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Religiosity and Aggression in College Students

A thesis
presented to
the faculty of the Department of Psychology
East Tennessee State University

In partial fulfillment
of the requirements for the degree
Master of Arts in Psychology

by
Shanea J. Watkins
August 2003

Dr. David Marx, Chair
Dr. Roger Bailey
Dr. Otto Zinser

Keywords: Religion, Religiosity, Aggression

ABSTRACT

Religiosity and Aggression in College Students

by

Shanea J. Watkins

The present study examined whether high and low religiosity had any relationship to a person's five measures of aggressiveness. The participants in this study consisted of 274 female and 202 male undergraduates. The results revealed that: (A) high scores of Religious Conflict and Hostility to Church yielded higher scores of aggression, (B) high scores of Religious Orthodoxy, Religious Solace, and Religious Tranquility yielded lower scores of aggression, (C) high scores of Religious Conflict and Hostility to Church yielded higher scores of total aggressiveness, and (D) high scores on Religious Solace and Religious Orthodoxy yielded low scores of total aggression. Frequency of church attendance was a good predictor of hostility scores for both males and females. Religious conflict scores predicted scores on physical aggression for both males and females. The results of this study document the relationship among religiosity, religious beliefs, and aggression and provide insight into why people may or may not act aggressively.

DEDICATION

I wish to thank my mother, father, and brother for their support and endless love. My family has kept me going with their many hours of comic stress relief, as there is never a dull moment in my house. My parents have always encouraged me, urged me to think and act independently, and have always supported my ambitions.

I also wish to thank Paul, who provided me with support, encouragement, friendship, and helped me get through the difficult times. Paul's friendship is immeasurable and I could not have made it without him.

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CONTENTS

	Page
ABSTRACT	2
DEDICATION	3
ACKNOWLEDGEMENTS	4
LIST OF TABLES	8
Chapter	
1. INTRODUCTION	9
Aggressive Behavior	9
Definitions	11
Theoretical perspectives of Religious Beliefs	12
Religiosity and Psychology	16
Relationship Between Religiosity and Criminality	18
Relationship Between Religion, Crime and Boredom	19
Relationship Between Religion and Spouse Abuse: Canada	20
Statement of the Problem	21
Hypotheses	22
2. METHOD	23
Participants	23
Reasons for Excluding Participants from Analysis	23
Participants Included in Analysis	24
Materials	25
Informed Consent	25
Cover Sheet	26

Chapter	Page
Demographic Questionnaire	26
A Survey of Attitudes Toward Religion and Philosophy of Life	26
Aggression Questionnaire.....	29
Procedure	31
Experimental Design.....	31
3. RESULTS	35
Hypothesis 1	35
Analysis for Men Participants	35
Analysis for Women Participants	36
Hypothesis 2	37
Analysis for Men Participants.....	37
Analysis for Women Participants	38
Hypothesis 3	39
Analysis for Men Participants.....	39
Analysis for Women Participants	39
Hypothesis 4	40
Analysis for Men Participants.....	40
Analysis for Women Participants	41
Correlation Matrix	42
Analysis for Men Participants.....	42
Analysis for Women Participants	43
4. DISCUSSION	47
Hypothesis 1	47
Hypothesis 2	49
Hypothesis 3	51

Chapter	Page
Hypothesis 4	52
Limitations	53
Implications	55
Directions for Further Research.....	56
REFERENCES	57
APPENDICES	61
Appendix A: Informed Consent	62
Appendix B: Cover Sheet	63
Appendix C: Demographic Questionnaire.....	64
Appendix D: QUESTIONNAIRE #1.....	65
Appendix E: QUESTIONNAIRE #2	69
VITA	71

LIST OF TABLES

Table	Page
1. Distribution of Religious Denomination.....	25
2. Median Scores and Significance Tests: Independent Variables	33
3. Mean Scores and Significance Tests: Dependent Variables.....	33
4. Pearson’s Product Moment Correlation Coefficient Matrix: Males	45
5. Pearson Product Moment Correlation Coefficient Matrix: Females	46

CHAPTER 1
INTRODUCTION
Aggressive Behavior

Violent and aggressive behavior is an issue of increasing concern in America in recent decades. Criminals come from all walks of life and can be anyone from the guy next door, to people suffering from mental diseases, to young children. In 1993 alone, over 24,000 murders were committed in the United States, and there were another 18,000 assaults (Flannery, 1997).

People are aggressive for many different reasons. Several psychological causes have been associated with people being more prone to act aggressively. A link between self esteem and aggression has been identified (Baumeister, Smart, & Boden, 1996; Kirkpatrick, Waugh, Valencia, & Webster, 2002). Surprisingly, it has been found that people with high self-esteem are more likely to aggress because they usually respond differently to their personal failures and criticisms than those with low self-esteem. People with high self-esteem may become more defensive and more aggressive in order to protect themselves from failure and criticism (Baumeister et al.; Kirkpatrick et al.).

Negative affect has also been identified as a possible contributor to aggressiveness (Bushman, Baumeister, & Phillips, 2001). Negative affect, the perception of being intentionally mistreated, aversive environmental situations, or frustration can be sources of anger and angry aggression (Berkowitz, 1990). The disregard of other peoples' feelings or rights is one aspect of this condition. Another is that a person who has a negative affect further disregards the penalties associated with negative or aggressive personal actions (Bushman et al.). According to Bushman et al., when certain people are in a negative emotional state, acting aggressively actually improves their emotional outlook (Bushman et al.).

Catharsis theories state that people will feel better if they do not keep all of their anger or negative feelings “bottled up” but instead let their negative feelings out (Bushman et al., 2001). Therefore, expressing anger or negative feelings will make one feel better. Knowing this, people in a negative affect state may become more aggressive to feel better (Bushman et al.). Anger also may result from the idea that a person may be able to regain something that was lost. For example, a person who thinks he/she has lost something of value may respond with anger, believing that the valued object will be returned (Berkowitz, 1990).

Aggressiveness also may be influenced by sociological factors such as poverty or education. One major reason posited for the increase in violent behavior is that the sense of community in America has broken down in recent decades (Flannery, 1997). Fromm (1941) purported that human beings are in a constant state of conflict between being free or being dependent. These conflicts have their basis in several human needs that have become apparent as people have looked for meaning in their lives. Specifically, all people have a need for relatedness with others. This need is found in the desire for social interaction, to be with others, and to be responsible for others. The need for relatedness is a give and take situation, where one person interacts with another to fulfill a personal need. Relatedness can be achieved by becoming submissive to others by taking a dominant role over others, or by expressing love for other people (Fromm).

Americans are becoming more alienated from their neighbors and more centered on their own jobs and careers. Alienation results in poor communication and fewer sources of social support. This combination fosters a breakdown in moral values and views. The emphasis in American society is not focused on looking out for the group or others but one’s personal needs (Flannery, 1997).

Religion is becoming increasingly important in Americans lives. In contrast to the societal trend toward more aggression and toward a general lack of concern for others, religion instructs people to care for others. Morality is active in religious teachings and principles because religious doctrine and examples show people how to live and act in appropriate and caring ways (Flannary, 1997). Ninety-three percent of Americans identify with a religious group (Kosmin & Lachman, 1993; Shafranske, 1996) and over 80% of people report that religion is “fairly” or “very” important in their lives (Gallup, 1995). Since 1944, approximately 95% of the population has stated a belief in God (Shafranske).

As a culture, Americans are typically more religious when compared to people from other modern industrialized nations (Hood, Spilka, Hunsberger, & Gorsuch, 1996; Lipset, 1996). Americans are also more involved with different religious denominations and groups than with other voluntary associations or groups (Lipset). Research has shown that religion can shape attitudes for the good, especially social and political beliefs (Steensland et al., 2000). Belonging to and being active in religious organizations gives an individual something to turn to when in need of help in solving problems, in acquiring unconditional love, and in dealing with conflict (Rice, 1999).

Definitions

Religiosity may be defined as the importance or prevalence of religion in a person’s life (Kosmin & Lachman, 1993; Shafranske, 1996). Religion is the knowledge, beliefs, feelings, actions, and experiences of an individual as expressed in relation to that person’s system. The person’s system may include a church group, their religious sect, or a religious organization to which they belong (Hood et al., 1996; Paloutzian, 1996).

Religion can include many different things, including subjective feelings, thoughts, and behaviors that arise from a search for the sacred, from seeking to fulfill a need for social identity, and from a need for affiliation and wellness. Finally, religion fosters an understanding of one's relationship and responsibility to others through the numerous moral and ethical messages present in religious teachings (Hill & Hood, 1999; Koenig, McCullough, & Larson, 2001; Zinnbauer, Pargament, & Scott, 1999).

The Aggression Questionnaire measures aggressiveness on four subtypes of aggression: anger, hostility, and verbal and physical aggression. Aggression can be defined as any act meant to cause harm. In the case of physical aggression, this would be acting with the intent to cause bodily injury, and in verbal aggression it would be acting with the intent to cause mental harm. Hostility can be defined as a person's malevolent feelings towards another and anger is the precursor of aggression as it involves physiological arousal (Buss & Perry, 1992).

Theoretical Perspectives of Religious Beliefs

James (1902) and Allport (1950) asserted that everyone has a different reason for turning to religion and no two people turn to religion for the same reasons. For example, a person who is curious might turn to religion to learn more about its theological basis, but a person who is organized might find comfort and meaning in religious rituals (Allport; James).

Reiss (2000) conducted a study that outlined 15 basic human desires that are related to and satisfied by religion. He asserted that every person could find some usefulness or comfort in religion by satisfying some combination of these 15 basic desires. One of the 15 basic human desires discussed in the study, vengeance, or a person's desire to take revenge on others, has some relationship with religiosity. Furthermore, low vengeance is associated with religiosity,

meaning that people who are more religious place less value on vengeance or vengeful behaviors.

Yinger (1970) proposed a theory of the science of religion that was designed to incorporate the interaction among culture, society, and personal factors into the science of religion. He said that force, conflict, and violence are part of life and considered them to be factors that should be accounted for in any theory. He also said that in order to understand religion it was necessary to examine it on three levels. In a cultural context, the role a particular religion plays for a certain culture must be understood. The personal characteristics of the individual who internalizes the religion must also be taken into consideration. Lastly, the social structures that enable a religion to exist, prosper, and perpetuate itself also need to be examined. Religion, as part of this theory, needs to be studied in a social context in order to fully understand its role in regulating social behaviors.

Religion involves two main sources: psychological and sociological. The psychological aspect views religion in two different ways. First, religion is the result of the effort to explain the mysterious. However, as people become more educated and the mysterious becomes explainable, there should be an ensuing decrease in religious beliefs. As people become better educated with each subsequent generation, religion should play less of a role in society (Yinger, 1970).

The second aspect of the psychological theory emphasizes the emotional needs of people and explains why religion is still a very important part of social systems, regardless of increases in education. Religion helps people to deal effectively with an environment that can be hostile and threatening. Religion plays a role by offering hope, comfort and guidance to people when there seems to be none available (Yinger, 1970).

According to Wood (1970), Immanuel Kant proposed a moral theory of religion based on people's limitations and ability to engage in rational thought. Kant said that faith is simply a person's desire to attain a moral end and is sustained through dealing with the stresses of everyday life. Faith in the belief that God is wise, and placing one's trust in Him reassures a person that everything will be fine. Faith is the choice to remain rational in dealing with the stresses of everyday life, instead of yielding to despair. Everyday stresses require that decisions be made. These decisions are best made with the help of faith because faith and reason both require, and are compatible with each other (Wood).

Lenski (1963) and Allport (1966) described religion as being an internal process. Lenski defined religious orientation as people being directed by values and prayer, or talking to God, and these activities give a person direction in life (Lenski). Allport said that being committed to religion is a process by which a person is motivated and life is given meaning (Allport, 1966; Morgan, 1983). For example, a person may be motivated to go to church to meet new people, to become more involved in the community, or to relieve stress (Allport; Morgan).

As an internal process, prayer has some positive effects. Morgan (1983) studied people who prayed regularly and those who did not. He found that the religious symbols embodied by the act of praying provide strong support for good, friendly, or cooperative behavior. Prayer is an internal process, and, as such, people who pray more often will have more internalized religious values, and will feel closer to and more influenced by God. Due to this greater internalization of values prayerful people are more likely to do the right thing and are less likely to become angry, even if the same is not expected from other people.

Durkheim (1951) said that religion aids in the maintenance of social order by offering a set of values and beliefs that can be collectively held. The moral commitments that these values

foster and their internalization decrease the likelihood that people will engage in deviant behavior (Brenda, 1997; Durkheim). Participation in religious activities reinforces and strengthens moral commitments and aids in the internalization of values. Many of the values taught through religious activities are reflections of societal norms for proper behavior. Religion and worship of God teaches people to respect authority, follow the rules, and conform to societal standards (Brenda; Tittle & Welch, 1983).

People who believe in religion and follow a general set of religious principles usually do not challenge authority figures. These people abide by the rules and procedures that are set forth by those people who are regarded as authority figures. Therefore, religious people will follow the rules and will avoid doing things like committing crime, or acting aggressively, which are discouraged (Ellis, 1985).

Sociologists have always studied the way in which belief systems influence the behaviors of the members of a society. In social control theory, Hirschi (1969) discusses conformity as a possible moderator or influencing factor to deviant behavior. People are more likely to conform to societal norms, and this makes them less likely to engage in deviant behavior. This is because people who conform to social norms are more closely bonded to society and its moral order.

The four main areas through which people bond to society and build moral behavior are attachment, commitment, involvement, and belief. Attachment refers to a person's interest in other people. The bond of commitment is defined as the time, energy, and effort a person places on conventional activities that bond them to societies moral and ethical norms. Involvement addresses an involvement in conventional societal activities such as school, family, or recreational involvement. The bond of belief deals with a person's acceptance of society's value system, which includes respect for laws and the people and institutions that enforce such laws

(Hirschi, 1969). These four areas can all be found in and fostered by religion and religious involvement (Matsueda, 1989).

Social bonds change over time as a person's social interactions, socialization, and other processes change. Weak bonds to religion, institutions, or others may make a person more susceptible to act deviantly due to the belief that there is no one or nothing to which to answer. Strong bonds to religion, institutions, or others cause a person to feel responsible to society and other people for his or her actions, so deviance is less likely. Engaging in deviant acts further weakens already compromised social bonds. It weakens a person's belief in morality, decreases attachments to other people, and reduces commitments. However, bonds may be strengthened by refraining from involvement in deviant acts (Matsueda, 1989).

Religiosity and Psychology

Individuals have many psychological needs and seek to have these needs met by many avenues. The need to belong is fundamental to one's psychological makeup (Maslow, 1970). Unfortunately, as more people enter into contact with one another, one person's needs may interfere with another person's needs. Morals are one mechanism for dealing with conflicting needs of individuals interacting with one another. Much psychological energy and pressure is brought to bare upon individuals to uphold society's moral code.

Religion is the institutionalization of this psychological mechanism. It is in place to take over from early socialization primarily based in the family. Religiosity includes internalization of that moral code and endeavors to insure adherence to continued moral development.

Personalization and internalization of ideas, beliefs, or doctrines makes it more likely that a person will find religious ideas more important and makes it more likely that he/she will adhere to religious principles and teachings. Religiosity encompasses many different things, such as

the strength of people's beliefs in church doctrine, their participation in church activities, or their frequency of church attendance. Religiosity differs for every person, the religious aspects that comprise religiosity exist in different combinations for each individual (Hood et al., 1996; Paloutzian, 1996).

Religion is likely to influence a person's morality. Different religious groups (Christians, Jews, Muslims, etc) may all have different views about exactly what or who "God" is, but they all usually agree on moral and ethical issues. Religious groups usually believe and teach that aggressive acts like crime, murder, and assault are wrong. People who are more religious would most likely say that religion can improve world conditions because it teaches a system of ethics that would be beneficial for all people (Hood et al., 1996; Paloutzian, 1996).

Most psychological researchers refer to belief, experience, and behavior when discussing religion and religiosity. Religion and religious practices meet the need of reducing psychological ambiguity. Religious doctrine states what one can and cannot do. This provides psychological comfort because the individual has clear knowledge of the behaviors and beliefs that are acceptable (Hood et al., 1996; Paloutzian, 1996).

The basis of this study assumes that behavior can be predicted from one's attitudes and thought. Specifically, that one's religiosity, that is, beliefs and morals, will predict one's likely choice of socially acceptable behaviors. A Survey of Attitudes Toward Religion and Philosophy of Life, developed by Funk in 1958 and reported by Shaw and Wright in 1967, measures the influence of religion in a person's life. It is broken down into seven scales: the Religious Conflict Scale, Religious Orthodoxy Scale, Philosophy of Life Scale, Religious Tranquility Scale, Religious Solace Scale, Hostility to Church Scale, and the Religious Attitude Change Scale. The subscales of a Survey of Attitudes Toward Religion and Philosophy of Life measure

whether a person is in conflict with their religious beliefs, whether a person accepts and follows the teaching of a church and religious authorities, or whether the person has a philosophy of life, or a code of ethics by which they live their life (Shaw & Wright, 1967).

Additionally, the Survey of Attitudes Toward Religion and Philosophy of Life assesses whether people believe that religion helps them adjust and be happy, or whether people use religion as a defense mechanism, as a reason to explain unhappiness or disappointment. Lastly, the subscales measure whether a person is indifferent towards religion and has negative attitudes toward the church and whether the person's religious beliefs have changed since entering college (Shaw & Wright, 1967).

Relationship Between Religiosity and Criminality

Ellis (1985) examined the relationship between religiosity and criminality through meta-analysis, using 50 research studies. He reported that one third of people who were surveyed in the United States believed that lack of commitment to religion was a major determinant of crime. Religion promotes group cohesion and causes a person to be committed to set of moral principles that are common to other members of the religious group. Laws against criminal activity usually have the moral principles of religion embedded in them. Therefore, people who are religious and follow religious guidelines are less likely to violate criminal laws.

There were several general findings of Ellis's (1985) research. First, a definite relationship between church attendance and crime rates was reported. People who attended church on a regular basis had lower crime rates than people who attended church irregularly. Lastly, a person's belief in an afterlife (going to heaven or hell) and the fear of being punished for immoral actions also was associated with lower rates of crime.

In another study, Evans, Cullen, Dunaway, and Burton (1995) examined the negative relationship between crime and religion, either independently, or in combination with other factors. Evans et al. concluded that, of all of the measures used to determine religiosity, religious activity had the greatest effect on criminality. People who are very active in the church and who are involved with church activities are usually subjected to numerous moral messages. The messages and teachings received from the church, combined with interactions with other religious people, contributed the greatest to the reduction in the measure of criminality.

Relationship Between Religion, Crime and Boredom

Ellis and Thompson (1989) studied the relationship among religion, crime, and levels of arousal or boredom. Previous studies have shown that individuals who attended church on a regular basis were less likely to be involved in crime than those who attended church on an irregular basis or never attended. The conclusion that can be drawn from this is that going to church fosters moral behavior and that, because of this, churchgoers are better citizens.

Ellis and Thompson (1989) found that people who were comforted by a church were more likely to adhere to religious ideas and viewed religion as more favorable than people who were bored by the church. People who were bored by the church reported higher rates of criminal activity than those people who reported that church activities were a source of comfort. Lastly, people who scored the highest on religiosity engaged in fewer criminal activities than people who had low scores on religiosity. They also found that there was no relationship between religion and criminal behavior when boredom or comfort with the church was not factored into the experiment.

Relationship Between Religion and Spouse Abuse: Canada

Brinkerhoff, Grandin, and Lupri (1992) studied the relationship between religious involvement and spouse abuse in Canada. The purpose of their study was to see if there was any relationship between spousal violence, denominational affiliation, and religious affiliation. These authors reported that the patriarchal view most Protestant pastors have influences the pastor's approach to counseling and responding to situations of wife abuse. These patriarchal beliefs are based on the idea that Eve was created for the sole purpose of serving Adam because she was created from his rib. Therefore, patriarchal beliefs are associated with a more permissive attitude towards beating or abusing your wife because the view is that a man's wife is his property.

In addition to the patriarchal view, males also dominate the church. Males hold the highest positions in the church and religious organizations, and females hold lower, less dominant positions and roles. The church continually teaches that women hold a lower position in life than men both by its doctrine and by its example. This study also reported that the best indicator of commitment to religion was church attendance. People who attended church frequently had a greater commitment to group values. Also, going to church on a regular basis is associated with lower levels of violence (Brinkerhoff et al., 1992).

This study concluded that a person's denomination had little or no impact on spouse abuse. However, there is a definite relationship between church attendance and violence. People who reported moderate levels of church attendance were highly abusive. It has been suggested that the reason for this is because these people are extrinsically committed, or "socially" religious, and not religious due to receiving internal satisfaction and reinforcement from religion. The people on the other end of the spectrum, who reported frequent attendance of church, had

lower rates of violence. These people are intrinsically committed to religion and are receiving internal comfort and satisfaction from church attendance (Brinkerhoff et al., 1992).

Statement of the Problem

The purpose of this study was to examine the relationship between religiosity and aggression. Morality is a person's internal ability to judge right from wrong. Moral decisions are made when a person decides to act in a manner that is beneficial for his or her entire community or society as a whole (Moshman, Glover, & Bruning, 1987). When morality fails, religion or a person's religiosity will help because religion embodies morality. A person who is unable to make a moral decision may find it easier to do so because of religious principles and teachings. People who have high religiosity, strong religious backgrounds, and are comforted by the church, are more likely to choose non-aggressive paths in life (Brinkerhoff et al., 1992; Ellis, 1985; Ellis & Thompson, 1989; Evans et al., 1995).

Research has suggested that religion plays a significant role in a person's ability to deal with all types of stressors. Religion supplies a person with a way to cognitively deal with stress and provides a basis for meaning in life. Religion has provided people with the means to adjust to stressful situations. However, coping with stressful situations successfully usually occurs when a person seeks support from the religious community and not when the person looks to God for a miracle or tries to bargain with God for a solution to their problem (Webb & Whitmer, 2001).

An important value of religious belief is that a person should make decisions that ensure no harm is done to society. People who are less religious, or who have low religiosity, are more likely to act in a manner that disregards what is good for society. In contrast, people have high

religiosity are more likely to embrace the principles and teachings of their religions and are more likely to act in ways that promote societies well being (Flannery, 1997).

Acting aggressively, with the intent to cause harm, violates the principles of religion. Yinger (1970) and Kant stated that faith in God and religion help people to deal with everyday stresses, thereby eliminating the need to behave aggressively (Wood, 1970). Therefore, when a person has no religious faith, or low religiosity, that person might be more accepting of aggression, and may be more likely to act aggressively.

Hypotheses

Based on the review of the literature the following hypotheses were offered:

1. Participants with high scores on religiosity as measured by the Religious Solace Scale, Religious Conflict Scale, and the Hostility to Church Scale will have higher scores on all five scales of aggressiveness than participants with low scores of religiosity.
2. Participants with high scores on religiosity as measured by the Religious Orthodoxy Scale and the Religious Tranquility Scale will have lower scores on all five scales of aggressiveness than participants with high scores of religiosity.
3. Scores on the Hostility to Church Scale, age, class rank, reported frequency of church attendance, prayer, and reading religious materials will predict hostility scores on the "Aggression Questionnaire".
4. Scores on the Religious Conflict Scale, age, class rank, reported frequency of church attendance, prayer, and reading religious materials will predict physical aggression scores on the "Aggression Questionnaire".

CHAPTER 2

METHOD

Participants

The participants of this study were 489 undergraduate students enrolled in general education courses (Introduction to Psychology, Introduction to Sociology, Criminal Justice) at a medium-sized regional university in the Southeastern part of the United States. Instructors of general education courses were contacted and arrangements were made to distribute surveys to their classes. The survey was administered during regularly scheduled class time, and participants were offered extra credit for completing the survey booklet per the extra credit policy of the respective department.

Reasons for Excluding Participants from Analysis

A total of thirteen participants were excluded from the analysis for the following reasons:

1. One female was excluded from analysis because she was only 17 when she completed the survey booklet,
2. Nine people were excluded because they did not complete the survey booklet.

Because there was not enough data to analyze, these cases were removed from consideration.

- a. Two people were excluded because they completed the demographic questionnaire and did not complete the rest of the survey booklet.
- b. Six people were excluded because they completed the demographic questionnaire and a Survey of Attitudes Toward Religion and Philosophy of Life but did not complete the Aggression Questionnaire.

- c. One person was excluded because he completed the demographic questionnaire and a Survey of Attitudes Toward Religion and Philosophy of Life but completed only half of the Aggression Questionnaire.
3. Three people were excluded because they completed the survey booklet but answered the survey items with a patterned response.
 - a. Two people alternated true and false responses on the Survey of Attitudes Toward Religion and Philosophy of Life and responded in numerical order to the items contained on the Aggression Questionnaire, i.e. 1, 2, 3, 4, 5, 1, 2, 3, 4, 5, etc.
 - b. One person circled all possible responses for every item on the Survey of Attitudes Toward Religion and Philosophy of Life and responded with answers of “3” (only slightly characteristic of me) to all of the items on the Aggression Questionnaire.

Participants Included in the Analysis

The final research sample was 476, and consisted of 274 females and 202 males. Females ranged in age from 18 to 49, with a mean age of 20.92 years. The males in the sample ranged in age from 18 to 65, with a mean age of 21.92 years. A large percentage of the females (44.7%, $n = 123$) and males (50%, $n = 101$) in the sample choose “Baptist” as their religious denomination. Very few females and males indicated being “agnostic” or “atheist”. Table 1 shows the complete distribution of religious denomination by gender.

Table 1

Distribution of Religious Denomination

	Males		Females	
	n	%	n	%
Baptist	101	50	122	44.7
Catholic	14	6.9	28	10.2
Protestant	20	9.9	31	11.3
Muslim	3	1.5	1	0.4
Methodist	10	5	26	9.5
Christian	20	9.9	24	8.7
Agnostic/Athiest	1	0.5	4	1.5
Other	33	16.3	38	13.8
Total	202	100	274	100

Materials

The materials used to conduct this study included an informed consent form (Appendix A) and a booklet containing the following items: a cover sheet (Appendix B), a short self-report demographic questionnaire developed by the author (Appendix C), Survey of Attitudes Toward Religion and Philosophy of Life (Appendix D) (Shaw & Wright, 1967), and the Aggression Questionnaire (Appendix E) (Buss & Perry, 1992).

Informed Consent.

The informed consent (Appendix A) was verbally read to all participants before the survey booklets were distributed. In this statement, participants were informed of:

1. the purpose of the research,
2. an approximate time for survey completion, and
3. confidentiality and contact information.

Cover Sheet

There were two reasons for including a cover sheet (Appendix B) with the booklet. First, the cover sheet discouraged the participants from proceeding through the booklet, as it provided the following instructions: “Please do not open the booklet or start completing any questionnaires until you are instructed to do so. Thank you”. Second, the participants were instructed that the cover sheet could be removed from the survey booklet and used to shield their responses from the view of other participants, ensuring complete privacy of answers.

Demographic Questionnaire

The short demographic questionnaire (Appendix C) contained items asking participants about age, gender, ethnicity, college class status, and religious background. A short scale measuring the degree of religious involvement was also included with the demographic questionnaire. The scale asked participants to report how often each month they attend church, pray, and read the bible or other religious information.

A Survey of Attitudes Toward Religion and Philosophy of Life

Religiosity was measured using A Survey of Attitudes Toward Religion and Philosophy of Life (Appendix D) (Shaw & Wright, 1967), a 66-item scale developed by Funk in 1958, and reported by Shaw and Wright in 1967. This questionnaire was designed to measure a person’s religiosity and is composed of seven scales: Religious Conflict, Religious Orthodoxy, Philosophy of Life, Religious Tranquility, Religious Solace, Hostility to Church, and Religious Attitude Change. The subjects used in the original development of the scale were 255 students enrolled in an introductory psychology course at a Midwestern university (Shaw & Wright).

The participants responded to the Religious Conflict, Religious Orthodoxy, Philosophy of Life, Religious Tranquility, Religious Solace, and Hostility to Church scales by marking “true” or “false” to the items contained in the survey. The participants responded to two of the items on the Religious Orthodoxy scale by choosing either “a” or “b” (see Appendix D, numbers 30 and 31). Participants responded to the Religious Attitude Change Scale by choosing same (S), partly different (P) or very different (D) (Shaw & Wright, 1967).

A response of “true”, or “b” was given a score of 1, and a response of “false” or “a” was given a score of 0. On the Religious Attitude Change Scale, responses of “very different” are given a score of 2, “partly different” are given a score of 1, and “same” received a score of 0 (Shaw & Wright, 1967).

The Religious Conflict Scale (Appendix D, items 1-22) was designed to measure a person’s tendency to be in conflict with his/her religious beliefs. Scores on this scale can range from zero (answering false to all items) to 22 (answering true to all items). High scores on this scale indicate the person is not sure what he/she believes about religion, or that the participant has an ambivalent attitude towards religion.

The Religious Orthodoxy Scale (Appendix D, items 23 through 31) was designed to measure whether a person accepts and follows the teaching of the church and religious authorities. Scores on this scale can range from zero, answering false or “b” to all items, to 11, answering true or “a” to all items. A high score on this scale would indicate that the person accepts religious teachings (Shaw & Wright, 1967).

The Philosophy of Life Scale (Appendix D, items 32 through 36) was designed to measure whether the participant has a philosophy of life, or a code of ethics by which the participant lives his/her life. Religious values are not important to people with a philosophy of

life; instead, they believe it is more important to make the world a better place. Scores on this scale can range from zero, answering false to all items, to 5, answering true to all items. A high score on this scale would indicate that the person has developed a personal philosophy of life related to upholding humanitarian ideals in place of religious values or beliefs (Shaw & Wright, 1967).

The Religious Tranquility Scale (Appendix D, items 37 through 42) was designed to measure whether people believe that religion helps them adjust and be happy. Scores on this scale can range from zero, answering false to all items, to 6, answering true to all items. Obtaining a high score on this scale indicates the person has a healthy attitude towards religion. Participants who score high on the religious tranquility scales are more prone to say that religion helps them to feel comforted and secure and that religion helps them to be a better person (Shaw & Wright, 1967).

In contrast to the Religious Tranquility Scale, the Religious Solace Scale (Appendix D, items 42 through 49) was designed to measure whether people use religion as a defense mechanism, as a reason to explain unhappiness or disappointment. Scores on this scale can range from zero, answering false to all items, to 7, answering true to all items. High scores on this scale would indicate that the person turns to religion only in times of need, when he/she has problems, or when things in life are bad. Religion is used as a safety net instead of being used as a source of guidance for both the good and bad times in life. High scores would indicate that the person has an unhealthy attitude towards religion (Shaw & Wright, 1967).

The sixth scale is the Hostility to Church Scale (Appendix D, items 50 through 56). Scores on this scale can range from zero, answering false to all items, to 7, answering true to all

items. High scores on this scale are indicative of indifference towards religion and of the expression of negative attitudes toward the church and religious objects (Shaw & Wright, 1967).

Lastly, the Religious Attitude Change Scale (Appendix D, items 57 through 66) was designed to measure any changes in a person's religious beliefs since entering college. Scores on this scale can range from zero, answering "same" to all items, to 20, answering "different" to all items. A high score on the Religious Attitude Change Scale would indicate that the person's religious beliefs have changed since entering college; while low scores would indicate a person has stable religious beliefs (Shaw & Wright, 1967).

Funk performed test-retest reliability for the seven scales of the Survey of Attitudes Toward Religion and a Philosophy of Life. The test-retest reliability estimates were obtained from a sample of 31 participants who took the survey over a three-week test interval. Funk's reported Pearson's product moment correlations for reliability are as follows: Religious Conflict Scale, $r = .84$; Philosophy of Life Scale, $r = .81$; Hostility to Church Scale, $r = .84$; Religious Tranquility Scale, $r = .84$; Orthodoxy Scale, $r = .95$; Religious Solace Scale, $r = .87$; and the Religious Attitude Change Scale, $r = .90$ (Shaw & Wright, 1967).

Aggression Questionnaire

The Aggression Questionnaire, developed by Buss and Perry (1992), measures four separate aspects of aggression: physical aggression ($\alpha = .85$), verbal aggression ($\alpha = .72$), anger ($\alpha = .83$), and hostility ($\alpha = .77$). Scores on the four scales can be combined to measure total aggression; the alpha level for the total aggression scale is .89. A sample of 372 participants was given the survey twice over a nine-week testing interval to establish test-retest reliability. The

test-retest reliability correlations were: Physical aggression, $r = .80$; Verbal aggression, $r = .76$; Anger, $r = .72$; Hostility, $r = .72$; and Total Aggression score, $r = .80$ (Buss & Perry, 1992).

A reliability study was conducted on the sample studied in this research project. The split half reliability coefficients were: Physical aggression, $r = .80$; Verbal aggression, $r = .70$; Anger, $r = .79$; Hostility, $r = .82$; and Total Aggression score, $r = .91$.

There are a total of 29 items on the scale, with items 1, 5, 9, 13, 17, 21, 24, 26, and 28 measuring physical aggression, items 2, 6, 10, 14, and 18 measuring verbal aggression, items 3, 7, 11, 15, 19, 22, and 29 measuring anger and items 4, 8, 12, 16, 20, 23, 25, and 27 measuring hostility. Scoring of the Aggression Questionnaire is done on a 5-point scale. A response of 1 indicates the “statement is extremely uncharacteristic of me”, 2 – “somewhat uncharacteristic of me”, 3 – “only slightly characteristic of me”, 4 – “somewhat characteristic of me”, and 5 – “extremely characteristic of me”. Items 24 and 29 are reversed scored, and all other items are given the score of the participant’s response (Buss & Perry, 1992).

This survey allowed the researcher to measure total aggressiveness by summing scores for the responses for all 29 items on the questionnaire. Total scores on the Aggression Questionnaire range from 29 to 145, with higher scores being indicative of more aggression. It is also possible to measure observable aggression, using scores from the four subscales. Hostility scores range from 8 to 40, anger scores can range from 7 to 35, physical aggression scores can range from 9 to 45, and verbal aggression scores can range from 5 to 25. A high score on any subscale is indicative of high aggression for that particular trait. For example, a person with a score of 25 on the verbal aggression scale would be characterized as being verbally aggressive (Buss & Perry, 1992).

Procedure

Participants were informed that the purpose of this study was to examine the relationship between religion and behavior, that participation was completely voluntary, and that all responses to the survey would remain anonymous. The researcher then passed out the booklets containing the cover sheet, the short demographic questionnaire, the Survey of Attitudes Toward Religion and Philosophy of Life, and the Aggression Questionnaire, requesting that the participants keep the booklet face down until further instructed. All participants in this study were given the phone number of main office of the psychology department at ETSU in case there were any questions about the study or inquiries about the final results of the study.

Once the verbal informed consent was read and all participants were given a survey booklet and time to ask questions, the participants were instructed to turn the booklets over and to begin completing the questionnaires. Participants were asked to sit quietly until everyone had a chance to complete the booklets, and then all booklets were passed to the aisle and picked up by the researcher.

Experimental Design

Participants were categorized into groups based on their responses to questions regarding gender and perceived measure of religiosity. For each gender, a median split was used to group participants into categories of high and low religiosity. The median split was set separately for males and females because three of the seven scales of the independent variable had median scores that were significantly different (see Table 2). Dividing the groups into high and low religiosity for both genders based on the median scores of one gender would have resulted in a highly skewed distribution.

An analysis of variance (ANOVA) was calculated on each of the dependent variables to evaluate the effects of gender on aggression scores. Table 3 shows the means, standard deviations, F-values, and *p*-values for each ANOVA.

Table 2

Median Scores and Significance Tests: Independent Variables

	Median Scores		Median Test	
	Males	Females	Chi-Square	<i>p</i>
Religious Conflict	6	7	5.241	0.022
Religious Orthodoxy	6	6	1.061	ns
Philosophy of Life	0	0	0.000	ns
Religious Tranquility	5	4	4.689	0.03
Religious Solace	6	7	4.753	0.029
Religious Hostility	1	0	0.017	ns
Religious Attitude Change	0	0	0.082	ns

ns = not significant

Table 3

Mean Scores and Significance Tests: Dependent Variables

	Mean Score		Standard Deviation		ANOVA	
	Males	Females	Males	Females	F	<i>p</i>
Physical Aggression	24.42	17.99	7.18	6.59	102.585	0.001
Verbal Aggression	15.23	13.98	3.57	3.97	12.665	0.001
Hostility	19.64	18.69	6.19	6.7	2.49	ns
Anger	17.2	15.96	5.69	5.42	5.9	0.015
Total Aggression	76.5	66.62	17.58	18.49	34.63	0.001

ns = not significant

The research design was a 2 (high vs. low) x 7 (scores on the seven subscales of religiosity) dependent groups mixed factorial design, with unequal cell sizes and five dependent variables: verbal aggression, physical aggression, hostility, anger, and total aggression scores. Two separate analyses were performed, one for females and one for males. The alpha level was set at $p < .05$ for each hypothesis.

A 2 x 7 multiple analysis of variance (MANOVA), with a Roy Bargman step-down, was performed on four subscales of the dependent variable (hostility, anger, physical aggression and verbal aggression) and grouped by the two levels (high and low) of the independent variables. A 2 x 7 analysis of variance (ANOVA) was run on the total aggression scores and grouped by the two levels (high and low) of the independent variables. The ANOVA was run separately on the total aggression scores because it is linearly dependent on the four subscales (anger, hostility, physical aggression and verbal aggression). Because total aggression is a composite score derived from adding the four subscale scores, the MANOVA excluded total aggression from analysis. Regression analysis was run on each of the seven subscales of the independent variable and certain demographic variables to determine any relationship with the aggression scores. Finally, a Pearson product moment correlation matrix was generated on the independent, dependent, and demographic variables.

CHAPTER 3

RESULTS

Hypothesis 1

The first hypothesis stated that participants with high scores on religiosity as measured by the Religious Solace Scale, Religious Conflict Scale and the Hostility to Church Scale would have higher scores on all five scales of aggressiveness than participants with low scores on religiosity.

Analysis for Men Participants

A 2 x 7 MANOVA with a Roy Bargman step-down procedure was conducted to determine the effect of the Religious Solace Scale, Religious Conflict Scale and the Hostility to Church Scale on the four subscales of the dependent variable: scores on hostility, anger, verbal aggression, and physical aggression. Religious Conflict had a significant effect on physical aggression, $F(1,200) = 10.476, p = .001$, and hostility, $F(1,198) = 22.544, p = .001$. Religious solace and hostility to church produced no significant differences on any of the four subscales of the dependent variable.

Males who had high scores on Religious Conflict had significantly higher scores on physical aggression (mean = 26.03) than males with low scores (mean = 22.88). Also, males who had high scores on Religious Conflict had significantly higher scores of hostility (mean = 21.96) than males with low scores (mean = 17.41).

A 2 x 7 ANOVA was conducted to determine the effects of the Religious Solace Scale, Religious Conflict Scale, and the Hostility to Church Scale on total aggression. Religious Conflict has a significant effect on total aggression ($F(1,200) = 22.694, p = .001$). Males who

had high scores on Religious Conflict had significantly higher total aggression scores (mean = 82.15) than males with low scores (mean = 71.10). Religious solace and hostility to church produced no significant differences on total aggression.

Analysis for Women Participants

A 2 x 7 MANOVA with a Roy Bargman step-down procedure was conducted to determine the effect of the Religious Solace Scale, Religious Conflict Scale and the Hostility to Church Scale on the four subscales of the dependent variable: scores on hostility, anger, verbal aggression, and physical aggression. Religious conflict had a significant effect on physical aggression ($F(1, 273) = 13.538, p = .001$), and hostility ($F(1, 271) = 27.755, p = .001$). Hostility to church had a significant effect on physical aggression ($F(1, 273) = 4.187, p = .042$).

Women who had high scores on Religious Conflict had significantly higher scores on physical aggression (mean = 19.49) than women with low scores (mean = 16.63). For women, high scores on Religious Conflict resulted in significantly higher scores of hostility (mean = 21.29) than women with low scores (mean = 16.33). Also, women participants who had high scores of Hostility to Church also had significantly higher scores of physical aggression (mean = 18.72) than women with low scores (mean = 17.10).

Religious solace yielded a significant effect on physical aggression ($F(1, 273) = 6.14, p = .014$) and verbal aggression ($F(1, 272) = 11.41, p = .001$). However, the relationship was opposite of what was hypothesized. Women who had high scores of Religious Solace had significantly lower scores of physical aggression (mean = 17.17) than women with low scores (mean = 19.15). Women who had high scores of Religious Solace also had significantly lower scores of verbal aggression (mean = 13.16) than women with high scores (mean = 15.14).

A 2 x 7 ANOVA was conducted to determine the effects of the Religious Solace Scale, Religious Conflict Scale, and the Hostility to Church Scale on total aggression. Religious conflict has a significant effect on total aggression ($F(1,273) = 32.073, p < .001$). Hostility to church produced a significant effect on total aggression, $F(1,273) = 6.345, p = .012$.

Women who had high scores on Religious Conflict had significantly higher scores on total aggression (mean = 72.89) than women with low scores (mean = 60.91). Also, women participants who had high scores of Hostility to Church also had significantly higher scores of physical aggression (mean = 69.14) than women with low scores (mean = 63.55).

Religious solace had a significant effect on total aggression $F(1,273) = 11.017, p = .001$, but it was inverse to what was hypothesized. Women who had high scores of Religious Solace had significantly lower scores of total aggression (mean = 63.56) than women with low scores (mean = 70.94). Also, women who had scores of Religious Solace had significantly lower scores of verbal aggression (mean = 13.16) than women with low scores (mean = 15.14).

Hypothesis 2

Hypothesis 2 stated that participants with high scores on religiosity as measured by the Religious Orthodoxy Scale and the Religious Tranquility Scale will have lower scores of aggressiveness than participants with high scores on religiosity.

Analysis for Men Participants

A 2 x 7 MANOVA with a Roy Bargman step-down procedure was conducted to determine the effect of the Religious Orthodoxy Scale and the Religious Tranquility Scale on the four subscales of the dependent variable: scores on hostility, anger, verbal, and physical

aggression. Religious orthodoxy had a significant effect on physical aggression scores, ($F(1, 198) = 5.128, p = .03$). Men who had high scores on Religious Orthodoxy had significantly lower scores on physical aggression (mean = 23.22) than men with low scores (mean = 25.44). However, there were no significant differences between the high and low groups of religious tranquility with any of the five categories of the dependent variable.

A 2 x 7 ANOVA was conducted to determine the effects of religious orthodoxy and religious tranquility on total aggression, and neither scale produced any significant differences.

Analysis for Women Participants

A 2 x 7 MANOVA with a Roy-Bargman step-down procedure was conducted to determine the effect of the Religious Orthodoxy Scale and the Religious Tranquility Scale on the four subscales of the dependent variable: scores on hostility, anger, verbal aggression, and physical aggression. Religious orthodoxy had a significant effect on physical aggression scores, ($F(1, 279) = 6.748, p = .01$). Religious tranquility had a significant effect on verbal aggression scores, ($F(1, 272) = 11.595, p = .001$).

Women who had high scores on Religious Orthodoxy had significantly lower scores on physical aggression (mean = 16.96) than women with low scores (mean = 19.01). For women, high scores on Religious Tranquility resulted in significantly lower scores of verbal aggression (mean = 13.46) than women with low scores (mean = 14.96).

A 2 x 7 ANOVA was conducted to determine the effects of the Religious Orthodoxy Scale and the Religious Tranquility Scale on total aggression. Religious Orthodoxy has a significant effect on total aggression ($F(1, 273) = 7.637, p = .006$). Women who had high scores on Religious Orthodoxy had significantly lower scores on total aggression (mean = 63.56) than

women with low scores (mean = 69.65). Religious tranquility produced no significant differences on total aggression.

Hypothesis 3

The third hypothesis stated that scores on the Hostility to Church Scale, age, class rank, reported frequency of church attendance, prayer, and reading religious materials would predict hostility scores on the “Aggression Questionnaire”.

Analysis for Men Participants

The regression equation with hostility to church as the predictor and hostility as the criterion was not significant ($F(1, 200) = .009, p = .925$). The regression equation with hostility to church, age, class rank, and reported frequency of church attendance, prayer, and reading religious materials as predictors and hostility as the criterion was not significant ($F(6, 157) = 1.655, p = .133$).

The regression equation with reported frequency of church attendance as the predictor of scores on hostility was significant, $F(1, 192) = 5.858, p = .016$, the sample correlation coefficient was .172, which indicates that approximately 3% of the variance of hostility in the sample can be accounted for by frequency of church attendance.

Analysis for Women Participants

The regression equation with hostility to church as the predictor of scores on hostility was not significant. The regression equation with hostility to church, age, class rank, reported frequency of church attendance, prayer and reading religious materials as predictors and hostility

as the criterion was significant ($F(6,258)=2.655, p=.016$), the sample correlation coefficient was .241, which indicates that approximately 6% of the variance of hostility in the sample can be accounted for by the linear combination of these variables.

The regression equation with reported frequency of church attendance as the predictor and hostility as the criterion was significant ($F(1,269)=5.985, p=.015$), the sample correlation coefficient was .148, which indicates that approximately 2.2% of the variance of hostility in the sample can be accounted for by reported frequency of church attendance.

Hypothesis 4

The fourth hypothesis stated that scores on the Religious Conflict Scale, age, class rank, reported frequency of church attendance, prayer, and reading religious materials would predict physical aggression scores on the “Aggression Questionnaire”.

Analysis for Men Participants

Religious conflict yielded significant results, $F(1, 200) = 10.476, p=.001$, for predicting scores of physical aggression. In this case, 5% of the variance of physical aggression in the sample can be accounted for by religious conflict, the multiple correlation coefficient was .223.

The regression equation with religious conflict, age, class rank, and reported frequency of church attendance, prayer, and reading religious materials as predictors and physical aggression as the criterion was significant ($F(6,157)=3.910, p=.001$), the sample correlation coefficient was .361, which indicates that approximately 13% of the variance of physical aggression in the sample can be accounted for by the linear combination of these variables.

The regression equation with religious conflict and frequency of church attendance as predictors and physical aggression as the criterion was significant ($F(2,191)=11.462, p=.001$), the sample correlation coefficient was .327; approximately 11% of the variance of physical aggression in the sample can be accounted for by the linear combination of these variables.

Analysis for Women Participants

Scores on Religious Conflict were significantly related to physical aggression, $F(1,273)=13.538, p<.001$. The multiple correlation coefficient was .217, which indicates that scores on religious conflict account for approximately 5% of the variance in the sample of scores on physical aggression.

The regression equation with religious conflict, age, class, rank and reported frequency of church attendance, prayer and reading religious materials as predictors and physical aggression as the criterion was significant ($F(6,258)=3.979, p=.001$), the sample correlation coefficient was .291, which indicates that approximately 8.5% of the variance of physical aggression in the sample can be accounted for by the linear combination of these variables.

The regression equation with religious conflict, and reported frequency reading religious materials as predictors and physical aggression as the criterion was significant ($F(2,265)=10.853, p<.001$), the sample correlation coefficient was .275, which indicates that approximately 7.6% of the variance of physical aggression in the sample can be accounted for by the linear combination of these variables.

Correlation Matrix

The seven independent variables and the following dependent and demographic variables were analyzed in a correlation matrix to assess any significant relationship among the variables: physical aggression, verbal aggression, hostility, anger, total aggression, number of times per month the participant attends church, number of times per month the participant prays, number of times per month the participant reads the Bible or other religious information, age, and religious background.

Analysis for Men Participants

For men participants significant correlations, $p < .01$, existed between the following pairs of variables:

1. Religious Solace and Religious Tranquility, $r = .55$.
2. Hostility to Church and
 - a. Philosophy of Life, $r = .574$,
 - b. Religious Solace, $r = -.510$.
3. Anger and
 - a. Physical aggression, $r = .508$,
 - b. Verbal aggression, $r = .495$,
 - c. Hostility, $r = .583$.
4. Total aggression and
 - a. Physical aggression, $r = .797$,
 - b. Verbal aggression, $r = .661$,
 - c. Hostility, $r = .765$, and

- d. Anger, $r = .837$.
- 5. Number of times in a month participant attends church and
 - a. Total religious orthodoxy score, $r = .543$,
- 6. Number of times per month participant reads the bible or other religious information and
 - a. Total religious orthodoxy score, $r = .433$,
 - b. Reported frequency of church attendance, $r = .571$,
 - c. Reported frequency of prayer, $r = .531$.

Analysis for Women Participants

For women participants significant correlations, $p < .01$, existed between the following pairs of variables:

- 1. Philosophy of Life and Religious Orthodoxy, $r = -.501$.
- 2. Religious Solace and Religious Tranquility, $r = .506$.
- 3. Verbal aggression and physical aggression, $r = .528$.
- 4. Hostility and physical aggression, $r = .536$.
- 5. Anger and
 - a. Physical aggression, $r = .696$,
 - b. Verbal aggression, $r = .612$,
 - c. Hostility, $r = .524$.
- 6. Total aggression and
 - a. Physical aggression, $r = .868$,
 - b. Verbal aggression, $r = .715$,

- c. Hostility, $r = .785$, and
 - d. Anger, $r = .862$.
7. Number of times in a month participant attends church and
- a. Total religious orthodoxy score, $r = .457$.
8. Number of times per month participant reads the bible or other religious information and
- a. Total religious orthodoxy score $r = .460$, and
 - b. Reported frequency of church attendance, $r = .597$.

Table 4

Pearson's Product Moment Correlation Coefficient Matrix:Males

	Orth	Phil. Life	Tran	Solace	R.Hostility	Change	Physical	Verbal	Hostility	Anger	Total Agg	Age	Rank	Church	Pray	Read
Conflict	** .20	.07	-.05	-.05	.06	.1	** .22	.12	** .37	** .23	** .32	-.06	-.04	-.15	-.02	-.08
Orth	1	** -.45	** .45	** .35	** -.45	** -.32	** -.16	-.08	-.12	-.04	-.13	-.07	-.09	** .54	** .29	** .433
Phil. Life		1	** -.32	** -.35	** .57	** .19	.09	-.01	.02	-.01	.04	.00	.03	** .41	** .28	** .26
Tran			1	** .55	** .41	** .20	-.05	-.08	-.05	-.07	-.08	* -.14	-.01	** .22	** .21	* .19
Solace				1	** -.51	** -.21	-.09	-.04	.02	-.05	-.06	-.11	-.08	** .25	* .17	** .23
R.Hostility					1	* .15	.03	.08	-.01	-.04	.01	.09	.09	** .36	** .24	** .21
Change						1	.05	.10	.11	.11	.11	-.05	.13	-.10	-.09	** .22
Physical							1	** .44	** .38	** .51	** .79	.09	-.02	** .26	-.07	* -.15
Verbal								1	** .34	** .49	** .66	0.12	.00	-.14	-.02	* -.16
Hostility									1	** .58	** .77	.02	-.08	* -.17	-.08	-.13
Anger										1	** .84	.06	-.04	-.05	-.09	-.09
Tot Agg											1	.09	-.05	** .21	-.08	* -.17
Age												1	** .18	.00	.05	.09
Rank													1	.01	.01	.11
Church														1	** .39	** .57
Pray															1	** .53
Read																1

** = Correlation is significant at the 0.01 level (2-tailed).

Table 5

Pearson's Product Moment Correlation Coefficient Matrix: Females

	Orth	Phil. Life	Tran	Solace	R.Hostility	Change	Physical	Verbal	Hostility	Anger	Total Agg	Age	Rank	Church	Pray	Read
Conflict	**-.37	** .21	-.15	**-.20	** .29	** .27	** .22	.15	** .37	** .27	** .32	.13	.07	**-.28	-.09	**-.27
Orth	1	**-.50	** .37	** .51	**-.28	**-.21	**-.16	-.15	-.12	-.12	**-.17	-.13	**-.22	** .46	.10	** .46
Phil. Life		1	**-.30	**-.33	** .37	** .19	** .20	.13	.11	.15	** .18	.06	** .18	**-.37	-.08	**-.35
Tran			1	** .51	** .29	-.01	-.02	**-.18	.03	-.03	-0.06	-.01	-.09	** .16	.08	** .18
Solace				1	**-.30	**-.21	-.15	**-.25	-.13	-.15	**-.20	-.02	-.08	** .29	.09	** .29
R.Hostility					1	** .32	.12	.15	.12	.11	.15	.14	** .17	**-.23	-.09	-.11
Change						1	.08	.11	** .17	.12	.15	-.01	.15	**-.21	.06	-.07
Physical							1	** .53	** .54	** .70	** .87	.11	.05	**-.20	-.11	**-.24
Verbal								1	** .37	** .61	** .72	.05	.12	-.02	-.03	-.09
Hostility									1	** .52	** .79	-.07	-.07	-.15	-.02	-.14
Anger										1	** .86	.09	-.02	-.13	-.03	-.13
Tot Agg											1	.05	.01	**-.17	-.06	**-.19
Age												1	** .31	.03	-.03	.06
Rank													1	.11	-.03	-.08
Church														1	.06	** .59
Pray															1	** .19
Read																1

** = Correlation is significant at the 0.01 level (2-tailed).

CHAPTER 4

DISCUSSION

Hypothesis 1

The first hypothesis stated that participants with high scores on religiosity as measured by the Religious Solace Scale, Religious Conflict Scale and the Hostility to Church Scale will have higher scores on all five scales of aggressiveness than participants with low scores of religiosity. For males, this hypothesis was supported only for Religious Conflict. Specifically, the relationship between religious conflict and hostility, physical aggression, and total aggression were supported. For females, partial support occurred on Religious Conflict, Hostility to Church and Religious Solace. Specifically, the following relationships were supported by the results: religious conflict and hostility, physical aggression and total aggression; and hostility to church and physical and total aggression. The relationship between religious solace and physical, verbal, and total aggression for women was also supported by the results, but the relationship between these variables was counter to what was hypothesized.

High scores on the Religious Conflict Scale illustrate that a person tends to be in conflict with his/her religious beliefs. High scores on the Religious Solace Scale (Appendix D, items 42 through 49) indicate that the person has an unhealthy attitude towards religion, and high scores on the Hostility to Church Scale High are indicative of indifference towards religion and of the expression of negative attitudes toward the church and religious objects (Shaw & Wright, 1967).

Studies have shown that high religiosity and favorable attitudes towards religion and the church are related to less aggressive, violent, or criminal behaviors. Alternately, negative attitudes, low religious commitment, and low religiosity are related to higher rates of criminal,

violent, and aggressive behaviors (Brenda, 1997; Brinkerhoff et al., 1992; Ellis, 1985; Flannery, 1997; Morgan, 1983; Reiss, 2000; Tittle & Welch, 1983).

Weak social bonds, and weak bonds to religion, institutions, or other people may make a person more susceptible to act deviantly due to the belief that there is no one or nothing to whom or which to answer. Engaging in deviant acts further weakens already compromised social bonds. It weakens a person's belief in morality, decreases attachments to other people, and reduces commitments (Matsueda, 1989).

People who score high on Religious Solace, Religious Conflict, and Hostility to Church are less likely to turn to religion to help them cope with everyday stresses and will be more prone to aggression. Yinger (1970) and Kant said that faith in God and religion help people to manage with everyday stresses, thereby eliminating the need to behave aggressively (Wood, 1970). Therefore, when a person has no religious faith, or low religiosity, that person might be more accepting of aggression and may be more likely to behave aggressively.

Having a negative attitude towards church and religion would make a person more likely not to participate in religious activities and to be bored by church and religion. People who were bored by church reported higher rates of criminal activity than those people who reported that church activities were a source of comfort. Also, people with low scores of religiosity engaged in more criminal activity than people who had high scores of religiosity (Ellis & Thompson, 1989).

Women who scored high of Religious Solace actually had significantly lower scores of physical, verbal, and total aggression than women who had low scores of Religious Solace. This is interesting because Religious Solace measures whether a person has an unhealthy attitude towards religion (Shaw & Wright, 1967). As evidenced by the literature cited above, the

assumption would be that if someone has a negative or unhealthy attitude towards the church, then that person may have higher aggressive tendencies.

However, the results for this study would suggest that Religious Solace measures a positive attitude towards the church given its negative relationship with aggression scores. The most plausible reason for this is that the survey participants may have misinterpreted the statements that were included in the Religious Solace scale. Instead of interpreting the statements as being indicative of an unhealthy attitude towards religion and God, they may have interpreted them as being representative of a having a closer relationship with religion and God.

Hypothesis 2

The second hypothesis predicted that participants with high scores on religiosity as measured by the Religious Orthodoxy Scale and the Religious Tranquility Scale will have lower scores on all five scales of aggressiveness than participants with high scores of religiosity. The relationship between religious orthodoxy and physical aggression was supported by the analyses for men. For women participants, the relationship between religious orthodoxy and physical and total aggression, and the relationship between religious tranquility and verbal aggression were supported.

High scores on the two categories of the independent variable in this hypothesis measure a person's acceptance of the church and its teachings, and whether a person believes that church and religion helps him/her to be happy (Shaw & Wright, 1967). Studies have shown that high religiosity, and favorable attitudes towards religion and the church are related to less aggressive, violent, or criminal behaviors (Brenda, 1997; Brinkerhoff et al., 1992; Ellis, 1985; Flannery, 1997; Morgan, 1983; Reiss, 2000; Tittle & Welch, 1983). People who accept the church and its

teachings will be less aggressive because morality is active in religious teachings and principles, and religious doctrine and example show people how to live and act in appropriate and caring ways (Flannery, 1997). Additionally, belonging to and being active in religious organizations gives an individual something to turn to when in need of resolution, unconditional love, and termination of conflict (Rice, 1999).

Faith in the belief that God is wise and placing one's trust in Him reassures a person that everything will be fine. Moral faith is the choice to remain rational and make wise choices in dealing with the hardships and aggravations of everyday life, instead of losing one's self in despair. Everyday problems require responses in the form of decisions. These decisions are best made with the help of faith. This is because faith and reason both require, and are compatible, with each other (Wood, 1970).

Individuals with high scores on the Religious Orthodoxy Scale and the Religious Tranquility Scale will be more accepting of the church and its teachings and believe that church and religion helps them to be happy. Also, high scores on these scales are related to more frequent participation and involvement in church. Participation in religious activities reinforces and strengthens moral commitments and aids in the internalization of values. Many of the values taught through religious activities are reflections of societal norms for proper behavior. Religion and worship of God teaches people to respect authority, follow the rules, and conform to societal standards (Brenda, 1997; Tittle & Welch, 1983).

People who are very active in the church and who are involved with church activities are generally subjected to numerous moral messages. The messages and teachings received from the church, combined with interactions with other religious people, contributed the greatest to the reduction in the measure of criminality (Evans et al., 1995). The conclusion that can be drawn

from this is that going to church fosters moral behavior and, as a result, churchgoers are better citizens (Ellis & Thompson, 1989).

Religious groups generally believe and teach that aggressive acts that cause harm (crime, murder, theft) are wrong. People who are more religious, or have high religiosity, would most likely say that religion can improve world conditions by teaching a system of ethics that would be beneficial for all people (Hood et al., 1996; Paloutzian, 1996). This is because religion promotes group cohesion and causes a person to be committed to a set of moral principles that are common to other members of the religious group. In fact, laws against criminal activity usually have the moral principles of religion embedded in them. Therefore, people who are religious and follow religious guidelines are less likely to violate criminal laws (Ellis, 1985).

Hypothesis 3

This hypothesis stated that scores on the Hostility to Church Scale, age, class rank, reported frequency of church attendance, prayer, and reading religious materials will predict hostility scores on the “Aggression Questionnaire”. Specifically, frequency of church attendance was a significant predictor of hostility scores for males. For females, the regression equation with hostility to church, age, class rank, reported frequency of church attendance, prayer, and reading religious materials as predictors and hostility as the criterion was significant.

High scores on the Hostility to Church Scale are indicative of indifference towards religion and of the expression of negative attitudes toward the church and religious objects (Shaw & Wright, 1967). People who have high scores on Hostility to Church are less likely to be involved in religious activities, to pray, to attend church on a regular basis, and to read religious materials.

Frequent prayer is related to low aggressiveness because prayer is an internal process, and, as such, people who pray more often will have more internalized religious values, and will feel closer to and more influenced by God. Due to this greater internalization of values, prayerful people are more likely to do the right thing and are less likely to become angry, even if the same is not expected from other people (Morgan, 1983).

Participation in religious activities and frequent church attendance reinforce and strengthen moral commitments and aid in the internalization of values. Many of the values taught through religious activities are reflections of societal norms for proper behavior. Religion and worship of God teaches people to respect authority, follow the rules, and conform to societal standards (Brenda, 1997; Tittle & Welch, 1983).

Studies have shown that people who attended church on a regular basis had lower crime rates than people who attended church irregularly (Ellis, 1985), and that going to church on a regular basis is associated with lower levels of violence (Brinkerhoff et al., 1992). Going to church fosters moral behavior and that, as such, churchgoers are better citizens (Ellis & Thompson, 1989).

Hypothesis 4

The fourth hypothesis stated that scores on the Religious Conflict Scale, age, class rank, reported frequency of church attendance, prayer, and reading religious materials would predict physical aggression scores on the “Aggression Questionnaire” and is supported by the analyses for both men and women. People who have high scores on the Religious Conflict Scale are unsure of their beliefs about religion, and have ambivalent attitudes towards religion (Shaw &

Wright, 1967). People who have scores on Religious Conflict are less likely to be involved in religious activities, to pray, to attend church on a regular basis, and to read religious materials.

Studies have shown that frequent prayer is related to low aggressiveness because prayer is an internal process, and, as such, people who pray more often have more internalized religious values, and will feel closer to and more influenced by God. Due to this greater internalization of values prayerful people are more likely to do the right thing and are less likely to become angry, even if the same is not expected from other people (Morgan, 1983).

Participation in religious activities and frequent church attendance reinforce and strengthen moral commitments and aid in the internalization of values. Many of the values taught through religious activities are reflections of societal norms for proper behavior. Religion and worship of God teaches people to respect authority, follow the rules, and conform to societal standards (Brenda, 1997; Tittle & Welch, 1983).

Studies have shown that people who attended church on a regular basis had lower crime rates than people who attended church irregularly (Ellis, 1985), and that going to church on a regular basis is associated with lower levels of violence (Brinkerhoff et al., 1992). In summary, going to church fosters moral behavior and, as such, churchgoers are better citizens (Ellis & Thompson, 1989).

Limitations

There are some limitations to this study. First, the study was conducted at a moderate sized college in the “bible belt”. In this geographic region and institution, there is more emphasis on religion and religious values than would be found at larger colleges, greater metropolitan areas, or places of more diversity. Therefore, high scores on the subscales of

religiosity might not hold true for other regions. This study might have benefited from including samples of student populations from larger, more diverse geographic regions and institutions.

The second limitation of this study was that the sample used was a sample of convenience and was not randomly selected. The researcher selected the classes used in this sample because they were high enrollment classes and would provide a large number of survey participants.

Third, after analyzing the data, and the corresponding relationships between the independent and dependent variables, it became apparent that church attendance was the greatest predictor of aggressiveness. This relationship is also extensively supported by the literature. The study would have benefited more from a single, small scale that measures only church attendance and participation, rather than using “A Survey of Attitudes towards Religion and a Philosophy of Life”.

Based on the above limitations, there are several aspects of this study that can be changed in order to ensure that future studies yield more thorough results. Future studies might want to use samples from both larger metropolitan areas and smaller geographic regions similar to the one used in this study. This would allow the researcher to compare results between the two regions and will be useful in making a better assessment of how big of an influence geographic location can be on religious beliefs.

Also, future studies might want to consider using a smaller scale to measure religiosity. Church attendance and participation are the most important measures of religiosity. Therefore, it is not necessary to measure religiosity on several different aspects. Future studies might want to only retain the Religious Orthodoxy scale used in this study and the three questions about religious activity included at the bottom of the demographic questionnaire used in this study.

Implications

The results of this study illustrate the effect of religiosity and religious beliefs on aggressiveness and may be of use to policy makers, law enforcement officials, and school authorities. Understanding this relationship is important because it provides more insight into reasons why a person may or may not decide to commit a crime or act violently or aggressively. High religiosity plays a predominant in teaching moral values and teaching a person how to act responsibly and care for others.

Studying and identifying the possible impacts of religiosity on aggressiveness, crime, and violence are important because these social problems are becoming more prevalent in American society. As the prevalence of aggressiveness, crime, and violence increases, identifying ways in which these problems may be solved is increasingly needed. One plausible solution may be to promote genuine religious involvement by American citizens, as this may be a key aspect in reducing violent and aggressive behaviors.

Finally, there has been an increase in literature and research on the subject of religiously motivated aggression since the tragedy of September 11, 2001. The symbolism offered by religious rituals and membership in different religious groups, including Islam, Christianity, and Judaism, might also be represented in acts of violence. Understanding the link between religiosity and aggression may give insight into why certain religious groups choose to engage in acts of war and terrorism and may bring more awareness and understanding of the role that religion plays in peoples lives.

Directions for Further Research

Literature on the relationship between religious beliefs and aggressiveness is not in short supply. A few interesting relationships that would be good topics for future research were identified in the correlation data. First, a positive relationship was found between philosophy of life and anger, physical, verbal aggression, and total aggression for women participants. The philosophy of life scale measures whether or not a person has developed a system of values, goals and purposes related to upholding humanitarian ideals, in place of religious values or beliefs. People who score high on the philosophy of life scale do not believe in religious values but rather their own code of ethical and moral behavior.

The positive correlation here indicates that a person who scores high on the philosophy of life scale, also has high scores on the aggression scales. However, this is counterintuitive, as one would believe that a well developed value system in tune with the goals of humanity would be related to low aggressiveness, and not vice-versa. Even more interesting is that this trend was true for women participants and not male participants, who are expected to be more aggressive.

Second, religious change and positive correlations with aggression needs further consideration. The religious change scale measures whether the person's religious beliefs have changed since he/she has entered college, but does not give an indication of whether those beliefs have gotten stronger or weaker. Based on literature, the assumption would be that religious beliefs become weaker upon entering college as more knowledge is gained (Yinger, 1970). However, research should be conducted to measure direction (stronger or weaker) of religious change after entering college and its relationship with aggressiveness.

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APPENDICES

Appendix A

Informed Consent (To be read to participants)

Please do not begin until instructed to do so. The booklet you've received contains questionnaires that will ask you about your religious beliefs and behaviors, and will take approximately 15 minutes to complete. Please make sure that you DO NOT place your name, social security number, or any other identifying information anywhere on this survey booklet. You may remove the cover page, and use it to shield your responses to the survey items from the view of other participants. Please take your time and answer all questions honestly, making sure to complete the entire booklet. Remember, your answers will be completely anonymous. Your participation is completely voluntary, if you choose not to participate, please keep your booklet face down, and sit quietly. If you have any questions about this study, or want to know the results, please contact Dr. Marx or myself in the Psychology department at 439-4424. You may turn your booklet over and begin.

Appendix B



**PLEASE DO NOT OPEN THIS BOOKLET
OR START COMPLETING THE QUESTIONNAIRES
UNTIL INSTRUCTED TO DO SO!**

THANK YOU! 😊

Appendix C

DEMOGRAPHIC QUESTIONNAIRE

Age: _____

Gender: _____ FEMALE

_____ MALE

Race: _____ AFRICAN AMERICAN

_____ ASIAN

_____ HISPANIC

_____ WHITE

_____ OTHER – PLEASE SPECIFY: _____

Class Rank: _____ FRESHMAN

_____ SOPHMORE

_____ JUNIOR

_____ SENIOR

_____ OTHER – PLEASE SPECIFY: _____

Religious Background: _____ BAPTIST

_____ CATHOLIC

_____ PROTESTANT

_____ MUSLIM

_____ JEWISH

_____ OTHER – PLEASE SPECIFY: _____

How often do you attend church each month? _____

How often do you pray each month? _____

How often do you read the Bible or other religious information each month? _____

Appendix D

QUESTIONNAIRE #1

This inventory consists of numbered statements. Read each statement and decide whether it is **true as applied to you** or **false as applied to you**. If the question is multiple choice, please circle your choice. Please circle T if a statement is true or mostly true as applied to you and please circle F if a statement is false or not usually true as applied to you.

- | | | |
|---|---|--|
| T | F | 1. I cannot decide what to believe about religion |
| T | F | 2. I sometimes wonder just what life is all about and why we are here. |
| T | F | 3. I am actively trying to decide by reading or other means, what the truth is about religion. |
| T | F | 4. At times I have felt guilty because of my religious upbringing. |
| T | F | 5. I sometimes feel disloyal to my parents because I cannot entirely accept their religious beliefs. |
| T | F | 6. I wish I was perfectly sure of my belief in God. |
| T | F | 7. I am not as strict in my religious practices as I feel I should be. |
| T | F | 8. My church is too strict. |
| T | F | 9. There are too many things about religion I don't understand. |
| T | F | 10. I am in danger of losing my faith. |
| T | F | 11. Sometimes I feel guilty because of my lack of faith. |
| T | F | 12. Education has led me to question some teachings of my church. |
| T | F | 13. Sometimes I believe in Hell and sometimes I don't. |
| T | F | 14. I wish I could be sure my religious beliefs are correct. |
| T | F | 15. Contradictory religious ideas make one wonder which ones to accept. |
| T | F | 16. I feel that I shouldn't question my religion, but I sometimes do, anyway. |

- T F 17. I feel that I should be more religious than I am.
- T F 18. I might be happier if I did not believe in my religion.
- T F 19. I wish I did not believe in hell, but I do.
- T F 20. I sometimes wonder why God lets terrible things happen to people.
- T F 21. It is hard to reconcile science with religion.
- T F 22. Although basically I believe in my religion, my faith often wavers.
- T F 23. I believe in the basic teachings of my church and attend regularly.
- T F 24. I believe firmly in the teachings of my church.
- T F 25. I never doubted the teachings of the church.
- T F 26. I believe that religious faith is better than logic for solving life's important problems.
- T F 27. I believe our fate in the hereafter depends on how we behave on earth.
- T F 28. I believe God knows our every thought and movement.
- T F 29. I believe that God controls everything that happens everywhere.
30. I think my prayers are answered
- (a) always
- (b) sometimes
31. I attend church
- (a) once a week or more
- (b) once a month or more
- T F 32. I do not believe in any particular religion; instead, I have a philosophy of life.
- T F 33. Although at one time I believed in a religion, I now believe in a code of ethics.
- T F 34. If you are a strong person, you do not need religion.

- T F 35. Promoting a better world is more important to me than religion is.
- T F 36. We make our own heaven or hell here on earth.
- T F 37. Religion has brought me peace of mind.
- T F 38. Religion's chief purpose is to make people happy.
- T F 39. Religion makes me feel safe and secure.
- T F 40. Religion helps me to be a better person.
- T F 41. I feel secure in the knowledge that God is always with me.
- T F 42. I believe in a merciful God, not a punishing one.
- T F 43. Religion helps me when I feel blue.
- T F 44. Some unhappy experiences have made me turn to God for help.
- T F 45. Sometimes religion is the only thing we can rely on.
- T F 46. If I were to lose my belief in God, there would be little comfort left.
- T F 47. I feel a strong need to believe in God.
- T F 48. You can always turn to God when you are in trouble.
- T F 49. At times only my belief in God has prevented me from feeling hopeless.
- T F 50. I believe that religion is of little use in present-day society.
- T F 51. I am indifferent to the subject of religion.
- T F 52. I have little use for religion.
- T F 53. Religion has not kept pace with the times.
- T F 54. Religion has too often been used to promote prejudice.
- T F 55. If you are a strong person, you do not need religion.
- T F 56. Promoting a better world is more important to me than religion is.

The following list represents a number of beliefs. Please indicate, by circling the appropriate choice, whether your attitude toward each is the same (S), partly different (P), or very different (D) than it was when you entered college.

- | | | | |
|---|---|---|--|
| S | P | D | 57. The Church. |
| S | P | D | 58. A personal God. |
| S | P | D | 59. The immortality of the soul. |
| S | P | D | 60. Hell. |
| S | P | D | 61. Heaven. |
| S | P | D | 62. Adam and Eve. |
| S | P | D | 63. Angels. |
| S | P | D | 64. The divine inspiration of the bible. |
| S | P | D | 65. The power of prayer. |
| S | P | D | 66. The divine authority of the Church. |

Appendix E

QUESTIONNAIRE #2

For the following items please rate how characteristic each is of you. Using the following rating scale record your answer in the space to the left of each item.

- 1 = Extremely uncharacteristic of me
- 2 = Somewhat uncharacteristic of me
- 3 = Only slightly characteristic of me
- 4 = Somewhat characteristic of me
- 5 = Extremely characteristic of me

- _____ 1. Once in a while I can't control the urge to strike another person.
- _____ 2. I tell my friends openly when I disagree with them.
- _____ 3. I flare up quickly but get over it quickly.
- _____ 4. I am sometimes eaten up with jealousy.
- _____ 5. Given enough provocation, I may hit another person.
- _____ 6. I often find myself disagreeing with people.
- _____ 7. When frustrated, I let my irritation show.
- _____ 8. At times I feel I have gotten a raw deal out of life.
- _____ 9. If somebody hits me, I hit back.
- _____ 10. When people annoy me, I may tell them what I think of them.
- _____ 11. I sometimes feel like a powder keg ready to explode.
- _____ 12. Other people always seem to get the breaks.
- _____ 13. I get into fights a little more than the average person.
- _____ 14. I can't help getting into arguments when people disagree with me.
- _____ 15. Some of my friends think I'm a hothead.
- _____ 16. I wonder why sometimes I feel so bitter about things.
- _____ 17. If I have to resort to violence to protect my rights, I will.

- 1 = Extremely uncharacteristic of me
- 2 = Somewhat uncharacteristic of me
- 3 = Only slightly characteristic of me
- 4 = Somewhat characteristic of me
- 5 = Extremely characteristic of me

- _____ 18. My friends say that I am somewhat argumentative.
- _____ 19. Sometimes I fly off the handle for no good reason.
- _____ 20. I know that “friends” talk about me behind my back.
- _____ 21. There are people who pushed me so far that we came to blows.
- _____ 22. I have trouble controlling my temper.
- _____ 23. I am suspicious of overly friendly strangers.
- _____ 24. I can think of no good reason for ever hitting a person.
- _____ 25. I sometimes feel that people are laughing at me behind my back.
- _____ 26. I have threatened people I know.
- _____ 27. When people are especially nice, I wonder what they want.
- _____ 28. I have become so mad that I have broken things.
- _____ 29. I am an even-tempered person.

VITA

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