) tends to be true
 - d) definitely true

- E4. The purpose of prayer is to secure a happy and peaceful life.
- a) I definitely disagree
 - b) I tend to disagree
 - c) I tend to agree
 - d) I definitely agree
- E5. It doesn't matter so much what I believe so long as I lead a moral life.
- a) I definitely disagree
 - b) I tend to disagree
 - c) I tend to agree
 - d) I definitely agree
- I6. Quite often I have been keenly aware of the presence of God or the Divine Being.
- a) definitely not true
 - b) tends not to be true
 - c) tends to be true
 - d) definitely true
- I7. My religious beliefs are what really lie behind my whole approach to life.
- a) this is definitely so
 - b) probably not so
 - c) probably so
 - d) definitely so
- I8. The prayers I say alone carry as much meaning and personal emotion as those I say during services.
- a) almost never
 - b) sometimes
 - c) usually
 - d) almost always

- E9.** I refuse to let religious considerations influence everyday affairs.
- a) definitely not true of me
 - b) tends not to be true
 - c) tends to be true
 - d) clearly true in my case
- E10.** The church is most important as a place to form social relationships.
- a) I definitely disagree
 - b) I tend to disagree
 - c) I tend to agree
 - d) I definitely agree
- E11.** There are many more important things in life than religion.
- a) I definitely disagree
 - b) I tend to disagree
 - c) I tend to agree
 - d) I definitely agree
- I12.** If not prevented by unavoidable circumstances, I attend church:
- a) more than once a week
 - b) about once a week
 - c) two or three times a month
 - d) less than once a month
- I13.** If I were to join a church group, I would prefer to join (1) a Bible Study group or (2) a social fellowship.
- a) I would prefer to join (1)
 - b) I probably would prefer (1)
 - c) I probably would prefer (2)
 - d) I would prefer to join (2)

- E14. I pray chiefly because I have been taught to pray.
- a) definitely true of me
 - b) tends to be true
 - c) tends not to be true
 - d) definitely not true of me
- I15. Religion is especially important to me because it answers many questions about the meaning of life.
- a) definitely disagree
 - b) tend to disagree
 - c) tend to agree
 - d) definitely agree
- E16. A primary reason for my interest in religion is that church is a congenial social activity.
- a) definitely not true of me
 - b) tends not to be true
 - c) tends to be true
 - d) definitely true of me
- I17. I read literature about my faith (or church).
- a) frequently
 - b) occasionally
 - c) rarely
 - d) never

- E18. Occasionally I find it necessary to compromise my religious beliefs in order to protect my social and economic well-being.
- a) definitely disagree
 - b) tend to disagree
 - c) tend to agree
 - d) definitely agree
- I19. It is important for me to spend periods of time in private religious thought and meditation.
- a) frequently true
 - b) occasionally true
 - c) rarely true
 - d) never true
- E20. The primary purpose of prayer is to gain relief and protection.
- a) I definitely agree
 - b) I tend to agree
 - c) I tend to disagree
 - d) I definitely disagree

VITA

Tad Andrew Skinner

Candidate for the Degree of

Master of Science

Thesis: THE RELATIONSHIP BETWEEN DIMENSIONS OF RELIGION,
STATE-TRAIT ANXIETY AND STATE-TRAIT ANGER

Major Field: Applied Behavioral Studies in Education

Biographical:

Personal Data: Born in Stillwater, Oklahoma, January 4, 1973, the son of Harold and Martha Skinner.

Education: Graduated from Ada High School, Ada, Oklahoma in May, 1991; received Bachelor of Science degree in Psychology from Oklahoma State University, Stillwater, Oklahoma in May, 1995. Completed the requirements for the Master of Science degree with a major in Counseling and Student Personnel at Oklahoma State University in July, 1997.

Experience: Employed as a youth worker during summers at camps and churches; graduate research assistant, Educational Administration and Higher Education Department, Oklahoma State University, Stillwater, Oklahoma, August, 1995, through May, 1996; intern counselor, University Counseling Service, Oklahoma State University, Stillwater, Oklahoma, August, 1996, through May, 1997.

Professional Organizations: American Psychological Association - Student Affiliate; American Psychological Association of Graduate Students.