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ADOLESCENT RELIGIOSITY, RELIGIOUS AFFILIATION,  
AND PREMARITAL PREDICTORS OF MARITAL  
QUALITY AND STABILITY

by

Stacey S. MacArthur

A dissertation submitted in partial fulfillment  
of the requirements for the degree

of

DOCTOR OF PHILOSOPHY

in

Family, Consumer, and Human Development

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Logan, Utah

2008

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## ABSTRACT

Adolescent Religiosity, Religious Affiliation, and Premarital  
Predictors of Marital Quality and Stability

by

Stacey S. MacArthur, Doctor of Philosophy

Utah State University, 2008

Major Professor: Dr. Thomas R. Lee  
Department: Family, Consumer, and Human Development

The influence of religiosity in adolescence on several variables that have been shown to be predictors of marital quality and stability was examined using a nationally representative sample of 3,151 youth, aged 13 to 17 years, from the National Study of Youth and Religion (NSYR). Religiosity was defined to incorporate multiple characteristics including religious beliefs, attitudes, participation, experiences, and identities. The effect of religious affiliation and religiosity was also examined for seven premarital predictors, which included relationship with parents, ideal age for marriage, right and wrong, academic achievement, sexual behavior, attitude toward cohabitation, and attitude toward divorce. Data were collected through telephone interviews using a random-digit-dial method between 2002 and 2003. Youth were categorized into eight religious groups: Conservative Protestant, Mainline Protestant, Black Protestant, Catholic, Jewish, The Church of Jesus Christ of Latter-day Saints, Other Christian, and Not Religious. Research questions were analyzed using ANCOVA, OLS regression, and

logistic regression. Results indicated that all three research hypotheses were supported by the data. Specifically, religious affiliation significantly predicted level of religiosity, religiosity was related to each of the seven premarital predictors of marital quality and stability, and religious affiliation acted as a moderator in the relationships between religiosity and the seven premarital predictors. Comparison of the eight religious groups revealed that religiosity has a unique influence on youth in the different groups in relation to these outcome variables. In light of these findings, implications, limitations, and future directions for research are discussed.

(178 pages)

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The data were downloaded from the Association of Religion Data Archives, [www.TheARDA.com](http://www.TheARDA.com) (n.d.), and were collected by Christian Smith and Lisa Pearce.

Stacey S. MacArthur

# CONTENTS

vi

	Page
ABSTRACT.....	iii
ACKNOWLEDGMENTS .....	v
LIST OF TABLES.....	viii
LIST OF FIGURES .....	x
CHAPTER	
I. INTRODUCTION .....	1
Definition of Religiosity .....	2
Previous Research.....	2
Theoretical Framework .....	6
Purpose Statement and Research Questions .....	7
II. REVIEW OF LITERATURE .....	9
Introduction.....	9
Religiosity .....	10
Premarital Predictors of Marital Quality and Stability .....	24
Control Variables.....	31
Relating Religiosity to Premarital Predictors .....	36
Use of Theory in Research.....	38
Ecological Systems Theory.....	44
Research Models, Questions, and Hypotheses .....	49
III. METHODS .....	53
Procedures.....	53
Participants.....	56
Measures .....	57
Statistical Analysis.....	65
IV. RESULTS .....	68
Descriptive Analysis .....	68
Inferential Analysis.....	72

	Page
V. DISCUSSION.....	95
Research Questions Answered.....	96
Discussion of Findings.....	98
Implications.....	104
Limitations .....	104
Future Directions .....	106
Conclusion .....	107
REFERENCES .....	108
APPENDICES .....	116
Appendix A: Religiosity Factor Scores .....	117
Appendix B: NSYR Religiosity Questions .....	119
Appendix C: NSYR Religious Affiliation Question and Responses.....	124
Appendix D: Religious Denominations in Combined Religious Groups.....	126
Appendix E: NSYR Relationship with Parents Questions.....	128
Appendix F: Relationship with Parents Factor Scores.....	132
Appendix G: NSYR Sexual Behavior Questions .....	134
Appendix H: Sexual Behavior Factor Scores.....	137
Appendix I: Right & Wrong Factor Scores .....	139
Appendix J: NSYR Right & Wrong Questions .....	141
Appendix K: NSYR Academic Achievement Questions.....	143
Appendix L: Academic Achievement Factor Scores.....	146
Appendix M: Conservative Protestant Subsample Correlations Between Variables.....	148
Appendix N: Mainline Protestant Subsample Correlations Between Variables.....	150
Appendix O: Black Protestant Subsample Correlations Between Variables.....	152
Appendix P: Catholic Subsample Correlations Between Variables.....	154
Appendix Q: Jewish Subsample Correlations Between Variables .....	156
Appendix R: LDS Subsample Correlations Between Variables.....	158
Appendix S: Other Christian Subsample Correlations Between Variables.....	160
Appendix T: Not Religious Subsample Correlations Between Variables.....	162
CURRICULUM VITAE.....	164



## LIST OF TABLES

Table	Page
1 Pearson Correlation Coefficients Between Independent and Dependent Variables .....	68
2 Means of Dependent Variables by Religious Affiliation.....	71
3 ANCOVA Tests of Between-Subjects Effects .....	72
4 Statistically Significant Differences in Religiosity by Religious Affiliation.....	73
5 OLS Regression Results for Quality of Relationship with Parents .....	76
6 OLS Regression Results for Ideal Age for Marriage.....	77
7 OLS Regression Results for Right and Wrong .....	78
8 OLS Regression Results for Academic Achievement .....	79
9 OLS Regression Results for Sexual Behavior .....	80
10 Adjusted Logistic Regression Coefficients for Cohabitation and Divorce.....	81
11 Significant Results for Interaction Terms on Relationship with Parents .....	84
12 Significant Results for Interaction Terms on Reported Ideal Age for Marriage .....	85
13 Significant Results for Interaction Terms on Right and Wrong .....	87
14 Significant Results for Interaction Terms on Academic Achievement .....	88
15 Significant Results for Interaction Terms on Sexual Behavior .....	90
16 Significant Results for Interaction Terms on Attitude Toward Cohabitation....	93
17 Significant Results for Interaction Terms on Attitude Toward Divorce.....	94
18 Religiosity Factor Scores .....	118
19 Relationship with Parents Factor Scores.....	133

Table	Page
20 Sexual Behavior Factor Scores .....	138
21 Right & Wrong Factor Scores.....	140
22 Academic Achievement Factor Scores .....	147
23 Conservative Protestant Subsample Correlations Between Variables.....	149
24 Mainline Protestant Subsample Correlations Between Variables .....	151
25 Black Protestant Subsample Correlations Between Variables.....	153
26 Catholic Subsample Correlations Between Variables .....	155
27 Jewish Subsample Correlations Between Variables .....	157
28 LDS Subsample Correlations Between Variables .....	159
29 Other Christian Subsample Correlations Between Variables .....	161
30 Not Religious Subsample Correlations Between Variables.....	163

## LIST OF FIGURES

Figure		Page
1	Church attendance by religious affiliation.....	16
2	Church attendance over time .....	16
3	Frequency of prayer by religious affiliation .....	18
4	Teen religious affiliation.....	20
5	Changes in religious affiliation over time.....	21
6	Importance of religion by grade.....	23
7	Importance of religion over time .....	24
8	Gender differences in church and youth group participation.....	33
9	Religious affiliation according to ethnicity.....	35
10	Theoretical model .....	50
11	Empirical model for question 1.....	51
12	Empirical model for questions 2 and 3 .....	52
13	Means of eight religious groups on religiosity .....	74

## CHAPTER I

### INTRODUCTION

Adolescence in the United States is a period of transition between childhood and adulthood. Physical, emotional, cognitive, social, and spiritual dimensions of maturation are included in this transition. The achievement or breakdown of each aspect of this transition depends on a myriad of variables such as individual characteristics (Scales, Benson, Leffert, & Blyth, 2000; Valle, Huebner, & Suldo, 2006) resilience or vulnerability (Pinkerton & Dolan, 2007), personal choices (Kruczek, Alexander, & Harris, 2005), support (Richman, Rosenfeld, & Bowen, 1998), and opportunities (Whitlock, 2007). Research has shown that the majority of individuals successfully navigate the perils of adolescence with only minor complications to become stable, contributing members of society as adults (Compas, 2004). However, enough youth engage in activities which place their current development and future outcomes at risk to warrant a careful study of the causes. Unfortunately, adolescent risk patterns may be increasing (Garbarino, 1995). How can our society better arm youth with strengths, characteristics, and assets to foster or increase the likelihood of their successful transition to adulthood? Several factors have been found to protect youth or to assist in their transition to adulthood. These include attachment (Allen & Land, 1999), mentoring (Karcher, 2005), or even technology (Bers, 2006). A yet to be shown factor that has received less attention is religiosity.

According to Smith, Faris, and Denton (2003), almost 90% of American teens claim affiliation with a religion. This number may increase when those who are spiritual but not a part of organized religion are included (Heimbrock, 2004). However, little is

known about the role of religiosity beyond affiliation or spirituality in the lives of U.S. teens. In addition, it is unclear how religiosity in youth may influence current development of strengths and how these may influence their future capacity in adult roles.

### Definition of Religiosity

A key issue of research about religiosity is its' definition. The investigators conducting the National Study of Youth and Religion (NSYR) recently defined religiosity to include religious "beliefs, practices, experiences, identities, and attitudes" (Smith & Denton, 2005, p. 26). To further clarify religiosity, the following is offered to describe the individual terms that make up the definition: *beliefs* include examples such as belief in God, the Trinity, angels, and the devil; *practices* include attendance at church/synagogue/temple, youth group, or summer camp, praying, and reading scriptures; *experiences* include being born again, and feeling the Holy Spirit; *identities* include incorporating religious values, heritage, and connection to others; and *attitudes* include importance of religion, and perceived closeness to God.

### Previous Research

#### *Religiosity*

Previous studies have examined adolescent religiosity in relation to a myriad of variables that either promote or discourage successful youth development. These include religiosity as either a protective factor against undesirable behavior such as premarital

sexual behavior (Rostosky, Wilcox, Wright, & Randall, 2004), use of alcohol, tobacco, and other drugs (ATOD; Nonnemaker, McNeely, & Blum, 2003), delinquency (Chadwick & Top, 1993), or as a factor to promote socially desirable characteristics such as involvement in community service (Smith, 2003), identity (Spencer, Fegley, & Harpalani, 2003; Youniss, McLellan, & Yates, 1999), coping (Desrosiers & Miller, 2007), and mental health (James & Wells, 2003). However, such research has used multiple definitions of religiosity often without consideration for which denomination, or the specific “beliefs, practices, experiences, identities, and attitudes” (Smith & Denton, 2005, p. 26) that the individuals ascribe to as a basis for their religiosity. Such individual differences may affect the mechanism whereby religiosity protects or promotes outcomes in adolescents’ lives.

Another unknown aspect of adolescent religiosity is the actual strength of influence during the course of adolescence. Some researchers investigating religiosity have found a general decrease in religiosity during the adolescent years (Johnston, Bachman, & O’Malley, 1999), while others suggest that adolescence is the stage of life when religious conversion is most likely to take place (Regnerus & Burdette, 2006). The reason for these disparate conclusions is unclear. It may be due to inconsistencies in definitions and measurement, the way findings are reported, or to variables associated with religiosity which are unaccounted for, such as affiliation, including the specific—and possibly unique—doctrines and practices associated with it.

### *Religion & Affiliation*

Clearly, differences in beliefs (e.g., concept of and relationship to God, belief in

Christ) and practices (e.g., prayer, worship) would affect strength of religiosity and religious outcomes. For instance, one research team noted that a fundamental difference among Christian denominations is the “Catholic emphasis on *works* compared with the Protestant emphasis on *faith*” (Park, Cohen, & Herb, 1990, p. 567, emphasis in original).

### *Premarital Predictors of Marital Quality & Stability*

Many premarital variables have been examined previously for their later influence on marital quality and stability. These include contextual factors such as family of origin variables, demographic variables, age at first marriage, and stress; individual factors such as emotional & physical health, interpersonal skills (Larson & Holman, 1994), childhood stress (Umberson, Williams, Powers, Liu, & Needham, 2005), kindness, commitment, sacrifice, forgiveness, affect regulation, secure attachment, and self-worth (Carroll, Badger, & Yang, 2006); and interactional factors such as cohabitation, premarital sex/pregnancy/childbirth, and communication skills (Larson & Holman). Many of these have been established as associated with or predictive of later levels of marital quality and stability.

It would be useful to understand any precursors or correlates of these premarital predictors and to examine how they are developed and how they may be strengthened or altered for current and future family roles. The current study will examine the influence of religiosity on the current development and future influence of the premarital predictors of relationship with parents (family of origin/contextual variable), attitude towards cohabitation and divorce, sexual activity (interactional variables), academic achievement and goals, and right and wrong (individual variables), while controlling for age, gender,

ethnicity, and socioeconomic status.

### *Control Variables*

Four variables were included as control variables, age, gender, ethnicity, and socioeconomic status. The purpose of their inclusion was to separate religiosity from other influential factors associated with outcome variables to better understand the unique influence of each religiosity variable on the outcome variables.

#### *Age*

Overall, religiosity shows a slight decline over the adolescent years. This decline is seen with church and youth group attendance, and importance of religion (Smith, Denton, Faris, & Regnerus, 2002). However, this is not true for all adolescents or all characteristics of religiosity. Some have found that a slight minority of youth continue at high levels of religiosity over the teen years (King, Elder, & Whitbeck, 1997) whereas others increase on some aspects of religiosity and decrease on others (Regnerus & Burdette, 2006).

#### *Gender*

Research examining gender differences on characteristics of youth religiosity have shown fairly consistent outcomes. Overall, compared to boys, girls report that religion holds higher levels of importance (King et al., 1997), and they have higher levels of prayer, and attendance at religious services and youth groups (Smith et al., 2002).



### *Ethnicity*

The ethnicity of U.S. teens has been associated with both religious affiliation and degree of religious participation. In general, Black youth consistently manifest higher levels of religiosity than White or Latino youth (Brody, Stoneman, & Flor, 1996). For religious youth groups, Black and White youth are more likely to participate compared to other racial groups (Smith et al., 2002).

### *Socioeconomic Status*

Previous research has revealed significant differences in socioeconomic status on measures of religiosity and membership in different religions or denominations (see Hunsberger, Pratt, & Pancer, 2001). Interestingly, higher levels of parental education have been associated with increased levels of attendance but decreased levels of religious importance (King et al., 1997).

## Theoretical Framework

Few studies of adolescent religiosity have used a theoretical framework as a guide. Of those studies that did identify a theory, two researchers used modified versions of ecological systems theory (Chadwick & Top, 1993; Spencer et al., 2003), one used a modified version of self-determination theory (Flor & Knapp, 2001), another used life-course theory (King et al., 1997), and in a final study the researchers outlined a conceptual model but did not name a specific theory (Brody et al., 1996). This limited use of theory may weaken research in this field by making it more difficult to form relevant questions, to interpret results, and to understand the connections between results from

different studies. Research that may seem disconnected could have clear relation when viewed through a common theoretical lens.

The theoretical framework that guided the current study was ecological systems theory (Bronfenbrenner, 1979, 1986; Bubolz & Sontag, 1993). This is a broad theory that incorporates multiple factors and their interaction to explain outcomes. It is briefly outlined here and then more fully explained in relation to the current study variables in the literature review.

The structure of the theory, as outlined by Bronfenbrenner (1979, 1986) and Bubolz and Sontag (1993), is made up of a Microsystem, Mesosystem, Exosystem, Macrosystem and Chronosystem. An important assumption of this theory is the bi-directional influence within and between each of the systems and the individual. The microsystem includes those contexts that directly influence development in the individual beginning with the person's own body (e.g., genes, health, beliefs), and then the family, home, school, neighborhood, and religious congregation. The mesosystem describes the interaction between any two or more elements in the microsystem and the subsequent influence from and on the individual and the other layers of environment. The exosystem includes contexts that are indirectly tied to the individual but are directly tied to an element in the microsystem such as parent's work, or the school board. The macrosystem represents the broader contexts of society, including culture, customs, values, beliefs, media, and laws. Lastly, the chronosystem represents the historical context and accounts for the passage of time for the developing individual.

## Purpose Statement and Research Questions

Religiosity is typically examined as a global construct, without regard to specific definition, affiliation, race/ethnicity, or other individual variations. This may lead to inaccurate conclusions about the influence of religiosity in the lives of youth on an individual or group basis. The purpose of this study was to examine an extant national data set of self-reported youth religiosity to better understand the dynamic nature of religiosity and individual differences in how it is experienced by U.S. teens. In addition, this study examined how religiosity influences current attitudes and behaviors that are correlated with premarital predictors of later marital quality and stability. These include relationship with parents, attitude toward cohabitation and divorce, adolescent sexual activity and pregnancy, academic achievement and goals, and the youth's knowledge of right and wrong, and how they behave in ways consistent with their knowledge.

Specifically, the following research questions were examined.

1. Is religious affiliation related to level of religiosity, controlling for age, gender, ethnicity, and socioeconomic status?
2. Is level of religiosity related to premarital predictors of marital quality and stability (i.e., relationship with parents; right & wrong; academic achievement; attitude toward cohabitation; attitude toward divorce; ideal age for marriage; and sexual behavior), controlling for age, gender, ethnicity, and socioeconomic status?
3. Is religious affiliation a moderator for the relationships in question two?

## CHAPTER II

### REVIEW OF LITERATURE

#### Introduction

Adolescence is a critical period of life when many decisions are made that can have long-lasting consequences. For some adolescents in the 21<sup>st</sup> century, these decisions take place in what has been called a “toxic environment,” an environment that is not nurturing of adolescent development and where many environmental risks exist that could place them in jeopardy (Garbarino, 1995). Adolescents are in a unique stage of life where they have enough maturity and autonomy to explore and follow individual pursuits (Arnett, 2002), but they may not have developed the ability to foresee the outcomes of choices they make (Eshel, Nelson, Blair, Pine, & Ernst, 2007). Adolescents often maintain a “personal fable” of invulnerability that nothing bad will ever happen to them (Alberts, Elkind, & Ginsberg, 2007; Elkind, 1967). At the same time, their explorations are setting the stage for outcomes in adulthood (Arnett).

Research has identified influences at many levels of the social environment associated with youth making good or poor choices during adolescence that will affect adult outcomes. Individual, family, peer, school, and community factors interact to increase or decrease the likelihood of problem behaviors in adolescence that elevate the risk for positive outcomes in adulthood (Benson, 1997; Bogenschneider, Small, & Riley, 1991; Hawkins, Catalano, & Arthur, 2002). Recently, the topic of religiosity has been coupled with adolescent outcomes with renewed interest. Religiosity has been found to be associated with lower levels of adolescent problem behaviors such as drug and alcohol

use (Nonnemaker et al., 2003), delinquency (Pearce & Haynie, 2004; Regnerus, 2003), and precocious and irresponsible sexual activity (Rostosky et al., 2004). It has also been found to be associated with prosocial characteristics and behaviors such as academic achievement (Jeynes, 2003), thriving (Dowling et al., 2004), physical and mental health (James & Wells, 2003; Hackney & Sanders, 2003), and coping (Spencer et al., 2003). Less has been found, however, about how religiosity may or may not be associated with preparation in adolescence for success in adult marriage and family roles. Research on premarital predictors of marital outcomes has identified several factors associated with marital stability and quality (Larson & Holman, 1994), but how religiosity in adolescence may influence these has not been investigated.

This review will present recent definitions of adolescent religiosity, examine the U.S. trends of adolescent religiosity, and note any differences in religiosity according to religious affiliation. This will be followed by a review of the current state of research for premarital predictors of marital quality and stability, and an outline of both strengths and weaknesses of previous research to elucidate the need for the current study. Finally, these literatures will be summarized and research questions and hypotheses will be restated and outlined.

## Religiosity

With almost 90% of American teens claiming affiliation with a religion (King & Boyatzis, 2004), it would be of great benefit to identify those aspects of religious participation that provide positive or protective factors so they could be fostered in youth generally. Surprisingly, little is known about the strength and influence of religion in the

lives of U.S. teens (Smith et al., 2003). Some researchers have found a general decrease in religious participation and spirituality during the adolescent years (Johnston et al., 1999) while others suggest that this time period is the stage of life when religious conversion and increased participation is most likely to take place (Regnerus & Burdette, 2006).

Generally, this domain has remained untapped in its potential to foster thriving in youth. One researcher states, “It is reasonable. . .to argue that the pursuit of things spiritual or religious represents a hidden and unclaimed core dimension of human development” (Benson, 2004, p. 50). Daly (2003) concurred with this by claiming that beliefs, and religious and spiritual matters are contained within research negative spaces, which “are the recessive areas that we are unaccustomed to seeing but that are every bit as important for the representation of the reality at hand” (p. 771). In other words, religiosity and spirituality are important in understanding youth development but have not yet become prevalent in youth research.

### *Definitions of Religiosity*

Church attendance has historically been used or misused in research as a generalized indicator of religiosity. However, alone it may not be an accurate indicator of overall religiosity. Call and Heaton (1997) argued that this unidimensional indicator “ignore[s] the complexity of religious experience” (p. 382). Another downside to treating religiosity in youth so lightly is that it tends to “push religious and spiritual development to the sidelines” (Benson, 2004, p. 50) and out of any real developmental import.

Recently, researchers are addressing this problem, by combining this over-simplistic measure with other measures of religious belief, public participation, and private behaviors to more fully capture religiosity in the lives of youth in the United States.

Researchers have measured religiosity using a variety of religious indicators either individually (e.g., church attendance) or in some combination. Some have used public practices (King et al., 1997; Nonnemaker et al., 2003; Schwadel & Smith, 2005; Wallace, Forman, Caldwell, & Willis, 2003; Youniss et al., 1999), personal practices (Nonnemaker et al.; Schwadel & Smith), religious beliefs (Schwadel & Smith; Spencer et al., 2003), religious identity (King et al.; Riebe-Estrella, 2004; Schwadel & Smith; Spencer et al., 2003; Youniss et al.), religious experiences (Schwadel & Smith), religious attitudes (King et al.; Schwadel & Smith; Wallace et al.; Youniss et al.), and one study separated religiosity into religious and spirituality categories (Hill & Pargament, 2003).

As seen in the last named study, some are defining spirituality outside of religiosity. Some adolescents who do not consider themselves to be religious, do consider themselves to possess spirituality. Researchers (King & Boyatzis, 2004; Koenig, McCullough, & Larson, 2001) have defined this type of being *spiritual but not religious* as the expression of a personal, subjective, unsystematic pattern of emotions and behaviors related to “some transcendent entity” (King & Boyatzis, p. 3).

Investigators conducting the National Study of Youth and Religion recently defined religiosity in a more specific and comprehensive manner to include religious “beliefs, practices, experiences, identities, and attitudes” (Smith & Denton, 2005, p. 26). The following clarifications are offered to operationalize the individual terms that make up this definition by giving examples of each: beliefs may include belief in God, angels,

and the devil; practices may include attendance at church, synagogue, youth group, or summer camp, as well as private practices of praying and reading scriptures; experiences may include being born again, feeling the Holy Spirit, and receiving an answer to prayer; identities may include incorporating religious values, heritage, and connection to others into how one sees themselves; and attitudes may include the importance of religion, and perceived closeness of the individual to God.

### *General Trends in Adolescent Religiosity*

The participation in and importance of religion appears to slightly decline through adolescence regardless of gender. The adolescent years bring “significant physical, psychological, and social changes” that may influence religiosity (Smith et al., 2002, p. 597). For instance, the frequency of church attendance tends to decline between 8<sup>th</sup> and 12<sup>th</sup> grades. One study (Johnston et al., 1999) reported that approximately 44% of 8<sup>th</sup> graders claimed to attend religious services weekly compared to 38% of 10<sup>th</sup> graders, and 31% of 12<sup>th</sup> graders. Participation in religious youth groups follows a similar pattern. A national data set (Survey of Parents and Youth) showed that 50% of 13-year-olds attend on a weekly basis, while only 29% of 18-year-olds attend at the same rate (Smith et al., 2002).

However, within this overall trend of declining church attendance, there may be some adolescents for whom religiosity becomes more important over time. For example, King and colleagues (King et al., 1997) found that 41% of teens remained high in religiosity, 12% remained low, 24% decreased, and 22% increased. Thus the 24% of teens who decreased in religiosity were almost matched in number by 22% who



increased. Examination of the National Longitudinal Survey of Adolescent Health (Add Health), found a similar polarizing pattern for religious change. From Wave I to Wave II, data revealed that 15-18% of youth increased on some measure of religiosity while also increasing on measures of parent-adolescent relations and other family outcomes. In contrast, 20-22% of the youth showed a decrease on one or more religious measures coupled with diminishing family relations (Regnerus & Burdette, 2006).

These data are important as a starting place to examine the role of religiosity in the lives of U.S. teens. Additional age and time related trends will mainly be presented within specific content areas throughout this review.

### *Beliefs*

#### *Belief in God*

The teen has the majority of control over personal beliefs aside from the filtering influence of parents and religious leaders or teachers. A fundamental religious belief concerns belief in God. Variations in belief in God include the nature of God (e.g., essence, spirit, embodied), the characteristics of God (e.g., omnipotent, omnipresent, omniscient), and their relationship to God (e.g., creation of, child of, distant). These distinctions may have subtle or obvious influences on how religiosity is experienced or valued.

#### *General Religious Beliefs*

Religious beliefs themselves might benefit individual welfare. Ellison and Levin (1998) stated that the simple expectation or belief that God will reward personal devotion

increases well-being in an individual. Well-being may additionally come in an indirect manner from religious beliefs through increased self-regulation and moral thought (Pearce & Haynie, 2004). However, research shows that many results of religiosity come in response to the degree beliefs and values have been internalized by the adolescent where they may have a greater influence on attitudes and behavior (Thomas & Carver, 1990).

### *Practices*

#### *Church Attendance*

Using data from Add Heath, Figure 1 (NSYR, n.d.) shows more than 50% of youth attend church at least monthly, 38% of these attend weekly, and 15% never attend. These rates vary according to religious affiliation with Jehovah's Witnesses, Holiness, Latter-day Saints, and Pentecostal youth indicating greater than 60% weekly attendance in contrast to the eastern faiths which show less than 30% (Smith et al., 2002). An overall observation of attendance by religious affiliation may be that the faiths showing more consistency between doctrine and actual beliefs show the higher rates of church attendance.

Research has shown important factors that influence continued religious attendance over time. Some of these youth factors related to being more likely to remain active in church attendance over time include agreement with and adherence to their religions' doctrines (Dudley, 1993), and strong identification with their parents (King et al., 1997).

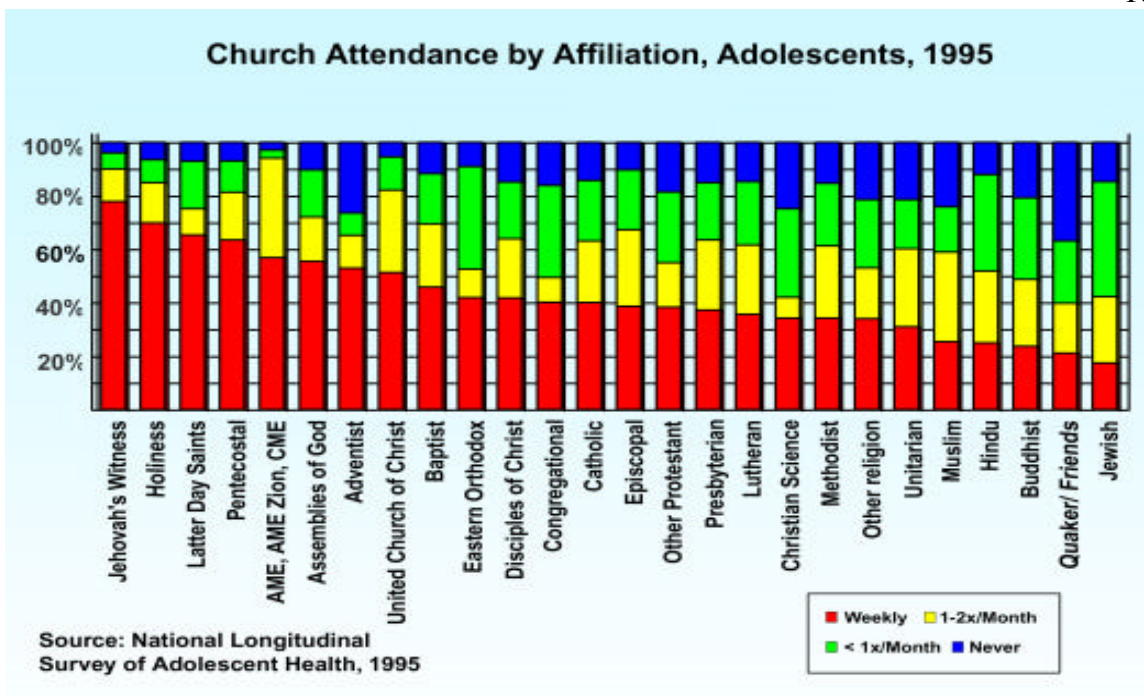


Figure 1. Church attendance by religious affiliation.<sup>1</sup>

Figure 2 (NSYR, n.d.) shows trends for a national sample of youth in church attendance for a 20 year period between 1976 and 1996. It shows an increase in youth (4%) that never attend church, an increase in the number of youth (4%) that rarely attend church, no change in youth (0%) that attend one to two times per month, and a decrease in the number of youth (8%) that attend church on a weekly basis.

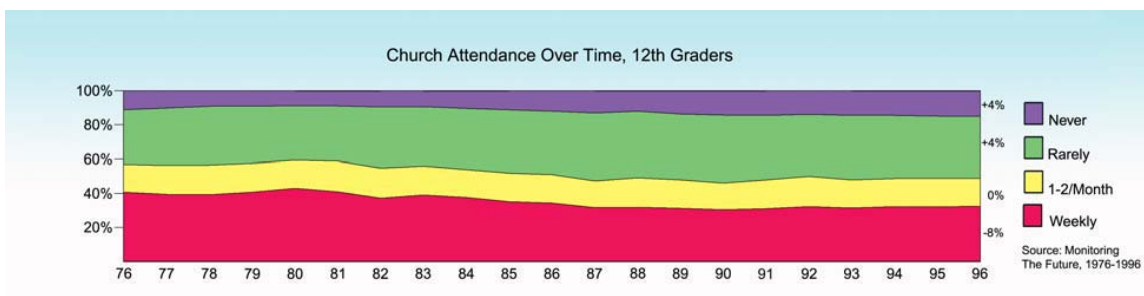


Figure 2. Church attendance over time.

<sup>1</sup> Using data from the specified sources (e.g., Add Health), NSYR created Figures 1-9 in this proposal.

### *Youth Group Participation*

About 50% of U.S. teens participate at least once or twice monthly in religious youth groups. The Monitoring the Future data indicate that 25% of high school seniors have participated in youth groups for at least four years, 16% more have participated for three years, 15% for two years, and 44% have not participated at all. Participation in religious youth groups, as with most other variables, varies according to denomination. In two national data sets, Latter-day Saints show the highest rate of weekly participation and participation in the past seven days at 45% in Add Health (1995 data), and 58% in the Survey of Parents and Youth (1998 data). In the Survey of Parents and Youth they are followed by Protestants (49%), Jews (44%), Muslims (43%), Catholics (32%), and Jehovah's Witnesses (20%). Surprisingly, 30% of those who claim no religious affiliation participate weekly in religious youth groups (Smith et al., 2002).

Few studies have examined the effects of religious youth group participation. Of those studies measuring this aspect of religiosity, results indicate youth that are involved in religious youth groups are able to interact with peers that typically share similar values (King et al., 1997), which in turn may lower the incidence of delinquency (Chadwick & Top, 1993) and increase the likelihood of holding pro-social values (e.g., personal responsibility, respect for parents; King et al.).

### *Personal Prayer*

Frequency of personal prayer occasionally has different—and more positive— influence on outcomes compared to simple religious attendance measures (see Nonnemaker et al., 2003). Youth have full control over participation in personal prayer.

As seen in Figure 3 (NSYR, n.d.), more than 50% of the youth affiliated with the first 11 religions named, along with youth in the Hindu faith, pray on a daily basis.

Specifically, Jehovah’s Witnesses indicate rates greater than 70%, Latter-day Saints and Holiness show rates greater than 60%, most of the other Christian denominations fall between 30-50%, and finally, the Eastern faiths (excluding Hindu) show the lowest frequency of prayer (Smith et al., 2002).

Overall, about 80% of U.S. teens pray, with 40% praying daily, and 22% praying weekly. Gender differences reveal that 10% more girls than boys pray (Smith et al., 2003). In addition, those affiliated with conservative denominations pray with greater frequency (Smith et al., 2002).

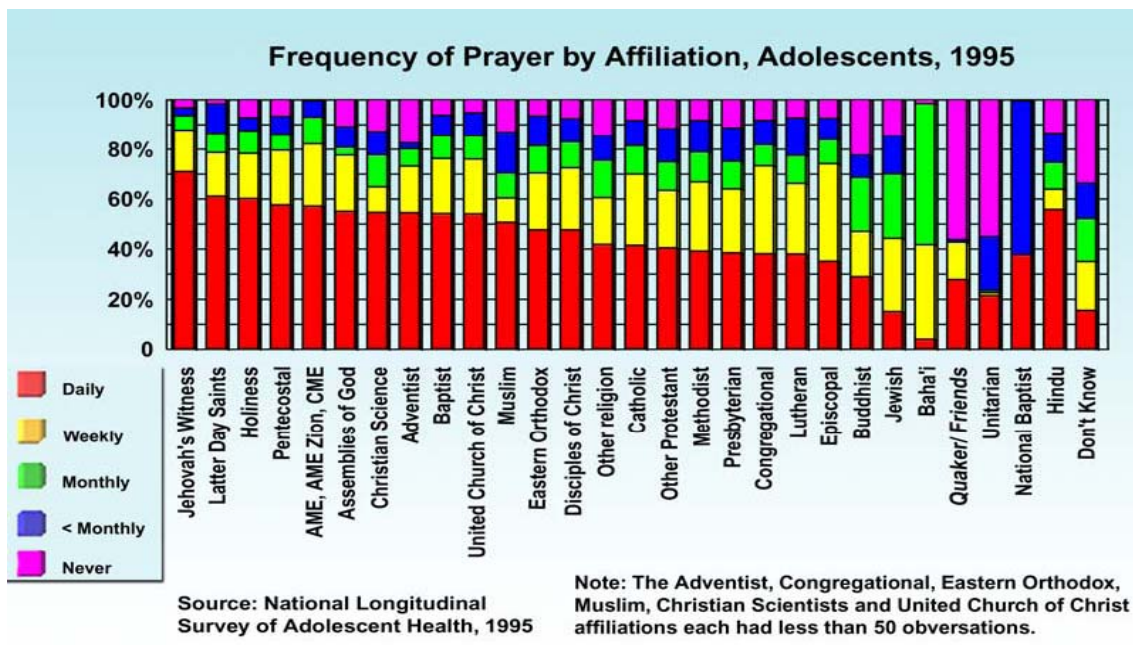


Figure 3. Frequency of prayer by religious affiliation.

### *Experiences*

Religious experiences may include being “born again” (Regnerus & Burdette, 2006), receiving an answer to prayer, feeling the Holy Ghost/Spirit, conversion, feelings of nearness to God or guidance from God (Tamminen, 1994), or a wide variety of other experiences. Aside from these apparent religious experiences, recent research has begun to investigate experiences of youth where they feel a sacred connection to family, friends, nature, and values, as well as to God. One researcher claims that “religion begins with religious experience and is sustained by it” (Hyde, 1990, p. 164). However, this aspect of religiosity has not been widely included in research. When it has been measured, results indicated that it has been related to increased positive and decreased negative outcomes for youth (Pearce, Little, & Perez, 2003; Regnerus & Burdette, 2006).

When religious experience was exclusively defined as feeling that God was particularly close to them or guiding them, youth respondents reported this sense of closeness to be a fairly widespread occurrence (48-58%), although decreasing with age. A slightly lower percentage (42-43%) of youth reported ever having experienced divine guidance (Tamminen, 1994).

A recent longitudinal study found that youth who experienced becoming *born again* showed an improvement in their relationship with their fathers (Regnerus & Burdette, 2006). Other researchers defined religious experiences in more social terms to include support from a religious congregation (Pearce et al., 2003). Findings indicated that positive interpersonal religious experience, which was defined as the “degree congregation would help out if teen was sick and degree of comfort that would be given

if faced with a difficult situation” (p. 270), was negatively related to depressive symptoms. In contrast, negative interpersonal religious experience, defined as the “frequency congregation makes demands on teen and is critical of the things he or she does” (p. 271), was positively correlated to depressive symptoms.

### *Identity and Religious Affiliation*

In 1995, 87% of 13-18 year olds reported membership with a specific religion or religious denomination, which would make religion a pervasive influence for teens (see Figure 4).

As seen in Figure 4 (NSYR, n.d.), of the surveyed youth, the largest number of youth (47%) claiming ties to a specific religion or religious denomination are affiliated with the Catholic and Baptist churches.

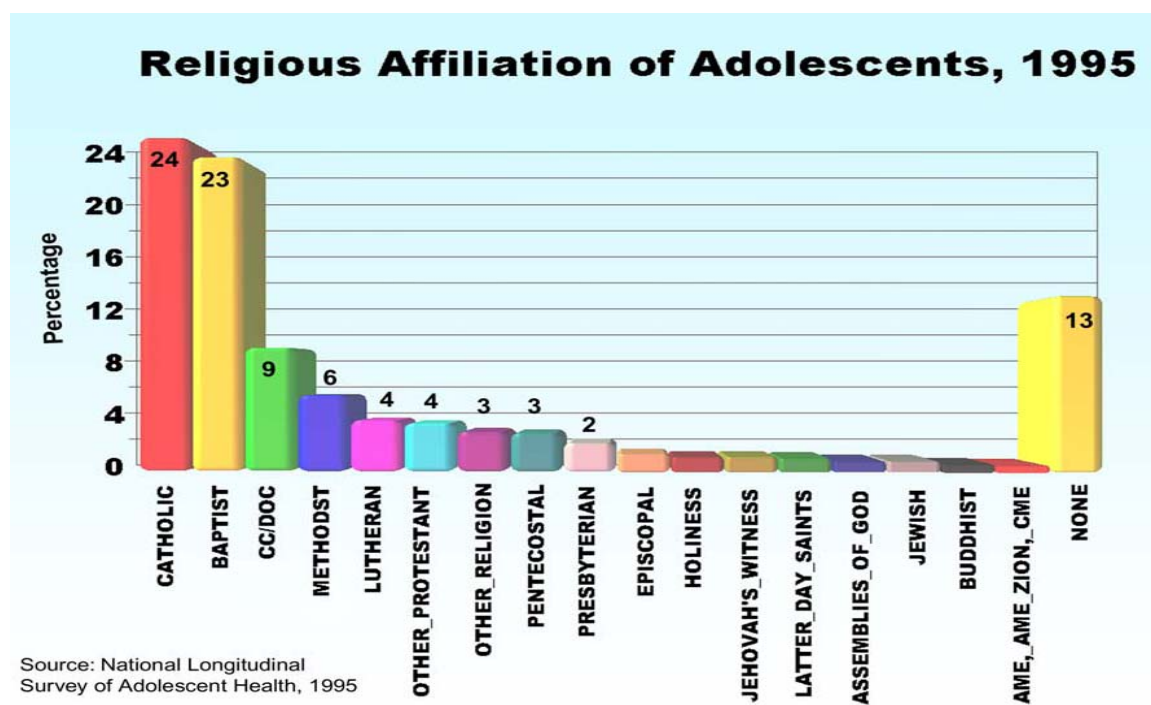


Figure 4. Teen religious affiliation.

They are followed by the Church of Christ/Disciples of Christ (9%) and various Protestant faiths (14%), and other Christian and eastern faiths each containing less than 1% of youth in the United States (Smith et al., 2002).

Changes in affiliation have been reported over a twenty-year period from 1976 to 1996 (see Figure 5). These data revealed a decline in the number of youth affiliated with Protestant (-10%) denominations (e.g., Lutherans, Methodists, Baptists, & the United Church of Christ) and Catholicism (-1%), while the number of youth in the Jewish (+1%), and Other group (+5%; e.g., The Church of Jesus Christ of Latter-day Saints) showed increases, and finally youth that did not identify with a religion (+5%) increased. In addition, more youth have been identifying with non-Christian traditions (Smith et al., 2002).

Differences in religious affiliation have been linked to youth outcomes (see Jaynes, 2003; Schwadel & Smith, 2005). This seems logical given the nature of religiosity. Any differences in the beliefs, practices, and the way religion is experienced by youth could be expected to alter religious influence on outcomes.

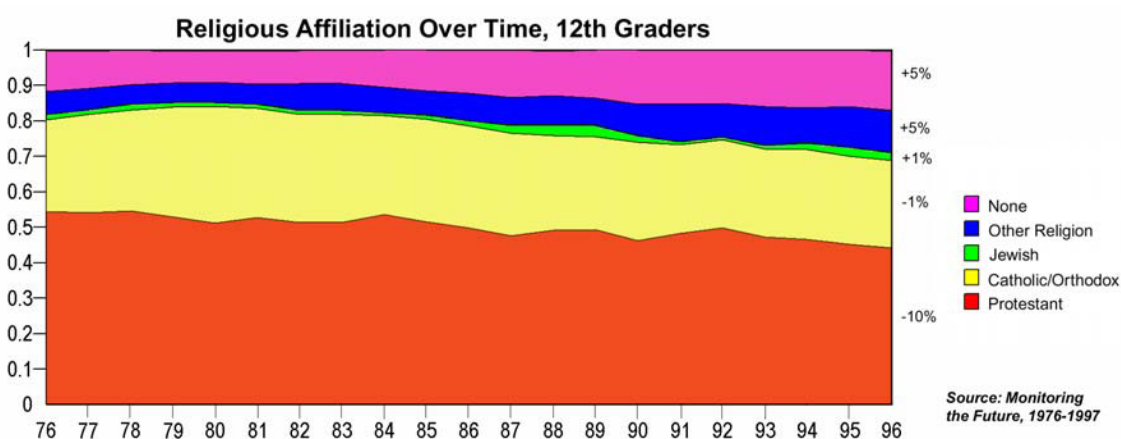


Figure 5. Changes in religious affiliation over time (NSYR, n.d.).



Unfortunately, many studies either do not measure religious affiliation or they do not examine differences between the groups (see Wallace et al., 2003).

Researchers who have taken religious affiliation into consideration have found some differences between religious groups. For instance, one study that found differences between highly religious and less religious students on academic achievement, did not find diversity between Catholic and Protestant students, but did find variation between Christian and non-Christian students (Jeynes, 2003). Similarly, a study that found differences in marriage dissolution between non-religious and affiliated couples, found that dissolution rates for men—but not women—were lower for Jews and higher for Conservative Protestants; however, the effect sizes were relatively small and were partially accounted for by demographic variables (Call & Heaton, 1997).

### *Attitudes*

As defined above, religious attitudes include the importance the teen places on religiosity and perceived closeness to God. This may be simply stated or manifest in a myriad of situations such as decision making, relationships, or behavior. Specifically, one study found that a strong relationship with Jesus was the most important significant correlate of commitment to the (Seventh-day Adventist) church (Dudley, 1993). In another study, youth indicated that religious beliefs affected their actions and helped them when things were not going well (Dowling et al., 2004). And finally, Regnerus and Burdette (2006) found that youth who reported a higher importance of religion had improved father-child relationships and family fulfillment.

Figure 6 (NSYR, n.d.), shows the importance of religion by grade for a national sample of youth (Monitoring the Future). Because the data were collected using cross-sectional methods, it is unclear how many youth increased or decreased on importance of religion to make up these final percentages. Overall, data show that 32% of 8<sup>th</sup> graders, 29% of 10<sup>th</sup> graders, and 31% of 12<sup>th</sup> graders, name religion as being very important in their lives, an *overall* difference of -1% from 8<sup>th</sup> to 12<sup>th</sup> grade. This is in contrast to 13% of 8<sup>th</sup> graders, 14% of 10<sup>th</sup> graders, and 16% of 12<sup>th</sup> graders that claim religion as not important, an *overall* difference of 3% from 8<sup>th</sup> to 12<sup>th</sup> grade.

Figure 7 (NSYR, n.d.) shows the change in importance of religion over a 20 year period from 1976 to 1996. The number of youth indicating that religion was not important showed a 3% increase, those claiming that religion was either a little important or pretty important both had a 3% decrease, and finally those reporting that religion was very important showed a 3% increase.

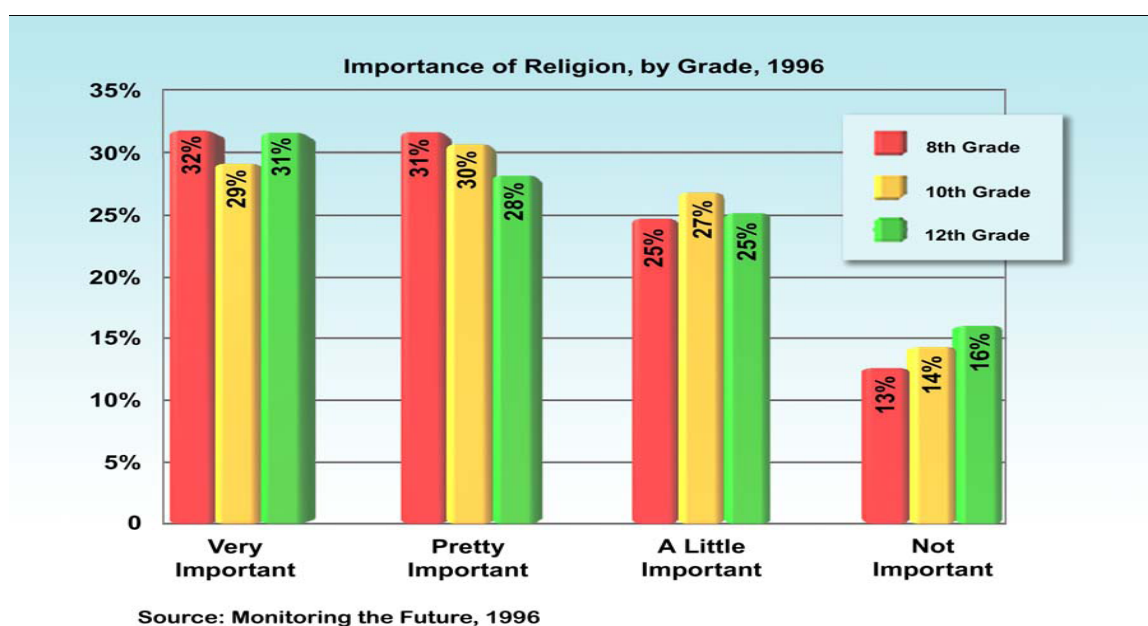


Figure 6. Importance of religion by grade.

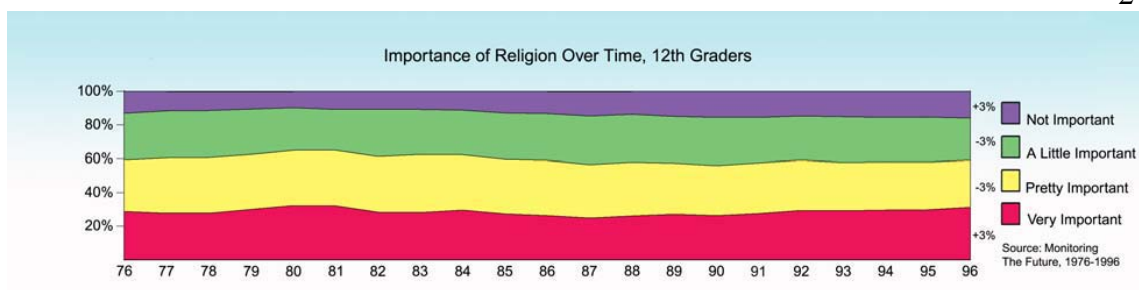


Figure 7. Importance of religion over time.

### Premarital Predictors of Marital Quality & Stability

Early in marital quality research, many wanted to predict success or failure in marriage, which led to the identification of possible premarital predictors (Burr, 1973; Holman, 2001). These include variables in three general categories; contextual factors, individual traits, and couple processes. The driving force behind this field of study is the question “. . . if we could. . . predict. . . [who would end up happy, unhappy, or divorced], could the couples heading for unhappiness. . . change. . . the future of their marriage by changing their attitudes and actions in the present?” (Holman, p. 1). As a result, efforts have been focused on the possibility of influencing these premarital predictors to increase the likelihood of positive marital outcomes.

#### *Contextual Factors*

##### *Relationship with Parents*

Interestingly, previous research has not shown that level of adolescent religiosity influences the mother-adolescent relationship, only the father-adolescent relationship (Regnerus & Burdette, 2006). However, the relationship with each parent has some joint and unique influence on marital outcomes. For example, youth who had a warm and

affectionate relationship with their parents were more likely in adulthood to have high stability and quality in marriage (Franz, McClelland, & Weinberger, 1991). Likewise, Holman and colleagues (Holman, Larson, & Harmer, 1994) found a significant positive relationship between the quality of the parent-child relationship and the later quality of the child's adult marriage relationship.

*Conflict with parents.* Two studies (Wamboldt & Reiss, 1989; White, 1990) found a relation between family of origin conflict and lower marital quality. However, it was not clear if the conflict was only between the youth and their parents, or if conflict between parents or between siblings was also included.

*Father-adolescent relationship.* Some researchers have found unique results for the association between religiosity and the father-adolescent relationship. Correlational analysis of the National Longitudinal Survey of Youth revealed that youth from religiously active families (any level) were more likely to have a positive relationship (e.g., enjoy spending time, admire, help) with their father (Smith, 2003). Longitudinal analysis in a second study additionally showed that youth who reported having had spiritual experiences (e.g., being born again) demonstrated an improved father-adolescent relationship over time (Regnerus & Burdette, 2006). And finally, greater closeness of youth to their fathers significantly predicted higher subsequent marital quality (for the youth; Wamboldt & Reiss, 1989).

*Mother-adolescent relationship.* A gender difference is related to the mother-adolescent relationship and later marital outcomes. Interestingly, mother-daughter closeness is related to higher quality marriage relationships throughout the marriage, whereas mother-son closeness is only related to marital quality in later marriage

(Wamboldt & Reiss, 1989).

### *Ideal Age for Marriage*

Even though youth cannot foresee the actual age they will marry, youths' plans with respect to this variable may have an influence on current and future outcomes. Early marital prediction research concluded that age at first marriage was positively related to marital adjustment (Burr, 1973). More recent research supports this early finding that younger age at marriage is related to an increased risk for divorce (Call & Heaton, 1997; Larson & Holman, 1994; Martin & Bumpass, 1989; Teachman, Tedrow, & Hall, 2006). Specifically, marriages were more unstable when the wife was younger at first marriage (Call & Heaton), especially if she was still in her teens (Martin & Bumpass).

### *Individual Traits*

#### *Right and Wrong*

Surprisingly, this variable has not often been specifically included in premarital success prediction, even though it has been highly influential during marriage (see Amato & Previti, 2003). However, attitudes and practice of right and wrong (e.g., honesty), may be contained in other premarital variables such as trust, values, or beliefs.

During marriage, it is clear that honesty has been related to marital quality and stability as infidelity has been reported as the greatest reason for marital dissolution (Merideth & Holman, 2001). For marital quality specifically, Goodwin (2003) identified trust as an interpersonal resource that promoted security in relationships. Results indicated that African-American women had less trust for their spouses compared to

European-American women, which in turn explained some of the variance in lower marital quality for African-American women.

It is more difficult to understand how premarital honesty may be related to a subsequent marital relationship. An indication of these effects may be identified through dating practices. A fairly recent phenomenon of internet dating has magnified the temptation for some users to mislead potential dating partners. A study by Lawson and Leck (2006) indicated that many internet users reported misrepresenting themselves in a more flattering, cool, or trustworthy way than reality. Others went a step further by blatantly lying about core issues (e.g., age, marital status) even though an eventual face-to-face meeting would reveal these discrepancies. The authors concluded that trust continues to be a fundamental issue of dating, no matter the realm, which may carry over into level of trust in the subsequent marriage.

#### *Academic Achievement*

Research has linked higher academic achievement to later increased marital quality and stability (Teachman et al., 2006), even after controlling for other divorce predictors (Orbuch, Veroff, Hassan, & Horrocks, 2002). One study reported a positive relation between years of education and marital quality (Goodwin, 2003). In addition, Kurdek (1993) found that divorce within the first four years of marriage was predicted by low academic achievement for either spouse. However, early in research and again more recently, some findings indicate a slight decrease in marital adjustment when the academic achievement level of individuals reached graduate school (Burr, 1973), especially when the wife was the one to achieve this level of education and the husband

did not (Rodrigues, Hall, & Fincham, 2006).

### *Couple Processes*

#### *Sexual Behavior*

Generally, research has shown a negative relation between premarital sexual behavior and later marital quality and stability, including divorce (Larson & Holman, 1994). However, there are some findings that place qualifications on this relationship (Teachman, 2003).

Previous results have indicated that specifically for women, premarital sex increased the likelihood for marital disruption. However, one study showed that this was only true when women had more than one sexual partner, or had first sex with someone other than her future husband. When premarital sex was limited only to her future husband, there was no increased risk for marital disruption (Teachman, 2003). Some authors speculate that premarital sex may be an indicator of later extramarital sex, which has been a common reason for divorce (Reiss & Miller, 1979). In addition, the more recent finding that the future role of a premarital sexual partner matters for marital outcomes refutes the idea that a selection factor (see explanation under *attitude towards Cohabitation*) was the cause for both premarital sexual activity and marital dissolution (Teachman).

Premarital childbearing showed a somewhat different pattern. Generally, premarital childbearing increased the risk of divorce (Heaton, 2002), but interestingly, premarital conception by itself did not necessarily show this same increased risk (White, 1990).

In an attempt to explain this negative relation between premarital sexual behavior and subsequent marital quality and stability, Burr (1973) posited that the extent that the behavior was a deviation from the (sub)cultural norm was related to how disruptive it would be to later marriage.

### *Attitude Towards Cohabitation*

Similar to ideal age for marriage and attitude towards divorce, attitude towards cohabitation was not meant to predict who will actually cohabit, but rather to tap into a mindset or acceptance of the practice of cohabitation. The overall consensus is that cohabitation has been associated with decreased marital quality and stability, including divorce (Dush, Cohan, & Amato, 2003; Larson & Holman, 1994; Teachman, 2003).

In attempts to explain the negative effects of cohabitation on marital quality and stability, some have concluded that those who cohabit either develop or already have a weaker commitment to marriage—a selection effect (Brown, Sanchez, Nock, & Wright, 2006). In contrast, others remark that the experience of cohabitation itself created uncertainty about the couple relationship that was not inherent in marriage (Bumpass, Sweet, & Cherlin, 1991).

Recent studies have investigated whether this relationship is partially explained by other variables. Brown et al. (2006) questioned if the newly created “covenant marriage,” which promotes stronger commitment to marriage and considerable barriers to divorce, would ameliorate the relationship between cohabitation and decreased marital quality and stability. Results indicated that it did not. Closely tied to findings for premarital sexual behavior, Teachman (2003) similarly found in recent cohorts of women



that those who cohabit only with their future spouse did not experience greater risk of divorce; however, he did not investigate if there was still a greater risk for decreased marital quality. In contrast, women who had multiple cohabiting partners showed a 28% increased risk for divorce over non-cohabitators. He again concluded that this counters the hypothesis that a selection factor was at fault for the negative findings between cohabitation and decreased marital quality and stability.

### *Attitude Towards Divorce*

After reviewing several studies about divorce, Brown and colleagues (Brown et al., 2006) concluded that weaker commitment to marriage and greater acceptance of divorce were risk factors associated with divorce. Others contend that thinking about divorce, which has been linked to actual divorce (Kurdek & Kennedy, 2001), was a necessary antecedent to divorce (Rodrigues et al., 2006).

Because of this link between thoughts or views about divorce and actual divorce, trends for attitudes and acceptance of divorce are important to current predictions about marital dissolution. Thornton and Young-DeMarco (2001) indicated that the general public has become increasingly more accepting of divorce since the 1960s. Specifically, almost 80% of youth in 1993 reported that divorce was an acceptable alternative when a marital relationship was poor. Others pointed out that this approval did not indicate an abandonment of the importance of marriage, only an acceptable outlet when the ideal was not achieved (Teachman et al., 2006).

In sum, religiosity has been part of the lives of a majority of youth in the United States. Because of this, it is important to understand how religiosity promotes attitudes

and behaviors associated with thriving in current and future roles. Religiosity itself is made up of multiple interacting components that may differ in their influence on youth that need to be accounted for and in the future examined for their unique contributions. A review of literature has shown some similarities and differences in definitions of religiosity, religious behavior, religious affiliation, and outcomes according to control variables. It is unclear how these similarities and differences are related to youth outcomes and to premarital predictors of later marital quality and stability.

### Control Variables

#### *Age*

#### *Religiosity*

As outlined previously in the religiosity literature review, many aspects of religiosity show a slight overall group decline through adolescence. This includes perceived closeness to God (Tamminen, 1994), importance of religion, and attendance at church and youth groups (Smith et al., 2002). However, other researchers (King et al., 1997; Regnerus & Burdette, 2006) have found that for a majority of youth religiosity remains stable through adolescence, whereas a minority show increases and others show decreases.

#### *Premarital Predictors of Marital Quality & Stability*

Age is also intricately associated with premarital predictors of marital quality and stability. For example, age is one of the most important factors related to ideal age for

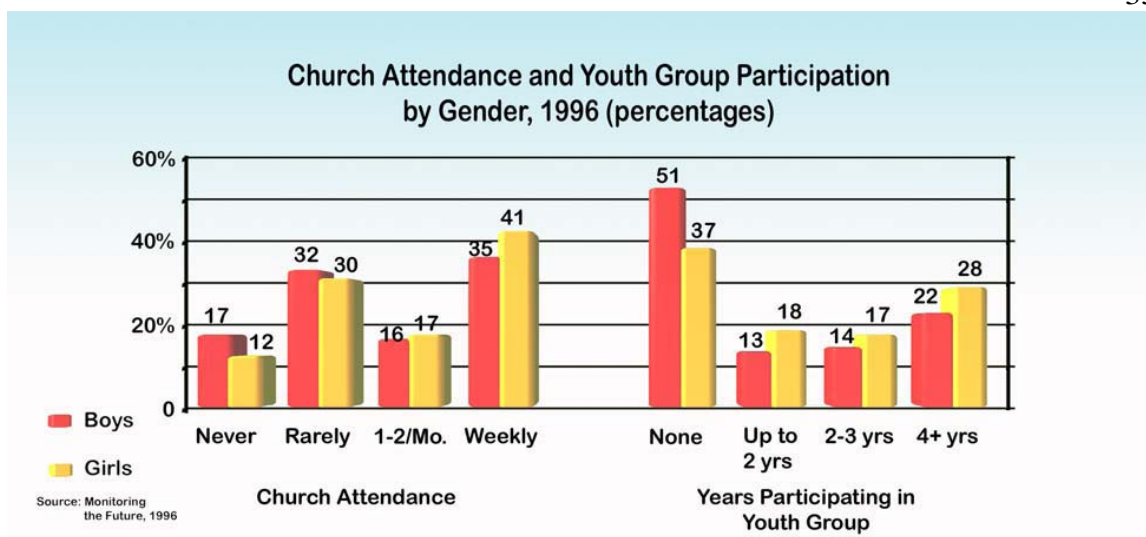
marriage—especially for the wife—( see Teachman et al., 2006) and for sexual behavior (see Zimmer-Gembeck & Helfand, 2008). Specifically, younger age at marriage is related to an increase in marital dissolution. For sexual behavior, an increase in age is associated with an increase in sexual behavior. In addition, age was also found to be a significant predictor for cohabitation expectations for youth (Manning, Longmore, & Giordano, 2007), with an increase in age correlating to an increase of expectation to cohabit.

### *Gender*

#### *Religiosity*

Gender differences in youth religiosity are quite consistent with girls generally scoring higher on measures of religiosity than boys (King et al., 1997). For instance, a national data set (Monitoring the Future) revealed that a 6% higher number of girls than boys attend church weekly (see Figure 8; NSYR, n.d.), whereas 5% more boys than girls never attend church. For youth groups, 14% more girls than boys have participated at some point. In addition, 6% more girls than boys have been participating in these groups for four years (Smith et al., 2002). Lastly, Smith and colleagues (2003) found that (10%) more girls participate in personal prayer than boys.

A specific gender difference found in the literature exists for parental transmission of religiosity. Results indicated that boys are more affected than girls by parental religious modeling. In addition, same-sex parent-adolescent dyads were more influential in transmitting religious behaviors than opposite-sex dyads (Flor & Knapp, 2001).



*Figure 8.* Gender differences in church and youth group participation.

### *Premarital Predictors of Marital Quality & Stability*

A gender difference related to academic achievement is when the wife achieves a graduate degree and the husband does not, it is detrimental to marital adjustment. The same is not true when the husband obtains a graduate degree and the wife does not (Rodrigues et al., 2006). A previously mentioned gender difference related to the mother-adolescent relationship shows that adolescent closeness with their mother is associated with different marital quality outcomes for daughters compared to sons (Wamboldt & Reiss, 1989). A final gender difference is related to both attitude towards cohabitation and divorce. A study by Teachman and colleagues (2006) found that 10% more girls than boys think that forming a marital union is important.

## *Ethnicity*

### *Religiosity*

The ethnicity of U.S. teens has influenced both religious affiliation and the degree of participation in multiple religious variables. For religious affiliation by race (see Figure 9), the African Methodist, Jehovah's Witnesses, and Baptists have the highest concentrations of Black youth; the Catholic and Adventist faiths have large concentrations of Hispanic youth; the eastern traditions are made up of more Asian youth; and White youth are the largest part of most religions with the exception of the eastern faiths and African Methodist (Smith et al., 2002).

In general, Black families consistently manifest higher levels of religiosity than Whites or Latinos (Brody et al., 1996). Black and White youth, compared to other racial groups, are the most likely to participate in religious youth groups (Smith et al., 2002).

### *Premarital Predictors of Marital Quality & Stability*

Ethnicity has been found to be related to multiple premarital predictors of marital quality and stability. First, it was related to level of trust between spouses, with African American women showing less trust for husbands than Caucasian women (Goodwin, 2003). In addition, ethnic differences were found for academic achievement, where Black youth reported lower achievement and Asian youth reported higher achievement compared to White youth (Shernoff & Schmidt, 2008).

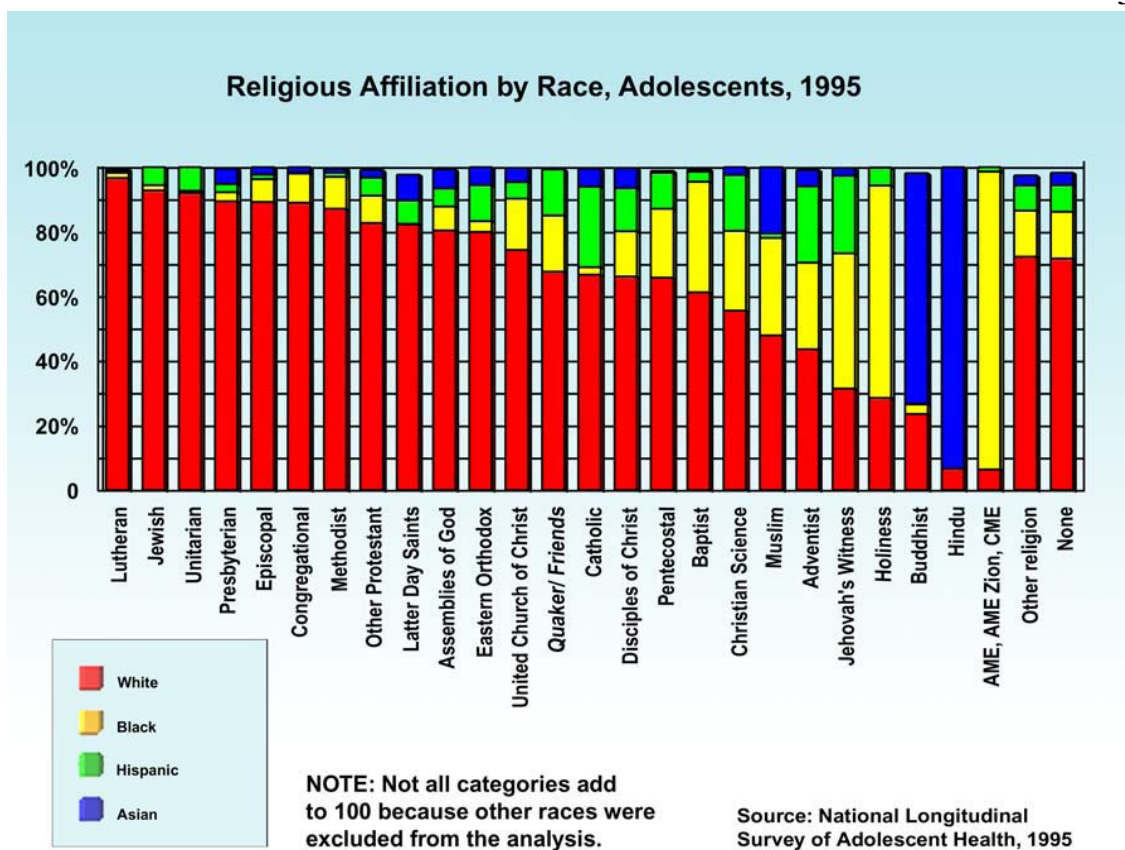


Figure 9. Religious affiliation according to ethnicity (NSYR, n.d.).

Lastly, ethnicity significantly predicted sexual behavior in youth showing that Black males engage in sexual intercourse at an earlier age in contrast to Asian youth at later ages than either White or Latino youth (Zimmer-Gembeck & Helfand, 2008).

### *Socioeconomic Status*

#### *Religiosity*

Indicators of socioeconomic status have not shown consistent results in religious research. Some have found that it is significant in explaining results (Chadwick & Topp, 1993; van der Slik & Konig, 2006), whereas others have shown no effect (Regnerus &

Burdette, 2006). However, research has not used standard measures of socioeconomic status. Some have used income, parent education (Regnerus & Burdette, 2006; van der Slik & Konig; Wallace et al., 2003), occupational status (van der Slik & Konig), or a combination of indicators.

### *Premarital Predictors of Marital Quality & Stability*

Socioeconomic status often follows racial/ethnic lines and therefore, has many similar research associations. Previous research has found that socioeconomic status alters the relationship between predictor variables and academic achievement for youth (Jeynes, 2003), as well as being a significant predictor on its own (Shernoff & Schmidt, 2008). In addition, family socioeconomic status is related to onset of sexual behavior, where a lower socioeconomic status is related to earlier onset (Zimmer-Gembeck & Helfand, 2008).

### Relating Religiosity to Premarital Predictors

Research has tied some aspects of both religiosity and religious affiliation to marital quality and stability. Kitson (2006) concluded after almost 40 years of divorce research that “a lessening and then increasing role of certain types of religion in personal and public life” (p. 29-30) has been influential in marital relationships. Others concluded that religiosity and religious affiliation specifically are not as important as a similarity between the spouses on each of these (i.e., religiosity, religious affiliation) that was influential in the marital relationship (Amato & Previti, 2003; Rodrigues et al., 2006).

In particular, religiosity in general has been positively related to marital quality

and stability (Brown et al., 2006). For example, couples with low religious participation have been found to have greater risk of marital dissolution (Heaton, 2002). In contrast, Amato and Previti (2003) concluded that divorce for highly religious individuals usually comes mostly as a result of more extreme conditions, such as infidelity, as opposed to “no fault” situations like incompatibility. In addition, church attendance has been positively related to marital stability (Call & Heaton, 1997). Call and Heaton found that the rate for marital dissolution is 2.4 times lower for couples that attend religious services weekly compared to non-attending couples. Goodwin (2003) speculated that a bond with a religious institution represented a social resource that may provide couples needed support and guidance.

Previous researchers have concluded that religious affiliation may be an important link between marital attitudes and behavior and marital stability. They have speculated that differences in religious teachings and practices concerning both marriage and the acceptance of divorce influence marital attitudes and actual behavior in marriage (Call & Heaton, 1997). An example of this may be research that reported reduced rates of divorce for certain regions of the country where there are higher concentrations of Catholic or Jewish couples compared to other religious groups (Rodrigues et al., 2006).

Lastly, religiosity has been positively related to the premarital predictor of academic achievement. Jeynes (2003) found that when compared to less religious students, very religious students had greater academic success on core subjects (e.g., math, reading, science, social studies), even beyond race, gender, and socioeconomic variables.



## Use of Theory in Research

### *Religiosity*

The use of theory to guide early research in adolescent religiosity was relatively sparse. Fortunately, theory is becoming more frequently used in recent research. The following section will briefly outline theories that have recently been used in this realm of research. A more complete focus will be placed on ecological systems theory as a starting point for the current study.

#### *General Use of Theory*

Brody et al. (1996) did not name a specific theory but did outline a conceptual model that provided guidance for their research. They hypothesized that parental religiosity would influence the adolescent belief system, which would both directly and indirectly influence youth competence. Tests of this hypothesis revealed that parental religiosity did influence individual and interpersonal family processes, including youth religiosity.

The theoretical basis of a study by King et al. (1997) was life-course theory. Within life-course theory, they hypothesized that social capital—a connection to institutions in the community gained by the youth from the religious congregation—would aid positive development through a myriad of religious supports (e.g., social norms, sources of counsel, encouraging excellence). Results showed an overall decline in church attendance over time, an increase in youth group participation over time, a stable desire to be a religious person, and a high importance of religion over time.

“A transactional model of religious internalization, based on self-determination theory” was the foundation for research used in a study on mechanisms of religious transmission from parents to adolescents (Flor & Knapp, 2001, p. 629). Flor and Knapp questioned whether specific methods of religious transmission would aid or impede youth internalization of religiosity. Their study did not connect the elements of the theory beyond the variables being used in the study, so it was not clear how extensively the theory was used. Results indicated differences in effectiveness of religious transmission based on the method used, the gender composition of the parent-adolescent dyad, and the frequency of religious interaction.

#### *Ecological Systems Theory*

Ecological systems theory has been useful in research to examine multiple aspects of the environment, such as individual, family, school, peer, and larger community factors, on religious outcomes (Benson, 2004). This framework acknowledges that there are not simple linear causes that contribute to the development of the multiple elements of adolescent religiosity, but rather a bi-directional interaction between the youth and the environment (Bronfenbrenner, 1979).

Chadwick and Top (1993) used a religious ecology framework to examine the effect of religiosity (Latter-day Saint) on adolescent delinquency. Using Bronfenbrenner’s ecological systems theory as a starting point, the religious ecology theory was useful to examine the influence of religious context on negative outcomes. The authors hypothesized that youth religiosity lessens the likelihood of delinquency only in the context of a highly religious climate. To test this theory, samples were drawn from

a low (LDS) climate and a high (LDS) climate. Findings indicated that the religious ecology theory was not supported. A high level of religious participation was able to lower the incidence of delinquency in both low and high religious climates.

A study by Spencer and colleagues (Spencer et al., 2003) was based extensively on ecological systems theory as the foundation for their research on identity formation and coping strategies for African-American adolescents. As part of this identity formation, they assert that it is helpful for youth to view themselves within a particular religious tradition that carries with it distinctive protective (e.g., coping) factors. The theory used as framework in this study was a modified version of Bronfenbrenner's ecological systems theory, called Phenomenological Variant of Ecological Systems Theory (PVEST).

The specific elements of this theory that were used in their study included risk contributors, net stress engagement, reactive coping methods, emergent identities, and life-stage specific coping outcomes. Risk contributors were those factors (e.g., poverty, race) present in the adolescent which may increase the likelihood of adverse outcomes; of course these may be offset by protective factors (e.g., religious tradition). Net stress engagement refers to the actual challenges to identity and well-being. Reactive coping methods are used to handle and resolve stressful situations. Emergent identities "define how individuals view themselves within and between their various contextual experiences" (Spencer et al., 2003, p. 182). And finally, life-stage specific coping outcomes refer to the future perception of the self (e.g., positive relationships; incarceration).

This theory which links context with perception for the adolescent is useful

throughout the lifespan to explain changing risks and protective factors. Further, PVEST can help tease out the mechanisms that underlie the connections between identity, perception, and support seeking, which in turn, assist in the formation of a healthy identity.

With the use of PVEST, the authors tested the hypotheses linking coping supports (e.g., religious tradition) to psychological well-being in low resource African-American youth. Results suggested that the use of religious factors coupled with a healthy cultural identity as a form of coping was important in developing a healthy identity both in personal and in social realms for African-American males. These same factors were not significant for African-American females (Spencer et al., 2003).

Regnerus, Smith, and Smith (2004) reported that their “analysis of the relationship between two measures of adolescent religiosity and the religiosity of parents, friends, school, and extended community offers a unique picture of the ecological contexts in which youth religiousness develops” (p. 34). Results indicated that the previously mentioned factors, along with age, gender, and race each made a unique contribution to the development of youth religiosity. The authors cautioned against studies that examine the causal priority of single characteristics in isolation to predict religiosity.

In sum, theory is becoming more prevalent in much of adolescent religiosity research. When it has been used, often there was an insufficient explanation of the theory to clarify the specific connections to the current study. However, some researchers have been effectively using theory as a solid foundation for religious study. Continuation of this practice will no doubt result in increased understanding of religious influences in the

lives of U.S. teens.

### *Premarital Predictors of Marital Quality and Stability*

A variety of theories have been used to study marital quality and stability. This review will cover theory related to relevant premarital predictors of marital stability and quality both prior to and during marriage, with the main focus being on ecological systems theory.

#### *General Use of Theory*

Kurdek (1993) investigated the contribution of four conceptual approaches in their ability to predict marital dissolution. These included the demographic approach, the individual-differences approach, the interdependence approach, and the spousal discrepancy approach. Results indicated that factors from each approach significantly predicted marital stability.

Others have used family life-course theory to examine the role of individual factors in marital stability (Amato & Previti, 2003; Heaton, 2002). Results indicated that infidelity was reported to be the greatest reason for divorce (Amato & Previti), with premarital sex, premarital childbirth, cohabitation, and racial and religious heterogamy each acting as contributors (Heaton).

#### *Ecological Systems Theory*

Many researchers (Goodwin, 2003; Holman, 2001; Larson & Holman, 1994) have used ecological systems theory to investigate predictors or characteristics of marital quality and stability. Others have presented research that may be understood with this

theory, although it was not explicitly stated. When viewed through this common framework, these studies may contribute to the literature base to better understand the multiple layers of influence on marital quality and stability.

The theoretical delineation of marital quality by Lewis and Spanier (1979) used social exchange theory to examine and account for multiple factors in the marriage environment. They grouped factors by individual (e.g., education, age) interpersonal (e.g., joint church attendance), and social and economic (e.g., socioeconomic status) resources. The authors concluded that marital quality is a dynamic concept that has multiple sources of influence from premarital (e.g., individual resources), marital (e.g., role-fit), and contingency factors (e.g., external pressures to remain married).

Recently, Goodwin (2003) used an ecological framework based on Lewis and Spanier (1979) as a starting point to examine unique and common resources for African-American women and European-American women in the U.S. Results relevant to the current study indicated that trust in one's spouse was positively associated with marital well-being for both groups. In addition, years of education was positively related to marital quality for European-American women only.

Finally, ecological systems theory was used by Larson and Holman (1994) to organize a literature review on premarital predictors of marital outcomes. The authors conceptualized both the individual and the couple as developing systems that interact in non-linear ways with multiple levels of the environment. Influential ecosystems are divided into family-of-origin, sociocultural, and contextual factors. Larson and Holman concluded that factors from each of the three domains interact to influence current preparation for later marital quality and stability.

## Ecological Systems Theory

Ecological systems theory provides a framework to account for and study the bi-directional influence of multiple layers of environments and a developing individual over time. As a result, development is viewed as a continuous process throughout the life course. This theory is unique in the view of humans as both biological and social beings (Bubolz & Sontag, 1993) within their environment. Bronfenbrenner (1979, 1986) applied the concept of ecology to the developing individual to create the ecological theory of human development. In doing this, he added and defined the multiple layers of environment as they apply to the development of the individual.

### *Related Definitions and Assumptions*

*Development.* Beyond what was briefly mentioned above, development is concerned with progression in the perception of, and the interaction with the ecological environment. This includes the person's relation to, and increased ability to choose, alter, or create the environment (Bronfenbrenner, 1979).

*Ecology of human development.* This is specifically defined by Bronfenbrenner (1979) as

the scientific study of the progressive, mutual accommodation between an active, growing human being and the changing properties of the immediate settings in which the developing person lives, as this process is affected by relations between these settings, and by the larger contexts in which the settings are embedded. (p. 21)

*Ecosystem.* The ecosystem consists of the developing person interacting with the evolving environment. This relationship is also bi-directional.

*Environment.* Bronfenbrenner (1979) defined the ecological environment

consisting of multiple nested structures. Boyden (1986) added that a person's environment may have a dual effect on development as either a stressor or "melior." A "melior" is described as an "experience which tends to promote well-being and to protect the individual against the effect of stressors" (p. 17). For the current study, religiosity is hypothesized to be an environmental "melior."

*Ecological transition.* This takes place when the developing person gains or loses a role or setting which causes a change in their ecological position. These transitions may be seen as both a result and an activator of further development (Bronfenbrenner, 1979). For the current study, this includes pregnancy and childbirth.

*Roles.* A role "is a set of activities and relations expected of a person occupying a particular position in society, and of others in relation to that person" (Bronfenbrenner, 1979, p. 85). An example of this in the current study is a person's religious role where certain expectations and obligations accompany specific religious or marital contexts.

*Values.* These are the beliefs of what is "good, right, and worthwhile" (Bubolz & Sontag, 1993, p. 435). Values act as a guide for decision making. For the current study, values are an inherent part of religious beliefs and practices. In addition, they act as a guide for premarital and marital thoughts, beliefs, and actions.

*Adaptation.* This is the mechanism of change for individual systems in relation to the environment. An essential part of adaptation is continued learning (Bubolz & Sontag, 1993).

A key process is adaptation by humans of and to their environments. ...quality of life...depend[s] on the ways and means by which humans achieve adaptation. Attention is given to the importance of selective perception, values, decision making, and human actions as they influence adaptation and the selection and use of resources as means toward attainment of goals, satisfaction of needs, and



quality of the environment. (Bubolz & Sontag, 1993, p. 421-422)

*Decision-making.* A basic premise of ecological theory is that individuals are able to choose and modify the environment through decision-making (Bubolz & Sontag, 1993) based on their perceptions of the environment (Bronfenbrenner, 1979). Decision-making related to the current study is concerned with level of involvement with religiosity, choices about premarital sexual behavior, acting on knowledge of right and wrong, interaction with parents, and choices about education, cohabitation and the ideal age to marry.

### *System Levels*

Bronfenbrenner (1979) proposed four environmental levels that influence the developing person plus a level accounting for the passage of time. They are categorized according to the proximity of influence they have on the individual. These are the micro-, meso-, exo-, macro-, and chronosystems.

*Microsystem.* This system “is a pattern of activities, roles, and interpersonal relations experienced by the developing person” (Bronfenbrenner, 1979, p. 22). It includes any environment that has direct influence on the individual. The term ‘experienced’ in the definition implies that a setting does not inherently influence the person outside their perceptions, which is why the same environment may influence individuals differently. Aside from the individual themselves, the family is the greatest context for development (Bubolz & Sontag, 1993). For the current study, the microsystem is made up of family (e.g., relationship with parents), the religious congregation, individual religious beliefs, dating partners (premarital sexual behavior;

age for marriage, cohabitation), and the school. These elements also affect and are affected by the individual and combined elements in the other systems.

*Mesosystem.* This level of environment does not contain any new elements but rather the interaction between any two or more elements in the microsystem. An example of this is the interface between a person's religious beliefs, parents, and dating partners.

*Exosystem.* This includes any environment that does not directly influence the individual but has indirect influence on and from elements in the microsystem. Examples of this are religious social networks, or the school board.

*Macrosystem.* The three previous system levels, including any underlying cultural consistencies, ideologies, or belief systems, are contained within the macrosystem (Bronfenbrenner, 1979). In addition, this system includes the individual's specific cultural values, norms, and patterns of society (Bubolz & Sontag, 1993). Examples of this system are religious sub-cultures (different religious affiliation), with differing sets of beliefs and customs; sub-culture attitudes about premarital sexual behavior, cohabitation, right and wrong, age for marriage, and divorce.

*Chronosystem.* This system was added by Bronfenbrenner (1986) to his initial model to account for both the historical context and changes over time for the individual. Elder (1980) added that this system describes time elements from simple life transitions to the collective influence of multiple decisions or transitions. This includes changing cultural attitudes about each of the macrosystem elements so that previous external restraints against premarital sexual behavior, cohabitation, and divorce have become less prevalent. The chronosystem may also be represented by the influence of one decision on another, such as choosing to marry at a young age, which may in turn lessen overall

academic achievement.

An important feature of these system levels is that there is interconnection within and between them, which in turn, influences the developing individual. Therefore, change in one environmental level can exert change across the levels (Bronfenbrenner, 1979).

### *Theoretical Hypotheses*

Bronfenbrenner's (1979) Proposition H may provide a rationale for examination of differences between religious groups on youth's current and future outcomes. The settings between the groups may promote variation in thoughts, beliefs, and actions on relevant premarital predictors. This proposition states, "If different settings have different developmental effects, then these effects should reflect the major ecological differences between the settings, as revealed by contrasting patterns of activities, roles, and relations" (p. 183).

In similar manner, Bronfenbrenner's (1979) Hypothesis 10 may provide the link between religiosity and premarital predictors of marital quality and stability. The religious identity, including role expectations, of an adolescent may be solidified due to the established structure provided by the religious institution. This hypothesis states:

The tendency to evoke perceptions, activities, and patterns of interpersonal relation consistent with role expectations is enhanced when the role is well established in the institutional structure of the society and there exists a broad consensus in the culture or subculture about these expectations as they pertain to the behavior both of the person occupying the role and of others with respect to that person. (Bronfenbrenner, 1979, p. 92)

Likewise, according to Bronfenbrenner's (1979) Hypothesis 47, the strengths initiated in the family setting may be further sustained in the peer, school, and religious setting which may carry over when the individual enters the marital setting.

The developmental potential of a setting is a function of the extent to which the roles, activities, and relations occurring in that setting serve, over a period of time, to set in motion and sustain patterns of motivation and activity in the developing person that then acquire a momentum of their own. As a result, when the person enters a new setting, the pattern is carried over and, in the absence of counterforces, becomes magnified in scope and intensity. Microsystems that exhibit these properties and effects are referred to as *primary settings*, and the persisting patterns of motivation and activity that they induce in the individual are called *developmental trajectories*. (p. 284-285, emphasis in original)

In sum, ecological theory offers a unique ability to examine multiple sources of environmental influence as they relate to individual preparation for marital quality and stability. Specifically, this theory provides a rationale for why religious affiliation and youth religiosity, individually and in combination, may apply to premarital predictors of subsequent marital quality and stability.

## Research Models, Questions, and Hypotheses

### *Theoretical Model*

The theoretical model for the current study (see Figure 10) shows where previous research has identified a myriad of premarital predictors, organized into three general categories, of later marital quality and stability (represented with solid lines). The current study picks up a step before this to examine the influence of religiosity and religious affiliation in adolescence on certain of those premarital predictors (represented with dotted lines).

In Figure 10, contextual factors include parental divorce, parental mental illness, family dysfunction, family support, age at marriage, education, income, occupation, social class, race, and stress (Larson & Holman, 1994).

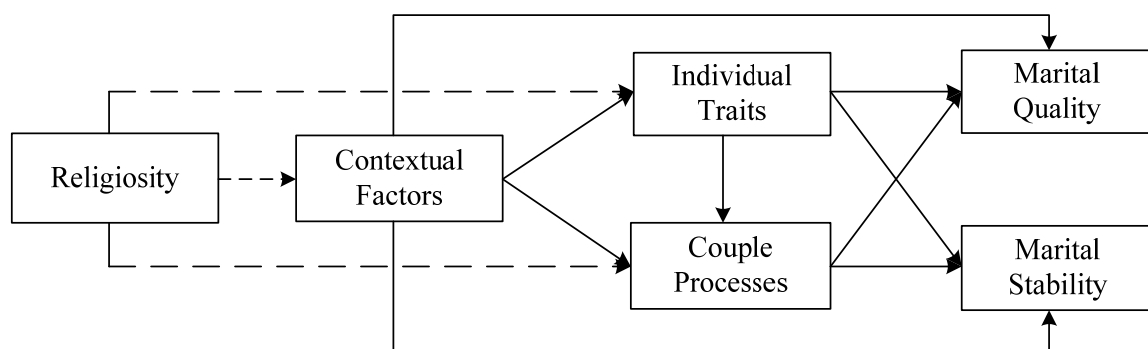


Figure 10. Theoretical model.

Individual traits include emotional health, interpersonal skills, conventionality, physical health (Larson & Holman), childhood stress (Umberson et al., 2005), other-centeredness (e.g., kindness, commitment, sacrifice, forgiveness), and personal security (e.g., self-worth, affect regulation, secure attachment, temperament; Carroll et al., 2006). Finally, couple processes include similarity of race, religion, intelligence, age, SES, values, attitudes, beliefs, and sex role orientations; cohabitation; premarital sex/pregnancy/childbirth; and communication skills (Larson & Holman).

### *Empirical Models*

For research question 1, religious affiliation was examined for any relation to religiosity when controlling for age, gender, ethnicity, and socioeconomic status. Figure 11 shows the empirical model for this question.

In research question two, religiosity was examined for any direct influence on premarital predictors of marital quality and stability when controlling for age, gender, ethnicity, and socioeconomic status. In addition, religious affiliation was examined for any moderating effects on this relationship (research question 3; see Figure 12).

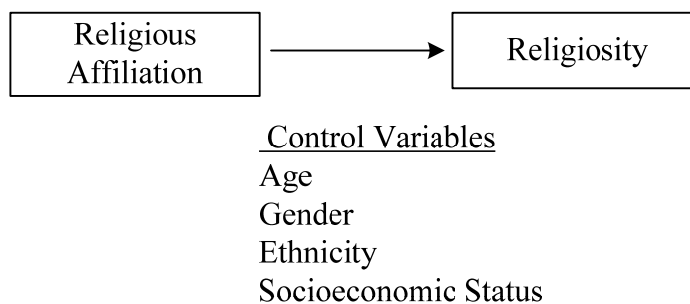


Figure 11. Empirical model for question 1.

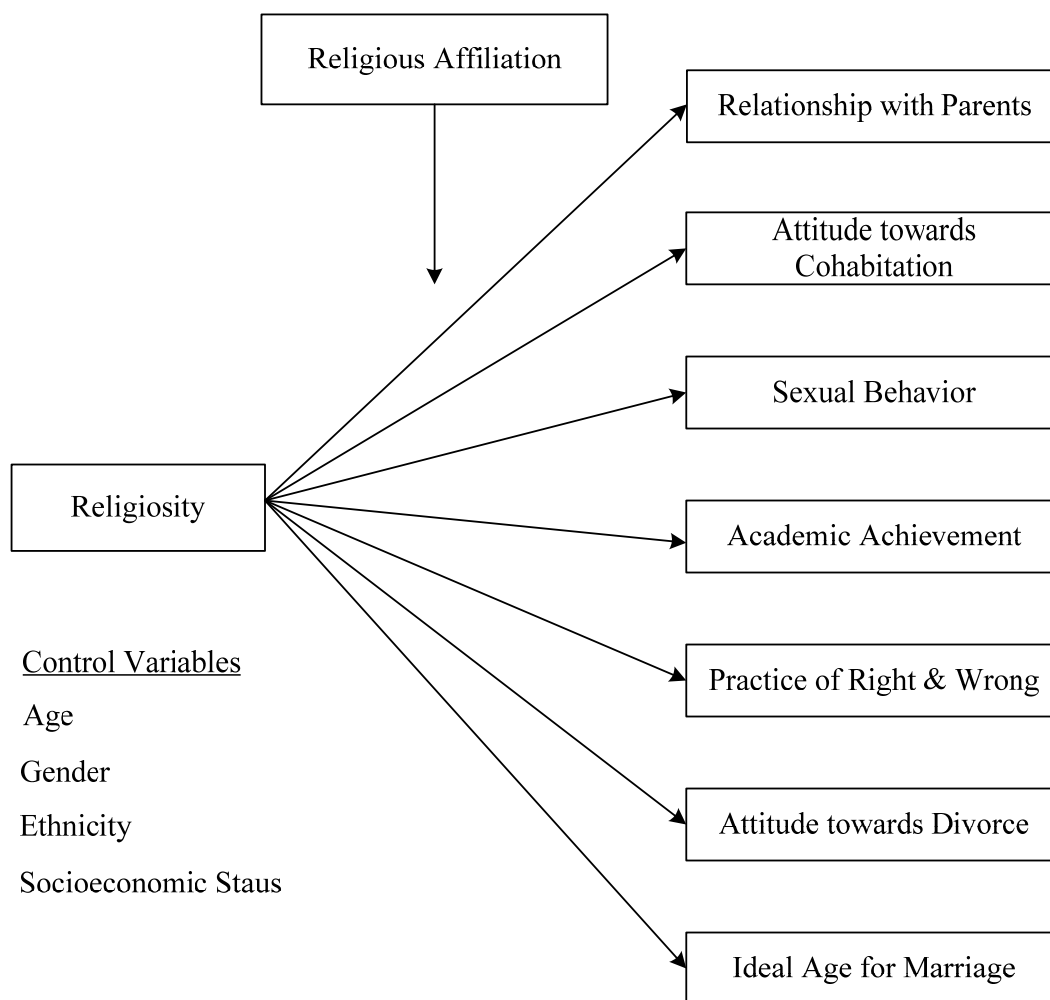


Figure 12. Empirical model for questions 2 and 3.

*Research Questions*

As a result of theory and the previous literature review, the following research questions and hypotheses were examined:

(a) Q1. Is religious affiliation related to level of religiosity, controlling for gender, ethnicity, age, and socioeconomic status?

(b) H1. Religious affiliation will be related to religiosity when controlling for gender, socioeconomic status, and ethnicity.

(c) Q2. Is level of religiosity related to premarital predictors of marital quality and stability (i.e., relationship with parents; attitude towards right & wrong; academic achievement; attitude towards cohabitation; attitude towards divorce; ideal age for marriage; and sexual behavior), controlling for age, gender, ethnicity, and socioeconomic status?

(d) H2. Religiosity and religious affiliation will be related to premarital predictors of marital quality and stability, controlling for age, gender, ethnicity, and socioeconomic status.

(e) Q3. Is religious affiliation a moderator of the relationships in Question two?

(f) H3. Religious affiliation will moderate the relationships in Question two.

## CHAPTER III

### METHODS

The purpose of the current study was to examine adolescent religiosity and religious affiliation as they relate to premarital predictors of marital quality and stability. To accomplish this, a nationally representative dataset from the National Study of Youth and Religion (ARDA, n.d.) was analyzed.

The National Study of Youth and Religion (NSYR) was conducted by researchers at the University of North Carolina to investigate the religiosity of U.S. adolescents. The two waves of data were collected between 2001 and 2005. The specific aims of that study were:

(a) to research the shape and influence of religion and spirituality in the lives of American Youth;

(b) to identify effective practices in the religious, moral, and social formation of the lives of youth;

(c) to describe the extent and perceived effectiveness of the programs and opportunities that religious communities offer to youth;

(d) to foster an informed national discussion about the influence of religion in youth's lives to encourage sustained reflection about and rethinking of cultural and institutional practices with regard to youth and religion (Smith & Denton, 2003, p. 1).

#### Procedures

For the current study, all data were obtained from Wave I of the NSYR project.



The description of the methods and procedures of the NSYR project is from the NSYR codebook authored by two NSYR researchers (Smith & Denton, 2003). Data were collected for this wave of NSYR between July 2002 and April 2003 by FGI Research through telephone interviews with parent-adolescent dyads. The current study used data from the adolescent survey for all variables except adolescent gender and socioeconomic status, which were from the parent survey.

Participants in the study were recruited through a random-digit-dial (RDD) method which generated telephone numbers in all 50 states. This method only excluded the 4% of households without a phone and those that used only cell phones. The resulting telephone numbers were called numerous times over 5 months at differing times of the day to reduce sampling bias. Households were excluded if they did not have at least one adolescent between the ages of 13 and 17 living there for half of the year, or the household did not speak either English or Spanish. Eligible households that refused to participate received two additional calls for a conversion attempt. In addition, information was mailed to the household about the NSYR study followed by a third phone call, both intended to reduce non-response bias in the sample. In an attempt to randomize the age and gender of the youth chosen to respond to the survey in cooperating households, the interviewer asked for the teen with the most recent birthday. To recruit the parent respondent, interviewers asked first to speak with the mother (or mother figure) followed by the father (or father figure) if there were no mother in the household or if she were unavailable.

In addition to the random sample described above, there was a non-random over-sample of 80 Jewish parent-youth dyads in order to obtain a large enough sample in this

religion for meaningful comparison. These participants were recruited by obtaining phone numbers of Jewish households throughout the U.S., from the Genysis, Inc. sampling firm. Households were again screened for teens between the ages of 13 and 17 years of age.

When compared to the 2002 U.S. Census data, the NSYR random sample was representative according to gender, age, ethnicity, household type, and socioeconomic status for 13-17 year olds in the U.S. The subsample of 80 additional Jewish youth was not nationally representative. These two subsamples combined resulted in a total sample of 3,370 youth.

Interviewers for NSYR were given training about the purpose of the study, the meaning of the survey questions and answer choices, the pronunciation of specific terms, and the ethical treatment of human subjects (through both NSYR & NIH). In addition, interviewers were monitored during interviews and later given feedback by project staff. After assessing household eligibility, interviewers obtained consent from the participants, informed them of the confidentiality of their responses (except for child abuse or intent to harm self or others), and offered a 20 dollar incentive to both parent and youth to participate in the survey. Willing participants could either complete the survey at that time or call a toll-free number at their convenience. After completing the survey, respondents were mailed information about the study, and contact information for the investigators and the university IRB, along with the 40 dollar household (\$20 for each respondent) incentive. This amount of incentive was deemed necessary as the parent interview lasted approximately 30 minutes (mean) and the youth interview lasted approximately 52 minutes (mean).

The NSYR parent and adolescent survey questions were developed by NSYR staff. This process included multiple rounds of pilot testing and focus groups, with both random and convenience samples of adolescents, to ensure comprehension of each question in the youth survey. In addition, both surveys were translated into Spanish by a professional translation service followed by revisions through Spanish-speaking translation consultants and interviewers. Participants could choose to take the survey in English or Spanish.

### Participants

Demographic characteristics show that 50.5% (1,677) of youth were male, and 49.5% (1,647) were female. For ethnicity, 66.1% (2,196) of youth were White, 17.2% (572) were Black, 11.5% (381) were Latino, 1.2% (40) were Asian, 1.1% (38) were Native American, .4% (12) were Pacific Islander, 1.61% (54) were mixed, .33% (11) refused to give their ethnicity, and .30% (10) reported that they didn't know their ethnicity. For age, 19.5% (647) of the participants were thirteen years old at the time of the interview, 19.2% (639) were fourteen, 21.3% (708) were fifteen, 20.0% (666) were sixteen, 19.9% (663) were seventeen, and .03% (1) refused to give their age. For region of the U.S., 41.3% (1,373) of the participants lived in the South, 22.6% (751) lived in the Midwest, 20.0% (664) lived in the West, and 16.1% (536) lived in the Northeast at the time of the survey. And finally for household income, 3.3% (111) made less than 10,000 dollars, 6.9% (230) made between 10 and 20,000 dollars, 11.9% (395) made between 20 and 30,000 dollars, 13.1% (435) made between 30 and 40,000 dollars, 13.1% (435) made between 40 and 50,000 dollars, 10.8% (358) made between 50 and 60,000 dollars, 7.6%

(254) made between 60 and 70,000 dollars, 6.4% (213) made between 70 and 80,000 dollars, 4.7% (157) made between 80 and 90,000 dollars, 4.1% (135) made between 90 and 100,000 dollars, and 11.9% (397) made more than 100,000 dollars.

For religious affiliation, 31.4% (1,045) were Conservative Protestant, 24.6% (819) were Catholic, 12.3% (410) were self-identified as Not Religious, 12.0% (400) were Black Protestant, 10.4% (347) were Mainline Protestant, 3.5% (117) were Other Christian, 3.4% (114) were Jewish, and 2.2% (72) were The Church of Jesus Christ of Latter-day Saints (LDS) at the time of the survey.

For this study, participants that identified with the Islamic (14), Pagan/Wiccan (12), Buddhist (8), Hindu (3), Native American (4), Satanist (1), Baha'i (1), and Taoist (1) religions were excluded because there were not enough in each group for analyses, and they are not similar enough to group together or with any other religion. This resulted in a total sample of 3,324 adolescents for the current study.

## Measures

### *Demographic Information*

#### *Age*

Age was measured using one question, "What is your birth date?" The answer was recorded verbatim. This information was then entered by one year increments from age thirteen to seventeen.

#### *Gender*

Gender was obtained from one question in the parent interview, "Is your child a

boy or a girl?” If the parent refused to answer, the interviewer recorded the child as being male.

### *Ethnicity*

Ethnicity was measured using one question; “What race or ethnic group do you consider yourself?” The answer was recorded verbatim. The responses were combined into seven categories: White (i.e., White, Caucasian, Anglo), Black (i.e., Black, African-American), Latino (i.e., Hispanic, Latino/a), Asian (i.e., Asian, Asian-American), Pacific Islander, Native American (i.e., Native American, American Indian), and mixed (i.e., mixed, refused, don’t know).

### *Socioeconomic Status*

Socioeconomic status was measured using one question in the parent survey; “Can you tell me, is your total household income before taxes: less than \$10,000, between \$10-20, 20-30, 30-40, 40-50, 50-60, 60-70, 70-80, 80-90, 90-100,000, or above \$100,000?”

### *Religiosity*

There were 89 questions regarding some type of religious dimension in the NSYR interview. Religiosity was measured using questions regarding importance (e.g., “How important or unimportant is religious faith in shaping how you live your daily life?”), beliefs (e.g., “Do you believe in God?”), private practices (e.g., “How often, if ever, do you pray by yourself alone?”), involvement (e.g., “About how often do you usually attend religious services?”) experiences (e.g., “Have you ever experienced a definite

answer to prayer or specific guidance from God?”), interest (e.g., “How interested or not are you in learning more about your religion?”), and attitudes (e.g., “How distant or close do you feel to God most of the time?”). Answer choices included Likert-type scales, *yes* or *no*, and frequency counts.

To create the religiosity scale, the individual questions were examined for content and meaning, were adjusted for differences in answer scales, were entered into exploratory factor analysis, were examined for reliability, and finally summed into a total score. The first step was to examine individual questions for their content and meaning about religiosity to determine relevance to the current study, and were subsequently kept or discarded. An example of a question that was discarded is “Would you say that your own ideas about religion are: similar or different from father?” This question does not reveal level of religiosity, but rather some type of family religiosity dimension which was not part of the current study.

Next, the remaining questions were transformed into z-scores to resolve the differences in the answer options. This was followed by examination in exploratory factor analysis (see Appendix A), using Oblimin rotation, to identify any questions that needed to be excluded. This rotation was chosen because of the expected correlation between factors of religiosity. The first factor was made up of fourteen questions and accounted for 35.83% of the total variance. The second factor included four questions and added 8.92% of the total variance. The third factor included five questions and accounted for 5.18% of the total variance. After this factor, the questions did not load as clearly and did not account for much added variance. This resulted in 23 included questions (see Appendix B) which were then examined for reliability. Together, these 23

questions yielded a .85 Cronbach's alpha coefficient. And finally, to include the highest number of participants as possible without changing the influence of the total items, a religiosity score was computed for participants that answered at least 20 of the 23 questions. For any missing questions (up to three), the mean of answered religiosity questions for that participant replaced the missing data (see Green & Salkind, 2005, p. 123). These items were then added to obtain a total score where a higher score represents greater religiosity. The separate factors were not used as variables for two main reasons. First, the different sample sizes in each religious group give more influence to the questions associated with the largest groups. And second, youth in different religious groups did not show the same beliefs or participate in the same practices at the same rate, which would again give more strength to the larger groups. As a result, each of the religiosity items were given equal weight by summing them into a total score.

### *Religious Affiliation*

Religious affiliation was measured using one question, "What religion or denomination is the place where you go to religious services?" Answers were recorded verbatim and included 64 names of religions/religious denominations (see Appendix C for the complete list), and *other*. Since the responses were recorded verbatim, some Christian denominations were represented by two common names (e.g., Catholic & Roman Catholic; LDS & Mormon), so they were combined. Further, many Christian denominations were combined by NSYR into categories of Conservative Protestant, Mainline Protestant, Black Protestant, and Other Christian (see Appendix D to see which

denominations make up each group). This was necessary because of the large number of denominations having very few participants (23 denominations had 5 or less). This resulted in eight categories: Catholic (C), Conservative Protestant (CP), Mainline Protestant (MP), Black Protestant (BP), Other Christian (OC), Jewish (J), The Church of Jesus Christ of Latter-day Saints (LDS), and Not Religious (NR).

### *Premarital Predictors of Marital Quality & Stability*

#### *Relationship with Parents*

Relationship with parents was measured using 20 questions about closeness (e.g., “How close or not close do you feel to your mother/father?”), communication (e.g., “How often do you talk with your mother/father about personal subjects, such as friendships, dating, or drinking?”), interaction (e.g., “How often, if at all, do you and your mother/father just have fun hanging out and doing things together?”), conflict (e.g., “How much, if any, conflict have you had with a parent over whether you date or who you date?”), and discipline (e.g., “If your parent find(s) out you've done something wrong, how often do they discipline you?”). Answer choices included Likert-type responses (e.g., *always* to *never*), and frequency counts.

Examination of the questions in this section revealed that for some groups of questions, youth were only able to respond in relation to a mother (figure) or father (figure) actually living in the home. This excluded 142 youth without a mother (figure) living in the home and 787 youth without a father (figure) living in the home. However, for other groups of questions, youth were able to think of any parent to give answers about, which would include a mother or father not living in the home. As a result, the



questions asking only about a mother (figure) or a father (figure) were combined into one question about any parent, like the remaining questions, by taking the highest of either score. This resulted in 16 final questions (see Appendix E).

The same steps were followed to create this, and the remaining scales, as the religiosity scale. As a result, z-scores were created and entered into exploratory factor analysis (see Appendix F) yielding four factors which accounted for 28.40%, 11.83%, 7.16%, and 6.95% respectively of the total variance. When examined for reliability, these 16 questions yielded a Cronbach's alpha of .81. For one missing answer, the mean for that participant replaced the missing score. These items were added into a total score where a higher score represents a better relationship with a parent.

### *Sexual Behavior*

This variable was measured using 24 questions that inquired about sexual attitudes (e.g., "Do you think that people should wait to have sex until they are married, or not necessarily?"), behavior (e.g., "Have you ever had sexual intercourse, or not?"), frequency (e.g., "About how many times have you ever had oral sex?"), and pregnancy (e.g., "Have you ever been pregnant/gotten someone pregnant?"). Answer choices included *agree* or *disagree*, *yes* or *no*, and frequency counts.

When examining the original 24 questions in this section, some did not indicate level of sexual participation, so they were excluded. Examples of this concerned use of contraception or feeling pressure from others to participate in sexual activity. The remaining 15 questions (see Appendix G) regarding sexual behavior revealed three distinct factors through exploratory factor analysis (see Appendix H). These factors

explained 62.27%, 10.35%, and 8.98%, respectively, of the total variance. The reliability of these items yielded a Cronbach's alpha of .95. For up to two missing questions, the mean for that participant replaced the missing score. The items were again summed into a total score where a higher score represents a greater amount of sexual behavior.

#### *Attitude Towards Cohabitation*

This variable was measured using one question; "In the future, would you ever consider living with a romantic partner that you were not married to, or not?" Answer choices were *yes* and *no*.

#### *Attitude Towards Divorce*

This variable was also measured with one question; "Do you think that, in general, a couple without children should end their marriage if it is empty and unfulfilling, or should they stick with it even if they are not happy?" Answer choices were *end it*, and *stick with it*.

#### *Ideal Age for Marriage*

This variable was measured using one question; "If you were to ever get married, what do you think would be the ideal age for you to get married?" Answer choices were *never plan to marry* or recording the age specified.

#### *Right and Wrong*

This variable was measured using eight questions about knowledge of right and wrong (e.g., "Do you yourself sometimes feel confused about what is right and wrong, or do you usually have a good idea of what is right and wrong in most situations?"), honesty

(e.g., “In the last year, how often, if ever, did you cheat on a test, assignment, or homework in school?”), and decision-making (e.g., “If you were unsure of what was right or wrong in a particular situation, how would you decide what to do?”). Answer choices included Likert-type responses, *agree* or *disagree*, and frequency counts.

To compute this scale, z-scores were created and the eight items were examined using exploratory factor analysis. This revealed that two items loaded in the opposite direction of the rest of the items even though they were scored in the same direction. Upon further review of these questions, it was discovered that they might be confusing to the youth as they were asked to agree or disagree with a negative statement, “Do you agree or disagree that morals are relative, that there are no definite rights and wrongs for everybody?” As a result of this possible confusion, these two items were excluded from the study. The remaining six questions loaded into three factors explaining 31.73%, 18.23%, and 16.70% of the total variance. However, when examined for reliability, the three questions that were supposed to tap into view of morals did not fit with the three questions that asked about actual practice of right and wrong. When the view of moral questions were included, the reliability coefficient was only .46, when they were excluded the Cronbach’s alpha raised to .69 (see Appendix I). The remaining three questions about right and wrong (see Appendix J) were added together for a total score where a higher score represents more honest behavior.

### *Academic Achievement*

Academic achievement was measured using six questions (see Appendix K) about grades (e.g., “What kind of grades do you usually get in school?”), problem behavior

(e.g., “In the last year, how often, if at all, did you cut or skip classes at school?”), and future goals (e.g., “Given realistic limitations, how far in school do you think you actually will go?”). Answer choices included choosing from a list (e.g., *associates degree, 4-year college degree, master’s degree, Ph.D.*), frequency counts, and Likert-type scales.

To create this scale, z-scores were again created and examined in exploratory factor analysis (see Appendix L). This procedure yielded two factors that explained 37.18% and 19.47% of the total variance. When examined for reliability, these items yielded a .65 Cronbach’s alpha. For one missing item, the mean for that participant replaced the missing score. The items were added together to form a scale where a higher score represents greater academic achievement.

## Statistical Analysis

### *Descriptive Analyses*

To begin, descriptive statistics for each variable, including the range, mean, standard deviation, and missing data were evaluated according to religious affiliation. The next step was to reveal the dimensions within the religiosity, relationship with parents, sexual behavior, right and wrong, and academic achievement variables, through exploratory factor analysis. This illuminated which questions needed to be excluded from the current study.

Next, the psychometric properties, including number of items, and reliability (alpha level), was examined for each scale. In addition, bivariate correlations between each independent variable and dependent variable were computed in order to assure

relationship. Lastly, the data were described using graphic representations.

### *Inferential Analyses*

For research question one (Q1), a one-way analysis of covariance (ANCOVA) was conducted to evaluate the contribution of religious affiliation to religiosity, controlling for age, gender, ethnicity, and socioeconomic status (see Figure 11 in Chapter II). To follow up a significant result of the ANCOVA test, post hoc analysis was conducted to evaluate pairwise comparisons between each of the religious groups on religiosity. The Bonferroni correction was used to help control for Type I errors.

For research question two (Q2), OLS regression and logistic regression were used to examine if level of religiosity was related to each of the seven premarital predictors of marital quality and stability. Dummy variables were created for the nominal variable of religious affiliation for use in analysis. In accordance with regression assumptions, OLS regression was used with the five continuous dependent variables, and logistic regression was used with the two dichotomous dependent variables.

In addition, religious affiliation was added and explored as a moderating variable (Q3) in the relationships in research question two. OLS regression and Logistic regression were used to assess if the relationship between religiosity and the seven dependent variables differed as a result of religious group affiliation. The dummy variables used in Q2 were used to create interaction variables for this research question. These were created by multiplying the religious group dummy variables by the religiosity variable. Eight of each type of these variables were necessary because the research question required that the model be run eight times (using seven religious dummy

variables and the matching seven interaction variables at a time) so each religious group could be used as the comparison group in order to assess significant differences between each religious dyad. According to Cohen, Cohen, West, and Aiken (2003), when these interaction variables are entered into a model, the total number of variables minus one (seven at a time for the current study), the model is designed to discover any differences between the entered variables (religious groups) and the reference variable (religious group) on an outcome variable.

## CHAPTER IV

## RESULTS

## Descriptive Analysis

Descriptive analyses were conducted to introduce certain aspects of the data for this study. To establish relationship between the independent and dependent variables, bivariate correlations were conducted (see Table 1).

Table 1

*Pearson Correlation Coefficients Between Independent and Dependent Variables*

Variable	Range	Religiosity	SES	Age	Gender	Ethnicity
Religiosity	-34.75 to 29.91	1 3182.00	-.01 2989.00	-.03 3181.00	.12*** 3182.00	-.04* 3163
Parent relationship	-53.67 to 13.07	.27*** 3173.00	.12*** 3106.00	-.22*** 3308.00	-.01 3309.00	.07*** 3288
Ideal marry age	15 to 80	-.11*** 3126.00	.05** 3059.00	.07*** 3255.00	-.08*** 3256.00	-.14*** 3237
Right wrong	-7.43 to 3.49	.13*** 3174.00	-.04 3106.00	-.14*** 3308.00	.04* 3309.00	.04* 3288
Sexual behavior	-7.99 to 42.50	-.22*** 3139.00	-.02 3074.00	.41*** 3275.00	-.09*** 3276.00	.02 3256
Academic achievement	-17.37 to 4.98	.21*** 3141.00	.25*** 3077.00	-.08*** 3278.00	.18*** 3279.00	.12*** 3258
Cohabit	0 to 1	-.37*** 3127.00	.05** 3054.00	.15*** 3250.00	-.11*** 3254.00	.04* 3234
Divorce	0 to 1	-.22*** 3064.00	.07*** 2995.00	.08*** 3192.00	.09*** 3193.00	.04* 3174

\* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$  (2-tailed).

In Table 1, the main independent variable, religiosity, and the four control variables are along the top. The seven dependent variables of premarital predictors of marital quality and stability along with religiosity (the dependent variable in research question one) are down the left side.

As seen in Table 1, religiosity was statistically significantly related to each of the other dependent variables at the  $p < .001$  level. Also, the independent variables were examined for multicollinearity and did not show any problems (Variance Inflation Factors  $< 1.1$ ; Eigen values  $< 2$ ).

To further understand the nature of these data, they were examined within each of the eight individual religious groups. Bivariate correlations were run between the independent and dependent variables within the individual religious groups to discover any differences between them and the full sample (see Appendices M-T). These groups were Conservative Protestant, Mainline Protestant, Black Protestant, Catholic, Jewish, LDS, Other Christian, and Not Religious. The following non-significant correlations represent differences from the full sample, where religiosity was significantly correlated with each of the seven dependent variables.

There were no differences between the LDS youth and the full sample. The data for the Conservative Protestant, Mainline Protestant, and Catholic youth showed a non-significant correlation between religiosity and reported ideal age for marriage. For Black Protestant youth, there was a nonsignificant correlation between religiosity and reported ideal age for marriage, right and wrong, and attitude toward divorce. The data for the Not Religious group showed nonsignificant correlations between religiosity and reported ideal age for marriage, right and wrong, academic achievement, and sexual behavior. The



Other Christian group showed non-significant correlations between religiosity and reported ideal age for marriage, right and wrong, academic achievement, and attitude toward divorce. And lastly, data for Jewish respondents revealed non-significant correlations between religiosity and five of seven dependent variables, reported ideal age for marriage, right and wrong, relationship with parents, academic achievement, and attitude toward divorce.

Next, the means were calculated for each of the dependent variables according to religious group along with the standard deviations and number of participants in each group was figured (see Table 2). The highest mean for religiosity was 12.68 for LDS youth, the lowest was -16.52 for Not Religious youth, and the grand mean was .61. The highest mean for youth relationship with parents was 1.63 for LDS youth, the lowest was -3.04 for Not Religious youth, and the grand mean was .03. The highest mean for reported ideal marriage age was 25.76 for Black Protestant youth, the lowest was 23.10 for LDS youth, and the grand mean was 24.66. The highest mean for right and wrong was .99 for LDS youth, the lowest was -.32 for Mainline Protestant youth, and the grand mean was -.005. The highest mean for academic achievement was 1.75 for Jewish youth, the lowest was -.93 for Not Religious youth, and the grand mean was .01. The lowest mean for sexual behavior was -3.99 for LDS youth, the highest was 3.58 for Not Religious youth, and the grand mean was -.08. The lowest mean for agreement with cohabitation was .22 for LDS youth, the highest was .78 for Jewish youth, and the grand mean was .55. And finally, the lowest mean for agreement with divorce was .55 for Conservative Protestant youth, the highest was .81 for Jewish youth, and the grand mean was .64.

Table 2

*Means of Dependent Variables by Religious Affiliation*

Variable	CP	MP	BP	C	J	LDS	OC	NR	TOT
Religiosity	7.06	1.15	5.09	-2.56	-8.67	12.68	-1.21	-16.52	.61
<i>SD</i>	(11.34)	(12.76)	(9.21)	(10.22)	(11.10)	(14.71)	(12.11)	(9.64)	(13.20)
<i>N</i>	1028	338	392	802	112	70	112	328	3182
Parental relationship	1.01	.33	-.14	.20	.41	1.63	-1.12	-3.04	.03
	(7.80)	(7.45)	(8.83)	(7.61)	(6.34)	(6.91)	(8.28)	(9.30)	(8.09)
	1043	346	397	819	112	72	108	404	3309
Ideal marriage age	23.78	24.62	25.76	24.87	25.43	23.10	24.50	25.58	24.66
	(3.14)	(2.87)	(4.56)	(3.22)	(2.72)	(4.98)	(3.56)	(5.06)	(3.73)
	1022	340	391	809	112	69	115	398	3256
Right & wrong	.14	-.32	-.09	-.04	.04	.99	.10	-.20	.01
	(2.26)	(2.32)	(2.46)	(2.37)	(2.49)	(1.62)	(2.34)	(2.50)	(2.36)
	1042	345	399	818	114	71	115	405	3309
Academic achievement	.05	.59	-.32	.18	1.75	.01	-.70	-.93	.01
	(2.86)	(2.71)	(2.96)	(2.92)	(2.56)	(3.66)	(3.16)	(3.46)	(3.02)
	1032	344	396	807	114	72	115	399	3279
Sexual behavior	-.88	-.12	-.09	-.89	1.30	-3.99	1.06	3.58	(.08)
	(11.51)	(11.04)	(11.06)	(10.86)	(11.63)	(8.20)	(11.87)	(13.10)	(11.51)
	1028	345	390	809	113	71	117	403	3276
Cohabitation	.41	.63	.50	.61	.78	.22	.55	.75	.55
	(.49)	(.48)	(.50)	(.49)	(.42)	(.42)	(.50)	(.43)	(.50)
	1030	343	386	802	110	72	110	401	3254
Divorce	.55	.73	.56	.67	.81	.59	.61	.77	.64
	(.50)	(.45)	(.50)	(.47)	(.40)	(.50)	(.49)	(.42)	(.48)
	997	330	387	795	108	70	114	392	3193

*Note.* CP = Conservative Protestant, MP = Mainline Protestant, BP = Black Protestant, C = Catholic, J = Jewish, LDS = The Church of Jesus Christ of Latter-day Saints, OC = Other Christian, NR = Not Religious, and TOT = total sample.

## Inferential Analysis

*Research Question One*

To address question one, whether religious affiliation was related to religiosity when controlling for demographic variables, a one-way analysis of covariance (ANCOVA) was conducted. The independent variable, religious affiliation, included eight levels: Conservative Protestant, Mainline Protestant, Black Protestant, Catholic, Jewish, The Church of Jesus Christ of Latter-day Saints (LDS), Other Christian, and Not Religious. The ANCOVA yielded significant results (see Table 3),  $F(7, 2946) = 195.74$ ,  $p < .001$ . The strength of the relationship between religious affiliation and religiosity was strong, as indicated by a partial  $\eta^2$  of .32.

Following the significant ANCOVA, post hoc testing through pairwise comparisons was conducted to reveal which religious groups were significantly different on religiosity (see Table 4). The Bonferroni procedure was used to reduce the rate of

Table 3

*ANCOVA Tests of Between-Subjects Effects*

Source	<i>df</i>	<i>F</i>	<i>p</i> -value	Partial $\eta^2$
Intercept	1	.30	.582	.00
Religious Affiliation	7	199.66	.000	.32
Income (SES)	1	4.25	.039	.00
Gender	1	31.37	.000	.01
Age	1	1.45	.228	.00
Ethnicity	1	13.05	.000	.00
Error	2958			
Total	2970			

*Note.*  $R^2 = .332$  (adj.  $R^2 = .330$ ); Dependent Variable = Religiosity.

Type I errors across the comparisons.

Table 4

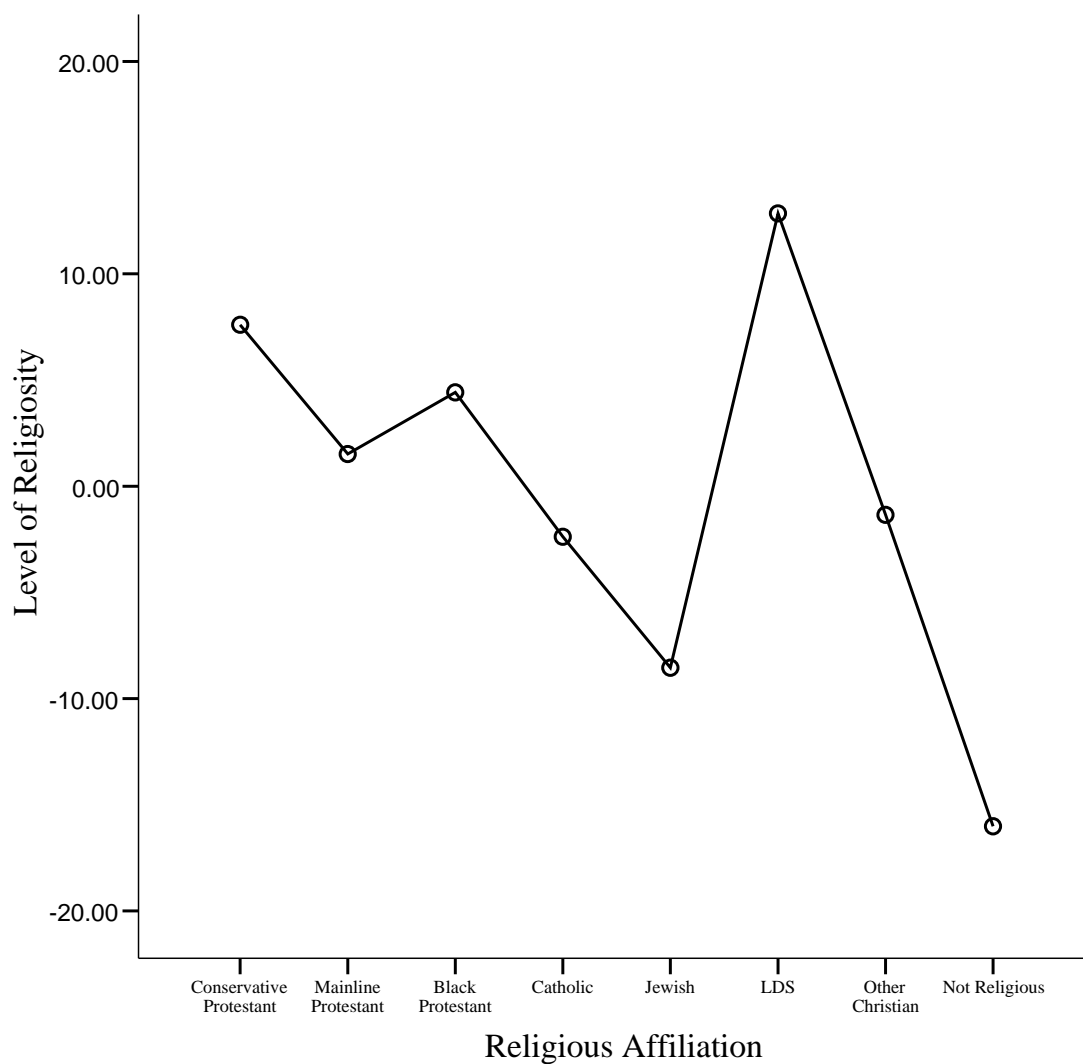
*Statistically Significant Differences in Religiosity by Religious Affiliation<sup>2</sup>*

(I) Religious affiliation	(J) Religious affiliation	Mean difference		
		(I-J)	SE	p-value
Conservative Protestant (n = 984)	Mainline Protestant	6.21	.71	.000
	Black Protestant	3.26	.78	.001
	Catholic	10.06	.54	.000
	Jewish	16.67	1.19	.000
	LDS	-5.35	1.40	.004
	Other Christian	9.01	1.13	.000
Mainline Protestant (n = 319)	Not Religious	23.71	.71	.000
	Catholic	3.85	.74	.000
	Jewish	10.46	1.28	.000
	LDS	-11.55	1.48	.000
Black Protestant (n = 361)	Not Religious	17.50	.88	.000
	Catholic	6.80	.76	.000
	Jewish	13.41	1.35	.000
	LDS	-8.60	1.53	.000
	Other Christian	5.76	1.25	.000
Catholic (n = 738)	Not Religious	20.45	.91	.000
	Jewish	6.61	1.21	.000
	LDS	-15.40	1.42	.000
	Not Religious	13.65	.74	.000
Jewish (n = 94)	LDS	-22.01	1.76	.000
	Other Christian	-7.65	1.57	.000
	Not Religious	7.04	1.30	.000
LDS (n = 64)	Other Christian	14.36	1.73	.000
	Not Religious	29.05	1.49	.000
Other Christian (n = 102)	Not Religious (n = 308)	14.69	1.24	.000

Note. Dependent Variable = Religiosity; Bonferroni correction used.

<sup>2</sup> All tables present only non-redundant information. As a result, significant comparisons are only shown under one comparison group.

Results showed that the Conservative Protestant, Jewish, LDS, and Not Religious groups were significantly different on religiosity from all other groups (see Table 4). The Mainline Protestant, Black Protestant, and Catholic youth were significantly different from six of seven groups. Finally, the Other Christian group showed significant differences from five other groups (see Figure 13), all at least at the  $p < .01$  level.



*Figure 13.* Means of eight religious groups on religiosity.

Figure 13, shows the means of each of the seven religious groups and the one non-religious group on measures of religiosity. LDS ( $M = 12.68$ ) youth report the highest level of religiosity and they are followed by the Conservative Protestant ( $M = 7.06$ ), Black Protestant ( $M = 5.09$ ), and Mainline Protestant ( $M = 1.15$ ) groups, then Other Christian ( $M = -1.21$ ) and Catholic ( $M = -2.56$ ) youth, and finally the youth identified as Not Religious ( $M = -16.52$ ).

### *Research Question Two*

To examine whether level of religiosity was related to the seven premarital predictors of marital quality and stability, Ordinary Least Squares (OLS) regression and Logistic regression were conducted. OLS regression was used for the five continuous dependent variables. The purpose of OLS regression is to reveal the proportion of variance in a continuous dependent variable explained by predictors.

Logistic regression estimates the probability that  $Y = 1$  for dichotomous dependent variables; in this study it estimated the probability or log odds of agreement with cohabitation or divorce. Thus, for every 1 unit increase (z-score) in religiosity, there is a change in the log odds of agreement with cohabitation or divorce. Details of results are given according to the log odds or coefficient ( $B$ ) and odds ratio ( $ExpB$ ). The coefficient ( $B$ ) represents the change in the log odds ( $p/1-p$ ) of agreement with cohabitation or divorce associated with a unit or categorical change in each independent variable (Hoffmann, 2004). The odds ratio ( $expB$ ) is the exponent of the coefficient and represents the probability of agreement with cohabitation or divorce divided by the probability of no agreement with cohabitation or divorce ( $\text{Log } (p/1-p)$ ).

### *Relationship with Parents*

A multiple regression analysis was conducted to investigate how well religiosity predicts the youth's relationship with parents after controlling for income (SES), gender, age, and ethnicity. Results indicated that religiosity was a statistically significant predictor for parental relationship, after controlling for the effects of the other variables in the model,  $F(5, 2956) = 93.89, p < .001$  (see Table 5). Specifically, after controlling for the other variables, for every standard deviation unit increase in religiosity, we expect a .27 ( $\beta$ ) standard deviation unit increase in parental relationship quality.

The coefficient of determination ( $R^2$ ) was .137, indicating that approximately 13.7% of the variance in parental relationship was accounted for by religiosity and the four control variables.

Table 5

#### *OLS Regression Results for Quality of Relationship with Parents*

Variable	Unstandardized coefficients		Standardized coefficients	<i>t</i>	<i>p</i> -value
	<i>B</i>	<i>SE</i>	$\beta$		
(Constant)	15.98	1.51		10.55	.000
Income (SES)	.30	.05	.11	6.06	.000
Gender	-.65	.28	-.04	-2.34	.019
Age	-1.21	.10	-.21	-12.23	.000
Ethnicity	1.14	.30	.07	3.75	.000
Religiosity	.17	.01	.27	15.70	.000

*Note.*  $R^2 = .14$ , adj.  $R^2 = .14$ ,  $N = 2962$ .

### *Ideal Age for Marriage*

A multiple regression analysis was conducted to predict respondent's reported ideal age for marriage based on religiosity and the control variables of income, gender,

age, and ethnicity. Results indicated that religiosity was a statistically significant predictor for ideal age for marriage, after controlling for the effects of the other variables in the model,  $F(5, 2915) = 30.30, p < .001$  (see Table 6). Specifically, after controlling for the other variables, for every standard deviation unit increase in religiosity, we expect a .10 ( $\beta$ ) standard deviation unit decrease in ideal age for marriage.

The coefficient of determination ( $R^2$ ) was .049, indicating that approximately 4.9% of the variance in ideal age for marriage was accounted for by religiosity and the four control variables.

Table 6

*OLS Regression Results for Ideal Age for Marriage*

Variable	Unstandardized coefficients		Standardized coefficients		
	<i>B</i>	<i>SE</i>	$\beta$	<i>t</i>	<i>p</i> -value
(Constant)	22.33	.74		30.37	.000
Income (SES)	.12	.02	.10	5.07	.000
Gender	-.40	.13	-.05	-2.99	.003
Age	.18	.05	.07	3.81	.000
Ethnicity	-1.42	.15	-.18	-9.62	.000
Religiosity	-.03	.01	-.10	-5.51	.000

Note.  $R^2 = .049$ , adj.  $R^2 = .048$ ,  $N = 2921$ .

*Right and Wrong*

A multiple regression analysis was conducted to examine the ability of religiosity to predict respondent's reported right and wrong, when controlling for income (SES), gender, age, and ethnicity. Regression results indicated that religiosity was a statistically significant predictor for right and wrong, after controlling for the effects of the other variables in the model,  $F(5, 2956) = 25.36, p < .001$  (see Table 7). Specifically, after



controlling for the other variables, for every standard deviation unit increase in religiosity, we expect a .12 ( $\beta$ ) standard deviation unit increase in right and wrong.

Table 7

*OLS Regression Results for Right and Wrong*

Variable	Unstandardized coefficients		Standardized coefficients		
	<i>B</i>	<i>SE</i>	$\beta$	<i>t</i>	<i>p</i> -value
(Constant)	3.49	.47		7.52	.000
Income (SES)	-.04	.02	-.05	-2.78	.005
Gender	.10	.09	.02	1.18	.240
Age	-.24	.03	-.14	-7.76	.000
Ethnicity	.34	.09	.07	3.65	.000
Religiosity	.02	.00	.12	6.67	.000

Note.  $R^2 = .041$ , adj.  $R^2 = .040$ ,  $N = 2962$ .

The coefficient of determination ( $R^2$ ) was .041, indicating that approximately 4.1% of the variance in right and wrong was accounted for by religiosity and the four control variables.

*Academic Achievement*

A multiple regression analysis was conducted to investigate the ability of religiosity to predict reported academic achievement, after controlling for income (SES), gender, age, and ethnicity. Results indicated that religiosity was a statistically significant predictor for academic achievement, after controlling for the effects of the other variables in the model,  $F(5, 2924) = 99.32$ ,  $p < .001$  (see Table 8). Specifically, after controlling for the other variables, for every standard deviation unit increase in religiosity, we expect a .19 ( $\beta$ ) standard deviation unit increase in academic achievement.

Table 8

*OLS Regression Results for Academic Achievement*

Variable	Unstandardized coefficients		Standardized coefficients		
	<i>B</i>	<i>SE</i>	$\beta$	<i>t</i>	<i>p</i> -value
(Constant)	.21	.56		.38	.703
Income (SES)	.25	.02	.24	13.60	.000
Gender	.99	.10	.17	9.67	.000
Age	-.16	.04	-.08	-4.45	.000
Ethnicity	.39	.11	.06	3.44	.001
Religiosity	.04	.00	.19	11.13	.000

*Note.*  $R^2 = .145$ , adj.  $R^2 = .144$ ,  $N = 2930$ .

The coefficient of determination ( $R^2$ ) was .145, indicating that approximately 14.5% of the variance in academic achievement was accounted for by religiosity and the four control variables.

*Sexual Behavior*

A multiple regression analysis was conducted to predict reported sexual behavior based on religiosity and the control variables of income (SES), gender, age, and ethnicity. Results indicated that religiosity was a statistically significant predictor for sexual behavior, after controlling for the effects of the other variables in the model,  $F(5, 2923) = 156.51$ ,  $p < .001$  (see Table 9). Specifically, after controlling for the other variables, for every standard deviation unit increase in religiosity, we expect a .20 ( $\beta$ ) standard deviation unit decrease in sexual behavior.

The coefficient of determination ( $R^2$ ) was .211, indicating that approximately 21.1% of the variance in sexual behavior was accounted for by religiosity and the four control variables.

Table 9

*OLS Regression Results for Sexual Behavior*

Variable	Unstandardized coefficients		Standardized coefficients		
	<i>B</i>	<i>SE</i>	$\beta$	<i>t</i>	<i>p</i> -value
(Constant)	-47.49	2.08		-22.83	.000
Income	-.13	.07	-.03	-1.93	.053
Gender	-1.51	.38	-.07	-3.96	.000
Age	3.26	.14	.40	24.05	.000
Ethnicity	.13	.42	.01	.31	.759
Religiosity	-.17	.01	-.20	-12.09	.000

Note.  $R^2 = .211$ , adj.  $R^2 = .210$ ,  $N = 2929$ .

*Attitude Toward Cohabitation and Divorce*

Table 10 shows the results of the logistic regression for agreement with cohabitation and divorce (separate models). The results are given according to odds ratios. The  $exp(B)$  in this case represents an adjusted odds ratio, because it has been adjusted for the other independent variables in the model. If the adjusted odds ratio is greater than one, the relation between the independent and dependent variable is positive, if it is between zero and one the relation is negative.

For both logistic regression models, religiosity was significant in distinguishing agreement with cohabitation and divorce. Specifically, after controlling for the effects of age, gender, ethnicity, and income (SES), for every unit increase in religiosity, the odds of agreement with cohabitation ( $expB = .94$ ,  $\chi^2(5) = 526.11$ ,  $p < .001$ ) decreases 6%. Similarly, the model for divorce shows that after controlling for the effects of age, gender, ethnicity, and income (SES), the odds of agreement with divorce ( $expB = .96$ ,  $\chi^2(5) = 204.50$ ,  $p < .001$ ) decreases 4% for every unit increase in religiosity.

Table 10

*Adjusted Logistic Regression Coefficients for Cohabitation and Divorce*

Variable	Cohabitation		Divorce	
	Coefficient	Odds	Coefficient	Odds
	<i>B</i>	<i>Exp(B)</i>	<i>B</i>	<i>Exp(B)</i>
Religiosity	-.07***	.94	-.04***	.96
Income (SES)	.03	1.03	.05**	1.05
Gender (Male = 1)	.33***	1.39	-.55***	.58
Age	.23***	1.26	.10**	1.10
Ethnicity (White = 1)	-.04	.97	-.01	.99
Constant	-3.54***		-.80	
<i>N</i>	2918		2860	
<i>R</i> <sup>2</sup> (Nagelkerke)	.22		.09	
Model $\chi^2$ (df)	526.11 (5)		204.50 (5)	

\* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$ .

*Research Question Three*

Research question three was included to examine if religious affiliation was a moderator—if level of religiosity interacts differently for religious groups—in the relationship between religiosity and the dependent variables. To accomplish this, OLS regression and Logistic regression were conducted. To obtain comparisons between each religious group dyad, it was necessary to run the model for each dependent variable eight

times while rotating the religious group that served as the comparison group. One of the purposes of analysis using dummy variables—and interaction variables created with dummy variables—is to discover any groups that are statistically significantly different from the comparison group. With the use of interaction variables in the model, the main effects of the original dummy variables for religious affiliation and religiosity—the combination of variables making up the interaction terms—are not interpreted even though they are necessary in the model. Instead, the individual interaction effects are interpreted, after a significant overall interaction effect (Cohen et al., 2003). If this overall interaction effect is statistically significant at the .05 level, then the overall interaction effect was partitioned into seven individual contrasts (e.g., religiosity by Jewish vs. Catholic). This reveals the relative effect of a unit increase in religiosity on an individual religious group, as compared to the reference religious group, net of all covariates.

Also important in interpretation of results using dummy coding is the meaning of the coefficients. In the output, the intercept is the mean of the reference interaction group. The unstandardized regression coefficients are the difference between the mean of that particular group and the reference group (Cohen et al., 2003).

### *Relationship with Parents*

A multiple regression analysis was conducted to examine differences in the interaction terms for religiosity and religious affiliation on parental relationship, when controlling for age, gender, ethnicity, and income (SES). After rotating each religious group interaction term as the reference group, results indicated there were six religious

group comparison dyads that were statistically significantly different,  $F(19, 2942) = 26.70, p < .001$ , in regards to parental relationship (see Table 11). Since each of the significant dyads included the Jewish group, this group was presented as the reference group. As a note, there were 19 independent variables in each analysis (religiosity, four control variables, seven religious group dummy variables, & seven interaction terms), however, only the significant and interpreted variables are shown in the tables.

Results indicated that religiosity had a different influence for Jewish youth on parental relationship than it did for these other six religious groups. The estimated score on parental relationship for Jewish youth at the average score of religiosity is 15.71, the intercept. Conservative Protestant youth are expected to score .21 ( $p < .01$ ) higher, Mainline Protestant youth are expected to score .20 ( $p < .01$ ) higher, Black Protestant youth are expected to score .28 ( $p < .01$ ) higher, Catholic youth are expected to score .25 ( $p < .01$ ) higher, Other Christian youth are expected to score .20 ( $p < .05$ ) higher, and Not Religious youth are expected to score .22 ( $p < .01$ ) higher on parental relationship at the mean of religiosity. In contrast, the influence of religiosity for all other religious group dyads was similar on parental relationship.

The coefficient of determination ( $R^2$ ) was .147, indicating that approximately 14.7% of the variance in parental relationship was accounted for by the interaction variables and the four control variables.

Table 11

*Significant Results for Interaction Terms on Relationship with Parents*

Reference group	Variable	Unstandardized coefficients		Standardized coefficients	<i>t</i>	<i>p</i> -value
		<i>B</i>	<i>SE</i>	$\beta$		
Jewish	(constant)	15.71	1.82		8.62	.000
	SES	.27	.05	.10	5.32	.000
	Age	-1.22	.10	-.21	-12.37	.000
	Gender	-.65	.28	-.04	-2.35	.019
	Ethnicity	1.52	.36	.09	4.19	.000
	Rel x CP	.21	.07	.19	2.87	.004
	Rel x MP	.20	.08	.10	2.63	.008
	Rel x BP	.28	.08	.13	3.45	.001
	Rel x C	.25	.07	.16	3.36	.001
	Rel x OC	.20	.09	.06	2.20	.028
	Rel x NR	.22	.08	.16	2.66	.008

*Note.*  $R^2 = .147$ , adj.  $R^2 = .142$ ,  $N = 2962$ ; CP = Conservative Protestant, MP = Mainline Protestant, BP = Black Protestant, C = Catholic, OC = Other Christian, NR = Not Religious, Rel = Religiosity.

*Ideal Age for Marriage*

A multiple regression analysis was conducted to examine interaction terms between religiosity and religious affiliation on reported ideal age for marriage, when controlling for age, gender, ethnicity, and income (SES). After rotating each religious group interaction term as the reference group, results indicated there were four religious group dyads that were statistically significantly different,  $F(19, 2901) = 11.07$ ,  $p < .001$ , on reported ideal age for marriage (see Table 12).

Table 12

*Significant Results for Interaction Terms on Reported Ideal Age for Marriage*

Reference group	Variable	Unstandardized coefficients		Standardized coefficients	<i>t</i>	<i>p</i> -value
		<i>B</i>	<i>SE</i>	$\beta$		
Latter-day Saints	(constant)	21.93	.94		23.25	.000
	SES	.11	.03	.09	4.56	.000
	Age	.17	.05	.07	3.64	.000
	Gender	-.42	.13	-.06	-3.15	.002
	Ethnicity	-1.06	.18	-.14	-6.08	.000
	Rel x CP	.07	.03	.13	2.01	.044
	Rel x MP	.07	.04	.08	2.05	.040
	Rel x C	.10	.03	.14	2.84	.004
Not Religious	(constant)	22.54	.83		27.19	.000
	Rel x C	.07	.03	.09	2.63	.009

*Note.*  $R^2 = .068$ , adj.  $R^2 = .061$ ,  $N = 2921$ ; LDS = The Church of Jesus Christ of Latter-day Saints, CP = Conservative Protestant, MP = Mainline Protestant, C = Catholic, and Rel = Religiosity.

Results indicated that religiosity had a different influence for LDS youth on reported ideal age for marriage than it did for youth in three other religious groups. The estimated score on ideal age for marriage for LDS youth at the average score of religiosity is 21.93, the intercept. Conservative Protestant youth are expected to score .07 ( $p < .05$ ) higher, Mainline Protestant youth are expected to score .07 ( $p < .05$ ) higher, and Catholic youth are expected to score .10 ( $p < .01$ ) higher on reported ideal age of marriage at the mean of religiosity.

Results also showed a difference in the influence of religiosity on reported ideal age for marriage between the Not Religious youth and Catholic youth. The expected score on ideal age of marriage for Not Religious youth at the average score of religiosity



is 22.54, the constant for that model. Catholic youth are expected to score .07 ( $p < .01$ ) higher on reported ideal age of marriage at the mean score of religiosity. For all other religious group dyads, the influence of religiosity was similar on ideal age of marriage.

The coefficient of determination ( $R^2$ ) was .068, indicating that approximately 6.8% of the variance in reported ideal age of marriage was accounted for by the interaction variables and the four control variables.

### *Right and Wrong*

A multiple regression analysis was conducted to examine differences in interaction terms between religiosity and religious affiliation on right and wrong, when controlling for age, gender, ethnicity, and income (SES). After rotating each religious group interaction term as the reference group, results indicated there were four religious group dyads that were statistically significantly different,  $F(19, 2942) = 8.69, p < .001$ , on right and wrong (see Table 13). The Conservative Protestant group was involved in each significant interaction, so they are presented as the reference group.

Results indicated that religiosity had a different influence for Conservative Protestant youth on right and wrong than it did for youth in four other religious groups. The estimated score on right and wrong for Conservative Protestant youth at the average score of religiosity is 3.36, the intercept. Black Protestant youth are expected to score .04 ( $p < .05$ ) lower, Jewish youth are expected to score .05 ( $p < .05$ ) lower, Other Christian youth are expected to score .04 ( $p < .05$ ) lower, and Not Religious youth are expected to score .03 ( $p < .05$ ) lower than Conservative Protestant youth on right and wrong at the mean of religiosity. Religiosity had a similar influence for all other religious group dyads.

Table 13

*Significant Results for Interaction Terms on Right and Wrong*

Reference group	Variable	Unstandardized coefficients		Standardized coefficients	<i>t</i>	<i>p</i> -value
		<i>B</i>	<i>SE</i>	$\beta$		
Conservative	(constant)	3.36	.47		7.11	.000
Protestant	SES	-.05	.02	-.06	-2.98	.003
	Age	-.24	.03	-.14	-7.90	.000
	Ethnicity	.36	.11	.07	3.28	.001
	Rel x BP	-.04	.02	-.06	-2.56	.011
	Rel x J	-.05	.02	-.06	-2.36	.018
	Rel x OC	-.04	.02	-.04	-2.18	.029
	Rel x NR	-.03	.02	-.09	-2.24	.025

*Note.*  $R^2 = .053$ , adj.  $R^2 = .047$ ,  $N = 2962$ ; BP = Black Protestant, J = Jewish, OC = Other Christian, NR = Not Religious, and Rel = Religiosity.

The coefficient of determination ( $R^2$ ) was .053, indicating that approximately 5.3% of the variance in right and wrong was accounted for by the interaction variables and the four control variables.

*Academic Achievement*

A multiple regression analysis was conducted to examine the difference in influence of religiosity between religious groups on academic achievement, when controlling for age, gender, ethnicity, and income (SES). After rotating each religious group interaction term as the reference group, results indicated there were 14 religious group dyads that were statistically significantly different,  $F(19, 2910) = 32.10$ ,  $p < .001$ , on academic achievement (see Table 14).

Table 14

*Significant Results for Interaction Terms on Academic Achievement*

Reference group		Unstandardized coefficients		Standardized coefficients	<i>t</i>	<i>p</i> -value
		<i>B</i>	<i>SE</i>	$\beta$		
Jewish	(constant)	1.41	.67		2.12	.034
	SES	.22	.02	.21	11.59	.000
	Age	-.17	.04	-.08	-4.70	.000
	Gender	.97	.10	.16	9.59	.000
	Ethnicity	.45	.13	.07	3.40	.001
	Rel x CP	.09	.03	.21	3.23	.001
	Rel x MP	.07	.03	.10	2.62	.009
	Rel x BP	.09	.03	.11	2.99	.003
	Rel x C	.08	.03	.14	3.02	.003
Rel x LDS	.10	.04	.09	2.90	.004	
Other Christian	(constant)	-.44	.62		-.71	.48
	Rel x CP	.09	.02	.23	3.86	.000
	Rel x MP	.08	.03	.11	3.12	.002
	Rel x BP	.10	.03	.12	3.47	.001
	Rel x C	.09	.02	.16	3.59	.000
Rel x LDS	.11	.03	.10	3.26	.001	
Not Religious	(constant)	.11	.63		.17	.86
	Rel x CP	.05	.02	.11	2.44	.015
	Rel x BP	.05	.02	.06	2.12	.034
	Rel x C	.04	.02	.07	2.14	.032
	Rel x LDS	.06	.03	.06	2.06	.039

*Note.*  $R^2 = .173$ , adj.  $R^2 = .168$ ,  $N = 2930$ ; CP = Conservative Protestant, MP = Mainline Protestant, BP = Black Protestant, C = Catholic, J = Jewish, LDS = The Church of Jesus Christ of Latter-day Saints, OC = Other Christian, NR = Not Religious, and Rel = Religiosity.

Results indicated that religiosity had a different influence for Jewish youth on academic achievement than it did for youth in five other religious groups. The expected score on academic achievement for Jewish youth at the average score of religiosity is

1.41, the intercept. Conservative Protestant youth are estimated to score .09 ( $p < .01$ ) higher, Mainline Protestant youth are expected to score .07 ( $p < .01$ ) higher, Black Protestant youth are expected to score .09 ( $p < .01$ ) higher, Catholic youth are expected to score .08 ( $p < .01$ ), and LDS youth are expected to score .10 ( $p < .01$ ) higher than Jewish youth on academic achievement at the mean of religiosity.

With the reference group as Other Christian, differences in the influence of religiosity were found for five dyads on academic achievement. The expected score on academic achievement for Other Christian youth at the mean of religiosity is -.44, the intercept for that model. Conservative Protestant youth are estimated to score .09 ( $p < .001$ ) higher, Mainline Protestant youth are expected to score .08 ( $p < .01$ ) higher, Black Protestant youth are expected to score .10 ( $p < .01$ ) higher, Catholic youth are estimated to score .09 ( $p < .001$ ) higher, and LDS youth are expected to score .11 ( $p < .01$ ) higher than Other Christian youth on academic achievement at the mean of religiosity.

Results from a third reference group showed that religiosity had a different influence for the youth in the Not Religious group on academic achievement than four additional religious groups. The expected score of Not Religious youth on academic achievement at the mean of religiosity is .11, the intercept for that model. Conservative Protestant youth are expected to score .05 ( $p < .05$ ) higher, Black Protestant youth are also expected to score .05 ( $p < .05$ ) higher, Catholic youth are expected to score .04 ( $p < .05$ ) higher, and LDS youth are expected to score .06 ( $p < .05$ ) higher on academic achievement at the mean of religiosity. Religiosity had a similar influence on academic achievement for all other religious group dyads.

The coefficient of determination ( $R^2$ ) was .173, indicating that approximately 17.3% of the variance in academic achievement was accounted for by the interaction terms and the four control variables.

### *Sexual Behavior*

A multiple regression analysis was conducted to examine the difference in influence of religiosity between religious groups on sexual behavior, when controlling for age, gender, ethnicity, and income (SES). After rotating each religious group interaction term as the reference group, results indicated that five dyads were statistically significantly different,  $F(19, 2909) = 43.03, p < .001$ , on sexual behavior (see Table 15).

Table 15

### *Significant Results for Interaction Terms on Sexual Behavior*

Reference group		Unstandardized coefficients		Standardized coefficients	<i>t</i>	<i>p</i> -value
		<i>B</i>	<i>SE</i>	$\beta$		
Latter-day Saints	(constant)	-48.05	2.68		-17.96	.000
	Age	3.28	.14	.40	24.18	.000
	Gender	-1.49	.38	-.07	-3.92	.000
	Rel x MP	.21	.10	.08	2.10	.036
	Rel x BP	.21	.11	.07	1.97	.049
	Rel x NR	.29	.11	.15	2.65	.008
Not Religious	(constant)	-48.42	2.13		-22.73	.000
	Rel x CP	-.16	.07	-.10	-2.32	.021
	Rel x C	-.17	.07	-.08	-2.35	.019

*Note.*  $R^2 = .219$ , adj.  $R^2 = .214$ ,  $N = 2929$ ; LDS = The Church of Jesus Christ of Latter-day Saints, MP = Mainline Protestant, BP = Black Protestant, NR = Not Religious, C = Catholic, and Rel = Religiosity.

Results indicated that religiosity had a different influence for LDS youth on sexual behavior than it did for youth in three other religious groups. The expected score on sexual behavior for LDS youth at the average score of religiosity is -48.05, the intercept. Mainline Protestant youth are estimated to score .21 ( $p < .05$ ) higher, Black Protestant youth are expected to score .21 ( $p < .05$ ) higher, and Not Religious youth are expected to score .29 ( $p < .01$ ) higher than LDS youth on sexual behavior at the mean of religiosity.

Using the Not Religious youth as the reference group, differences in the influence of religiosity were found for two additional dyads on sexual behavior. The expected score on sexual behavior for Not Religious youth at the mean of religiosity is -.16, the intercept for that model. Conservative Protestant youth are estimated to score .16 ( $p < .05$ ) lower, and Catholic youth are estimated to score .17 ( $p < .05$ ) lower than Not Religious youth on sexual behavior at the mean of religiosity.

The coefficient of determination ( $R^2$ ) was .219, indicating that approximately 21.9% of the variance in sexual behavior was accounted for by the interaction variables and the four control variables.

#### *Attitude Toward Cohabitation*

Logistic regression analysis was used to assess any differences in the influence of religiosity between religious groups on attitude toward cohabitation, when controlling for income (SES), age, gender, and ethnicity. After rotating each religious group interaction term as the reference group, results indicated there were 11 religious group dyads that were statistically significantly different,  $\chi^2(19) = 604.04$ ,  $p < .001$ , on agreement with

cohabitation (see Table 16).

Results indicated that religiosity had a different influence for LDS youth on agreement with cohabitation than for youth in all seven other religious groups. Compared to LDS youth, Conservative Protestant youth have an 11% ( $expB = 1.11, p < .05$ ) increase, Mainline Protestant youth have a 13% ( $expB = 1.13, p < .05$ ) increase, Black Protestant youth have a 16% ( $expB = 1.16, p < .01$ ) increase, Catholic youth have a 17% ( $expB = 1.17, p < .01$ ) increase, Jewish youth have a 13% ( $expB = 1.13, p < .05$ ) increase, Other Christian youth have a 12% ( $expB = 1.12, p < .05$ ) increase, and Not Religious youth have a 15% ( $expB = 1.15, p < .01$ ) increase in the odds of agreement with cohabitation.

When using Conservative Protestant youth as the comparison group, there were three additional religious group dyads that were significantly different in the influence of religiosity on agreement with cohabitation. Compared to Conservative Protestant youth, Black Protestant youth have a 4% ( $expB = 1.04, p < .01$ ) increase, Catholic youth have a 5% ( $expB = 1.05, p < .001$ ) increase, and Not Religious youth have a 4% ( $expB = 1.04, p < .05$ ) increase in the odds of agreement with cohabitation.

Lastly, with Catholic youth as the comparison group, one more comparison dyad was statistically significantly different. Compared to Catholic youth, Mainline Protestant youth have a 3% ( $expB = .97, p < .05$ ) decrease in the odds of agreement with cohabitation, when holding religiosity constant.

Table 16

*Significant Results for Interaction Terms on Attitude Toward Cohabitation*

Reference group		<i>B</i>	<i>SE</i>	<i>Exp(B)</i>	<i>p</i> -value
Latter-day Saints	Constant	-4.00	.70	.02	.000
	Age	.24	.03	1.27	.000
	Gender	-.34	.08	.71	.000
	Rel x CP	.10	.05	1.11	.033
	Rel x MP	.12	.05	1.13	.012
	Rel x BP	.14	.05	1.16	.003
	Rel x C	.15	.05	1.17	.001
	Rel x J	.12	.05	1.13	.028
	Rel x OC	.11	.05	1.12	.037
	Rel x NR	.14	.05	1.15	.005
Conservative Protestant	Constant	-3.22	.46	.04	.000
	Rel x BP	.04	.02	1.04	.004
	Rel x C	.05	.01	1.05	.000
	Rel x NR	.04	.02	1.04	.021
Catholic	Constant	-3.42	.47	.03	.000
	Rel x MP	-.03	.01	.97	.025

*Note.* (Nagelkerke)  $R^2 = .250$ ,  $N = 2918$ ; CP = Conservative Protestant, MP = Mainline Protestant, BP = Black Protestant, C = Catholic, J = Jewish, Latter-day Saints = The Church of Jesus Christ of Latter-day Saints, OC = Other Christian, NR = Not Religious, and Rel = Religiosity.

*Attitude Toward Divorce*

Logistic regression analysis was used to evaluate the influence of religiosity for the eight religious groups on attitude toward divorce, when controlling for age, gender, ethnicity, and income (SES). After rotating each religious group interaction term as the reference group, results indicated there were two religious group dyads that were statistically significantly different,  $\chi^2(19) = 238.27$ ,  $p < .001$ , on agreement with divorce



(see Table 17).

Results indicated that religiosity had a different influence for Not Religious youth on agreement with divorce than it did for youth in two other religious groups. Compared to Not Religious youth, Black Protestant youth have a 5% ( $expB = 1.05, p < .05$ ) increase, and Catholic youth have a 4% ( $expB = 1.04, p < .05$ ) increase in the odds of agreement with divorce when holding religiosity constant.

Table 17

*Significant Results for Interaction Terms on Attitude Toward Divorce*

Reference group		<i>B</i>	<i>SE</i>	<i>Exp(B)</i>	<i>p</i> -value
Not Religious	Constant	-1.53	.51	.22	.003
	Age	.09	.03	1.10	.002
	Gender	.56	.08	1.74	.000
	SES	.03	.02	1.03	.029
	Rel x BP	.05	.02	1.05	.017
	Rel x C	.04	.02	1.04	.019

*Note.* (Nagelkerke)  $R^2 = .109, N = 2860$ ; BP = Black Protestant, C = Catholic, and Rel = Religiosity.

## CHAPTER V

## DISCUSSION

The primary purpose of this study was to examine the possibility of religious affiliation holding a unique role in the religiosity of youth in regards to current strengths development and future family roles. As a result, the current study explored (1) the relation between religious affiliation and religiosity, (2) the relation between religiosity and seven premarital predictors of marital quality and stability, and (3) the possibility of religious affiliation acting as a moderator in these relationships.

Using ecological systems theory, these hypotheses came from the idea that differences in the microsystem—namely the teachings, beliefs, practices, experiences, and attitudes associated with individual religious groups—would shape how religiosity is experienced by the youth, and therefore how it relates to current and future outcomes.

To accomplish these purposes, data were obtained and analyzed from the National Study of Youth and Religion (NSYR). These data were comprised of a national sample of religious and non-religious youth along with their reported religious affiliation. From this full sample, eight religious groups—including a Not Religious group—were organized to examine differences in religiosity and outcomes related to premarital predictors of marital quality and stability. Data were analyzed using a one-way analysis of covariance, ordinary least squares regression, and logistic regression. Results were organized according to the individual research questions.

## Research Questions Answered

### *Research Question One*

The first research hypothesis predicted that religious affiliation would be related to level of religiosity, after controlling for age, gender, ethnicity, and socioeconomic status. This hypothesis was fully supported by the data, which showed an overall effect for predicting religiosity by religious affiliation. Further analysis clarified this by revealing 25 out of the possible 28 religious group dyads were significantly different from each other on religiosity. As expected, the Not Religious group had the lowest mean on religiosity.

The results of this question also showed great practical significance as well. The overall effect of religious affiliation on religiosity showed a partial  $\eta^2$  of .32 which is a very strong effect size. For individual group differences, the smallest mean difference between groups was the Conservative Protestant and the Black Protestant groups at 3.26. The largest mean difference between groups was 29.05 between the LDS and the Not Religious groups.

### *Research Question Two*

In the second research hypothesis, it was predicted that religiosity would be related to premarital predictors of marital quality and stability, after controlling for age, gender, ethnicity, and socioeconomic status. This hypothesis was also fully supported by these data, indicating that level of religiosity was related to all seven premarital predictors of marital quality and stability. Specifically, religiosity was positively related to parental

relationship, right and wrong, and academic achievement. Conversely, it was negatively related to reported ideal age for marriage, sexual behavior, and agreement with cohabitation and divorce.

Practical significance was not as strong for question two. In the OLS regression analyses, for every one unit increase in religiosity, there was a .17 unit increase in relationship with parents, a .03 unit decrease in ideal age for marriage, a .02 unit increase in right and wrong, a .04 unit increase in academic achievement, and a .17 unit decrease in sexual behavior. In the Logistic regression analyses, for every one unit increase in religiosity, there was a 6% decrease in agreement with cohabitation, and a 4% decrease in agreement with divorce.

### *Research Question Three*

In the third research hypothesis, it was expected that religious affiliation would act as a moderator for the relationship between religiosity and the premarital predictors of marital quality and stability, after controlling for age, gender, ethnicity, and socioeconomic status. Similarly to the previous two hypotheses, this hypothesis was supported by the data. The data revealed that religious affiliation did act as a moderator between religiosity and each of the premarital predictors of marital quality and stability. However, this moderating influence was not equal among all religious groups or among all the dependent variables. Specifically, 6 of 28 religious group dyads were different on the influence of religiosity for parental relationship, 4 of 28 were different for reported ideal age for marriage and right and wrong, 14 of 28 were different for academic achievement, 5 of 28 were different for sexual behavior, 11 of 28 were different for

agreement with cohabitation, and 2 of 28 religious group dyads were different on agreement with divorce.

Research question three revealed moderate to strong practical significance along with statistical significance. There were large differences in religiosity effect between religious groups on relationship with parents (20 to 25% change) and sexual behavior (16 to 29% change). There were moderate differences in religiosity effect between religious groups on ideal age for marriage (7 to 10% change), right and wrong (3 to 5% change), academic achievement (4 to 11% change), attitude toward cohabitation (3 to 15% change), and attitude toward divorce (3 to 5% change).

### Discussion of Findings

Similar to previous research (Chadwick & Top, 1993; Desrosiers & Miller, 2007; Nonnemaker et al., 2003; Rostosky et al., 2004), this study adds to the growing body of literature that religiosity continues to be an influence on important attitudes and behaviors of youth and acts as a buffer against negative outcomes. In addition, these findings add to previous research by showing that not only is youth religiosity important in current and future outcomes related to premarital predictors of marital quality and stability, but that religious affiliation is important in the meaning and influence religiosity holds for youth relative to these outcomes. In fact, these findings provide evidence that research investigating religiosity may be incomplete without being coupled with religious affiliation.

One of the purposes of early research on marriage was to discover any factors that could be used to help predict the success or failure of marriage. This research yielded

various premarital predictors of marital quality and stability (see Larson & Holman, 1994). Researchers investigating these premarital predictors posed the question regarding whether there is anything that is able to influence the premarital predictors to increase the likelihood of a successful marriage. The findings from research question two in the current study address this question by showing that religiosity is able to influence these specific premarital predictors of marital quality and stability that were examined in the current study. Further, the results from research question three provided evidence that there is a unique role and influence of religiosity that is at least partially dependent on the religious affiliation of the adolescent. The current study was not able to specifically outline how religiosity was unique for youth of different religious affiliations, only that the influence of religiosity was different in association with these specific outcomes.

One of the most interesting findings that supports the need for religious affiliation to be used in religiosity research came in the descriptive analyses. Bivariate correlations to establish relationship between the independent and dependent variables were conducted both for the full sample and for each of the eight religious groups. If the current study would have only used the full data set for analysis and disregarded religious affiliation, results would have shown that level of religiosity—regardless of affiliation—was significantly correlated to each of the dependent variables. However, these same bivariate correlations did not show the same results for each of the individual religious groups.

Results indicated there was no relation between religiosity and reported ideal age of marriage for Conservative Protestant, Mainline Protestant, Black Protestant, Catholic, Jewish, Other Christian, and Not Religious youth. There was no relation between

religiosity and right and wrong for Black Protestant, Jewish, Other Christian, and Not Religious youth. There was no relation between religiosity and relationship with parents for Jewish youth. There was no relation between religiosity and academic achievement for Jewish, Other Christian, and Not Religious youth. There was no relation between religiosity and sexual behavior for the Not Religious youth. And finally, there was no relation between religiosity and attitude toward divorce for the Jewish and Other Christian youth. As a result, using data with only one (any except LDS) religious affiliation represented would not have shown significant results for religiosity and all the dependent variables in question two, as was found for the full sample.

#### *Relation to Previous Research*

Overall, results of the current study support previous research that religiosity is positively associated with marital quality and stability (Brown et al., 2006; Kitson, 2006), although indirectly in this case through premarital predictors of marital quality and stability. These findings may extend the importance of religious affiliation in religiosity research in general, and more specifically in regards to premarital predictors of marital success. In addition, the current findings may relate to former research indicating that similarity of religiosity and religious affiliation were found to be important in marital quality and stability (see Amato & Previti, 2003; Rodrigues et al., 2006).

In partial support of previous research (Regnerus & Burdette, 2006), this study found that higher reported religiosity was associated with a better relationship with parents. However, the current data were analyzed with both mother and father together, so it was unclear if there were increased differences in religiosity influence for fathers

compared to mothers as was found earlier.

Results indicated that religiosity was negatively related to respondent's stated ideal age for marriage. Prior research on age of marriage has found that earlier age at first marriage was associated with an increased risk for divorce (Call & Heaton, 1997; Larson & Holman, 1994; Teachman et al., 2006), particularly when the wife was in her teens (Martin & Bumpass, 1989). It may be that for the highly religious, the expectation of abstinence before marriage by some religious groups provides added motivation to enter into marriage at earlier ages.

These findings support previous research by Pearce and Haynie (2004) that religiosity increases the level of self-regulation and moral thought. For the current study, this may be directly applied to the findings associated with sexual behavior and right and wrong in research question two. Both increased self-regulation and moral thought would contribute to reduced sexual behavior and increased right and wrong in youth.

Findings in this study supported previous research on academic achievement and religious group differences, with one addition. Jeynes (2003) found a significant difference between Christian and non-Christian students on academic achievement, but no differences between Catholic and Protestant students. Similarly, the current study found differences on academic achievement between students in five Christian denominations and students in the Jewish religion, and did not find differences on academic achievement between the Catholic youth and any of the three Protestant groups. However, this study also found differences between five Christian denominations and the Other Christian group.

Lastly, the current findings that religiosity, moderated by religious affiliation, was



related to each of the premarital predictors of marital quality and stability, may provide important insight on the relation between homogamy of religiosity and religious affiliation to marital quality and stability. Amato and Previti (2003) found that more religious couples were less likely to cite causes such as incompatibility and more likely to report infidelity as a reason for marital dissolution. The authors interpreted these results as indicating that it takes more extreme conditions, such as infidelity, to instigate a divorce in more religious couples. This may be attributed to a similarity of beliefs and teachings related to both premarital predictors and about the meaning and commitment to a subsequent marriage, resulting from similar levels of religiosity and religious affiliation. In contrast, differences in either of these may result in disparate or a lessening in conviction of beliefs, teachings, or commitment to the premarital predictors or actual marriage (see Call & Heaton, 1997).

#### *Relation to Theory*

Ecological systems theory provided a framework for further understanding the results of this study. This theory considers the bidirectional influence between the developing individual, and multiple layers of the environment (Bronfenbrenner, 1979; Bubolz & Sontag, 1993), in this case the microsystem, the mesosystem, and the macrosystem. For the current study, this included the youth, religiosity, religious affiliation, and premarital predictors of marital quality and stability. The microsystem consists of the youth interacting with religiosity, and the youth interacting with the premarital predictors. The mesosystem consists of the interaction between religiosity and individual characteristics of religious affiliation, which further interact with the youth.

The macrosystem consisted of the religious sub-cultures contained in the different religious groups. Each of these interact with each other, which then influence the premarital predictors of marital quality and stability.

In light of these findings, it may be important to refer back to the characteristic of development within this framework where the individual has the ability to choose, alter, or create their environments (Bronfenbrenner, 1979). First, an adolescent—at some point—chooses to be affiliated with a certain religious group. Then, they decide the extent they will pay attention to and participate in the teachings and practices of that group. In return, that level of participation in a specific religious group would also be expected to influence the individual's attitudes and behaviors relative to premarital predictors of marital quality and stability. Taken as a whole, an adolescent with higher religiosity would be more likely to have the attitudes and behaviors that promote a successful marriage later.

Bronfenbrenner's (1979) theoretical hypotheses may further place the results into context. Both Proposition H and Hypothesis 10 relate to the differences found between the religious groups on each of the premarital predictors (Proposition H) after establishing a positive association for religiosity (Hypothesis 10). Simply stated, Proposition H hypothesizes that differences between settings (e.g., sub-cultures between religious groups) would show differences in developmental effects (e.g., premarital predictors), which was supported by the results of question three in this study. Hypothesis 10 posited that the structure and support provided by affiliation with a particular religion would enhance positive societal values and role expectations, which was supported by the findings in research question two of this study.

## Implications

An important implication that may be drawn from this study applies to premarital counseling. This study examines various premarital predictors of marital quality and stability, which may be used to identify possible areas of concern to discuss in premarital counseling. This refers back to one of the original purposes for studying premarital predictors of marital quality and stability stated by Holman (2001), "...if we could...predict...[who would end up happy, unhappy, or divorced], could the couples heading for unhappiness...change...the future of their marriage by changing their attitudes and actions in the present?" (p. 1). In conjunction with this counseling, religious affiliation could further be taken into account along with religiosity to better understand the world view attitudes and actions of the participant that may be assessed and altered if needed.

## Limitations

There were some limitations in this study. To begin, the NSYR questionnaire had a specific limitation that may have affected one outcome of this study. In the relationship with parents section, respondents were asked to answer questions only in reference to a mother or father (figure) *living in the home*. This excluded data on any relationships with non-resident parents. As a result, the data obtained may not accurately reflect the true nature of all parent relationship(s) with the adolescent.

A second limitation concerns the creation of the eight religious groups. Four of these groups were made up of combinations of similar religious denominations,

Conservative Protestant, Mainline Protestant, Black Protestant, and Other Christian. A clearer picture of religious affiliation differences may occur if a sample were obtained with a sufficient number of participants in individual religious groups. With these combined groups, there may be a confounding effect between different denominations.

Similarly, another limitation may concern the exclusion of a *spiritual but not religious* group aside from the Not Religious group to compare against the seven religious groups. Even though the NSYR questionnaire did ask to what degree participants considered themselves spiritual but not religious, some of these same participants had previously identified as associating with a specific religious denomination. As a result, it would have been difficult to tease out which participants were simply not participating in their identified religion as opposed to those who consider their form of worship to be spirituality, which would not include participation in any organized religion. In the future, it would be helpful to have spiritual but not religious as a follow-up question to youth who identified themselves as not religious.

A further limitation involves the role of culture, ethnicity, and region of the U.S. in the practice of religiosity. Even though ethnicity was a control variable, youth of different ethnicities within the same religious group may have interpreted questions in a different manner. Closely related to this is the effect of youth living in different regions of the U.S. The combination of ethnicity and region of the U.S. may have influenced the interpretation and responses of youth in addition to the influence of their religious affiliation.

A final limitation relates to the summing of the religiosity scale instead of using individual questions or factors. However, this may have been a necessary step in the

research process. Religiosity was carefully defined using multiple characteristics of religiosity, however, in order to give equal weight to beliefs and practices of each individual religious group, the questions were added to create the final scale. This was also necessary due to the unequal sample sizes for each religious group. Crosstabs of the religious groups and the individual religiosity questions making up the scale revealed that the smaller groups (e.g., Jewish, LDS) were discriminated between level of religiosity by different questions (e.g., fasting, Sabbath day observance) than the larger groups.

### Future Directions

Results of this study imply that future research involving religiosity needs to include at least the reported religious affiliation of the participants, and more completely to use religious affiliation as a variable to better understand the meaning of religiosity for the specific participants and outcomes being studied.

Future research may build on these outcomes by investigating the specific aspects of different religious groups, including a spiritual but not religious group, that contribute to distinct meaning and influence for religiosity as it applies to each of the premarital predictors of marital quality and stability. For instance, there may be some key religious indicators that reveal the extent that religious beliefs have been internalized to then have greater influence on the individual as suggested by Thomas and Carver (1990). This may be accomplished by using individual questions of religiosity as predictors of various outcome variables. In addition, it would also be more effective to have enough participants in each religious group being studied, so there would not be any combined religious groups.

Another direction for future research to further investigate the current findings relates to the negative association between religiosity and reported ideal age for marriage. Subsequent studies may investigate if the negative outcomes related to a younger age at first marriage hold for each of the religious groups, or if religious affiliation may mediate or moderate some of those effects.

A final way that research may build on the current study relates to the final limitation explained above. Subsequent studies examining religiosity may continue to include multiple aspects of youth religiosity to account for this dynamic and individual variable. To extend this research, questions may be posed to examine the individual factors or questions of religiosity to reveal how they specifically relate to outcomes.

### Conclusion

The principal contribution of this study is that it builds on previous research on the strengthening and protective role of religiosity and extends that research to include the moderating role of religious affiliation to better understand the influence of religiosity. This study offers evidence that even though higher levels of religiosity promote positive characteristics and shield against negative characteristics related to premarital predictors of marital quality and stability, that religiosity operates differently on youth depending on their religious affiliation.

In conclusion, religiosity can be a powerful and positive influence for many teens. It may be considered a grounding force to provide context and guidance for life and may arm youth with the skills necessary to reduce or overcome the social ills they encounter, and prepare them for greater success in future family roles.

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APPENDICES

Appendix A. Religiosity Factor Scores



Table 18

*Religiosity Factor Scores*

NSYR Question	Component		
	1	2	3
Y126 God	0.796		
Y125 angels	0.767		
Y125 miracles	0.76		
Y230 pray alone	0.668		
Y57 faith	0.664		
Y27/38 attend @25	0.65		
Y25/78 learn relig.	0.61		
Y128 God close	0.588		
Y84 wish attend	0.551		
Y130 judgment	0.541		
Y59 commit God	0.541		
Y131 God view	0.525		
Y141 view religion	0.474		
Y59 prayer answered	0.435		
Y211 youth group	0.92		
Y212 youth group	0.908		
Y213 youth group	0.908		
Y60 attendance	0.477		
Y229 read religious			0.75
Y111 give religious			0.488
Y229 fasted			0.475
Y231 read scriptures			0.453
Y229 day of rest			0.431
Component	% Variance		
1	35.83		
2	8.92		
3	5.18		

Appendix B. NSYR Religiosity Questions

## NSYR Religiosity Questions

Y57. How important or unimportant is religious faith in shaping... A) How you live your daily life. B) Your major life decisions.

Answer choices include: Extremely important; Very important; Somewhat important; Not very important; and Not important at all.

Y59. Have you ever... B) Experienced a definite answer to prayer or specific guidance from God? D) Made a personal commitment to live your life for God?

Answer choices include: Yes; and No.

Y60B. About how often do you usually attend religious services there?

Answer choices include: Few times a year; Many times a year; Once a month; 2-3 Times a month; Once a week; and More than once a week.

Y84. If it was totally up to you, how often would you attend religious services?

Answer choices include: Never; A few times a year; Many times a year; Once a month; 2-3 Times a month; Once a week; and More than once a week.

Y84A. If it was totally up to you, would you go to the same CHURCH that you go to now, a different religious congregation, or would you not go to religious services at all?

Answer choices include: Same; Different; and Not at all.

Y111. [if teen has given away more than \$20 of their own money to an organization]

Were the organizations or causes that you gave money to religious, not religious, or both?

Answer choices include: Religious; Not religious; and Both.

Y125. Do you believe... B) In the existence of angels? E) In the possibility of divine miracles from God?

Answer choices include: Definitely; Maybe; and Not at all.

Y126. Do you believe in God, or not, or are you unsure?

Answer choices include: Yes; No; unsure.

Y128. How distant or close do you feel to God most of the time?

Answer choices include: Extremely distant; Very distant; Somewhat distant; Somewhat close; and Very close.

Y130. Do you believe that there will come a judgment day when God will reward some and punish others, or not?

Answer choices include: Yes; and No.

Y131. Which of the following views comes closest to your own view of God?

Answer choices include: Personal being involved in lives of people; Created world, but NOT involved in world; Not personal, like a cosmic life force; and NONE OF THESE VIEWS.

Y141. Which of the following statements comes closest to your own views about religion:

Answer choices include: Only one religion is true; Many religions may be true; and There is very little truth in any religion.

Y207. Are you CURRENTLY involved in ANY religious youth group?

Answer choices include: Yes; and No.

Y211. [If teen is involved in a religious youth group] About how often do you attend this youth group's meetings and events?

Answer choices include: More than once a week; About once a week; 2-3 Times a month; About once a month; A few times a year; and Almost never.

Y212. [If teen is involved in a religious youth group] For how many years have been involved in a religious youth group?

The answer is recorded verbatim.

Y229. In the last year, have you...C) Fasted or denied yourself something as a spiritual discipline. E) Tried to practice a weekly day of rest to keep the Sabbath.

Answer choices include: Yes; and No.

Y230. How often, if ever, do you pray by yourself alone?

Answer choices include: Never; Less than once a month; One to two times a month; About once a week; A few times a week; About once a day; and Many times a day.

Y231. How often, if ever, do you read from [SCRIPTURES C] to yourself alone?

Answer choices include: Never; Less than once a month; One to two times a month; About once a week; A few times a week; About once a day; and Many times a day.

Y257. How interested or not are you in learning more about your religion?

Answer choices include: Very interested; Somewhat interested; Not very interested; and Not at all interested.

Y258. [If teen doesn't think of self as part of a particular religion/denomination/church OR if teen does not identify with a religion] How interested or not are you in learning more about religion?

Answer choices include: Very interested; Somewhat interested; Not very interested; and Not at all interested.

Y273. When you are 25, do you think you will want to attend the kind of [CHURCH TYPE 1] you go to now, or a different kind of [CHURCH TYPE 1], or will you not attend a [CHURCH TYPE 1] at all?

Answer choices include: Kind of church attend now; Different kind of church; and Will not go.

Y278. .[If teen doesn't attend religious services more than twice a year or answered "refused")] When you are 25, do you think you will be attending religious services, yes, maybe, or no?

Answer choices include: Yes; Maybe; and No.

Appendix C. NSYR Religious Affiliation Question and Responses

## NSYR Religious Affiliation Question and Responses

Y60A What religion or denomination is the place where you go to religious services?

Answers were recorded verbatim and included the following: Adventist/Seventh-Day

Adventist; Anglican; Assemblies of God (Assembly of God); Baha'i; Baptist; Bible

Church/Bible Believing; Brethren; Buddhist; Catholic; Charismatic; Christian or just

Christian; Christian and Missionary Alliance (CMA); Christian Science (Christian

Scientist); Church of Christ (Churches of Christ); Church of God; Church of the

Nazarene; Calvary Chapel; Congregationalist; Disciples of Christ; Episcopalian;

Evangelical; Evangelical Covenant Church; Evangelical United Brethren; Evangelical

Free Church; Four Square; Free Methodist Church; Friends; Hindu; Holiness; Inter-

Denominational; Islamic (Islam); Jehovah's Witness; Jewish; Just Protestant; Latter-day

Saints; Lutheran; Mennonite; Methodist; Missionary Church; Mormon; Muslim;

Nazarene; Native American; Non-Denominational; Orthodox (Eastern, Greek, Russian,

ETC.); Pagan; Pentecostal; Personal Spirituality; Presbyterian; Quaker; Reformed;

Roman Catholic; Satanist; Taoist; Unitarian-Universalist; United Church of Christ

(UCC); Vague description of religion; Vineyard Fellowship; Wesleyan Church; Wiccan;

and Other.



Appendix D. Religious Denominations in Combined Religious Groups

## Religious Denominations in Combined Religious Groups

### *Conservative Protestant*

Adventist/Seventh-Day, Assembly of God, Baptist, Bible Church/Believing, Brethren, Charismatic, Christian, Christian and Missionary Alliance (CMA), Church of Christ, Church of God, Church of the Nazarene, Calvary Chapel, Evangelical, Evangelical Covenant Church, Evangelical United Brethren, Evangelical Free Church, Four Square, Free Methodist Church, Holiness, Inter-Denominational, Just Protestant, Lutheran, Mennonite, Missionary Church, Nazarene, Non-Denominational, Pentecostal, Presbyterian, Reformed, Vineyard Fellowship, Wesleyan Church, and other.

### *Mainline Protestant*

Anglican, Christian, Congregationalist, Disciples of Christ, Episcopalian, Friends, Just Protestant, Lutheran, Methodist, Presbyterian, Quaker, Reformed, United Church of Christ (UCC), and other.

### *Black Protestant*

Baptist, Christian, Church of Christ, Church of God, Episcopalian, Holiness, Methodist, Missionary Church, Non-Denominational, Pentecostal, Presbyterian, and other.

### *Other Christian*

Catholic, Christian, Christian Science, Jehovah's Witness, Lutheran, Methodist, Presbyterian, Unitarian-Universalist, and other.

Appendix E. NSYR Relationship with Parents Questions

## NSYR Relationship with Parents Questions

*Mother*

- Y1. How close or not close do you feel to your MOTHER?
- Y2. Generally, how well do you and your MOTHER get along?
- Y3. How OFTEN do you talk with your MOTHER about personal subjects, such as friendships, dating, or drinking?
- Y4. How EASY or HARD is it for you to talk with your MOTHER about personal subjects, such as friendships, dating, or drinking?
- Y5. How EASY OR HARD would it be for you to talk with your MOTHER about personal subjects, such as friendships, dating, or drinking?
- Y6. How often, if at all, does your MOTHER...? A) Praise and encourage you. B) Hug you. C. Tell you that (she loves/they love) you.
- Y9. How often, if at all, do you and your MOTHER just have fun hanging out and doing things together?

*Father*

- Y10. How close or not close do you feel to your FATHER?
- Y11. Generally, how well do you and your [FATHER NAME] get along?
- Y12. How OFTEN do you talk with your [FATHER NAME] about personal subjects, such as friendships, dating, or drinking?
- Y13. How EASY OR HARD is it for you to talk with your [FATHER NAME] about personal subjects, such as friendships, dating, or drinking?
- Y14. How EASY OR HARD would it be for you to talk with your [FATHER NAME]

about personal subjects, such as friendships, dating, or drinking?

Y15. How often, if at all, does your [FATHER...? A) Praise and encourage you. B) Hug you. C) Tell you that (he loves/they love) you.

Y18. How often, if at all, do you and your [FATHER NAME] just have fun hanging out and doing things together?

### *Parents*

Y23. In general, how much do you feel that your PARENT... A) Understand(s) you? B) Love(s) and accept(s) you for who you are? C) Pay(s) enough attention to you?

Y30. About how many NIGHTS PER WEEK do you usually eat dinner together with at least one of your parents or adult guardians?

### *Conflict*

Y157. How much, if any, conflict have you had with you [PARENT TYPE] over whether you date or who you date?

Answer choices include: A lot; Some; A little; and None.

Y158. [If teen has not dated anyone since turning 13] How much, if any, conflict have you had with your [PARENT TYPE] over whether you should date or who you might want to date?

Answer choices include: A lot; Some; A little; and None.

Y159. If your [PARENT TYPE] find(s) out you've done something wrong, how often (does he/she/do they) discipline you?

Answer choices include: Always; Usually; Sometimes; Rarely; Never; Never get caught; and Never do wrong.

Y160. How upset would your [PARENT TYPE] be if (he/she/they) found out...A) that

you were skipping school. B) that you were using illegal drugs. C) that you were having sex.

Answer choices include: Extremely upset; Very upset; Somewhat upset; Not very upset; and Not upset at all.

Appendix F. Relationship with Parents Factor Scores

Table 19

*Relationship with Parents Factor Scores*

NSYR Question	Component			
	1	2	3	4
Y3/Y12 parent talk	0.802			
Y4/5/13/14 talk ease	0.764			
Y1/10 parent close	0.643			
Y2/11 parent relate	0.579			
Y9/18 parent hang	0.513			
Y160 upset drug		0.772		
Y160 upset skip		0.719		
Y160 upset sex		0.681		
Y159 punish		0.574		
Y6/15 parent love			-0.905	
Y6/15 parent hug			-0.873	
Y6/15 parent encourage			-0.514	
Y157/158 conflict				0.778
Y23 love				0.54
Y23 understand				0.504
Y23 attention				0.468
Component	% Variance			
1	28.4			
2	11.83			
3	7.16			
4	6.95			



Appendix G. NSYR Sexual Behavior Questions

## NSYR Sexual Behavior Questions

Y99. Do you think that people should wait to have sex until they are married, or not necessarily?

Answer choices include: Yes, they should wait; and No, not necessarily wait.

Y100. Do you think it is okay for TEENAGERS to have sex if they are emotionally ready for it, or don't you?

Answer choices include: Yes; and No.

Y152. How many total different people, if any, have you been physically involved with, more than just holding hands and light kissing, since you turned 13 years old?

The answer is recorded verbatim.

Y169. Have you ever willingly touched another person's private areas or willingly been touched by another person in your private areas under your clothes, or not?

Answer choices include: Yes; and No.

Y170. Have you ever engaged in oral sex, or not?

Answer choices include: Yes; and No.

Y171. How old were you when you first had oral sex?

The answer is recorded verbatim.

Y172A1. About how many times have you ever had oral sex?

Answer choices include: Once; A few times; Several times; and Many times.

Y172A3. With how many different people have you ever had oral sex?

The answer is recorded verbatim.

Y172A. When was the last time you had oral sex?

Answer choices include: Within the last month; More than a month ago; More than 6 months ago; and More than a year ago.

Y173. Have you ever had sexual intercourse, or not?

Answer choices include: Yes; and No.

Y174. Y174-Y181: How old were you when you had sexual intercourse for the first time?

The answer is recorded verbatim.

Y177. About how many times have you ever had sexual intercourse?

Answer choices include: Once; A few times; Several times; and Many times,

Y179. With how many different people have you ever had sexual intercourse?

The answer is recorded verbatim.

Y181. When was the last time you had sexual intercourse?

Answer choices include: Within the last month; More than a month ago; More than 6 months ago; and More than a year ago.

Y183. Have you ever been pregnant?

Answer choices include: Yes; and No.

Y184. Have you ever gotten someone pregnant?

Answer choices include: Yes; and No.

Appendix H. Sexual Behavior Factor Scores

Table 20

*Sexual Behavior Factor Scores*

NSYR Question	Component		
	1	2	3
Y170 oral ever	0.971		
Y171 oral age	0.955		
Y172 oral last	0.949		
Y172 oral number	0.937		
Y172 oral partners	0.907		
Y152 date physical	0.558		
Y169 touch	0.524		
Y174 sex age		0.798	
Y173 sex ever		0.781	
Y177 sex number		0.766	
Y179 sex partners		0.763	
Y181 sex last		0.754	
Y183/184 pregnancy		0.565	
Y99 abstain 1			0.977
Y100 abstain 2			0.923
Component	% Variance		
1	62.27		
2	10.35		
3	8.98		

Appendix I. Right & Wrong Factor Scores

Table 21

*Right & Wrong Factor Scores*

NSYR Question	Component
	1
Y98 lied	0.811
Y98 secret	0.809
Y98 cheat	0.735
Question	% Variance
1	61.74
2	21.66
3	16.60

Appendix J. NSYR Right & Wrong Questions



## NSYR Right &amp; Wrong Questions

Y98. In the last year, how often, if ever, did you... A) Do things that you hoped your [PARENT TYPE] would never find out about. B) Cheat on a test, assignment, or homework in school. C) Lie to your [PARENT TYPE].

Answers include: Very often; Fairly often; Sometimes; Occasionally; Rarely; and Never.

Appendix K. NSYR Academic Achievement Questions

## NSYR Academic Achievement Questions

Y85A./ Y86A. Given realistic limitations, how far in school do you think you actually WILL go?

Answer choices include: No farther in school; Some high school (Grades 9-11); High school graduate (Grade 12 or GED); Technical or vocational school after high school; Some college or associates degree (AA), no 4-year degree; College graduate (BS, BA, or other 4-year degree); and Post-graduate training or professional schooling after college (MBA, MA, PHD, etc.).

Y85B. Ideally, how much education would you LIKE to complete?

Answer choices include: No farther in school; Some high school (Grades 9-11); High school graduate (Grade 12 or GED); Technical or vocational school after high school; Some college or associates degree (AA), no 4-year degree; College graduate (BS, BA, or other 4-year degree); and Post-graduate training or professional schooling after college (MBA, MA, PHD, etc.).

Y86B. Given realistic limitations, how much education do you think you actually WILL complete?

Answer choices include: No farther in school; Some high school (Grades 9-11); High school graduate (Grade 12 or GED); Technical or vocational school after high school; Some college or associates degree (AA), no 4-year degree; College graduate (BS, BA, or other 4-year degree); and Post-graduate training or professional schooling after college (MBA, MA, PHD, etc.).

Y91. What kind of grades (did you get in school last year/do you usually get in school)?

Answer choices include: All As; Mostly As; As and Bs; Mostly Bs; Bs and Cs; Mostly Cs; Cs and Ds; Mostly Ds; Ds and Fs; Mostly Fs; Mixed; and School does not use grades.

Y161. In the last year, how often, if at all, did you cut or skip classes at school?

Answer choices include: Never; Once or twice; 3-5 Times; and More than 5 times.

Y162. In the last TWO years, how many times, if any, have you been suspended or expelled from school?

The answer was recorded verbatim.

Y218. How important or unimportant is it to you to do really well in your school-work?

Answer choices include: Extremely important; Very important; Somewhat important; Not very important; and Not important at all.

Appendix L. Academic Achievement Factor Scores

Table 22

*Academic Achievement Factor Scores*

NSYR Question	Component	
	1	2
Y85 education goal	0.922	
Y86 education goal 2	0.901	
Y161 cut class		0.786
Y162 suspended		0.635
Y218 school importance		0.551
Y91 grades		0.486
Component	% Variance	
1	37.18	
2	19.47	

Appendix M. Conservative Protestant Subsample Correlations Between Variables

Table 23

*Conservative Protestant Subsample Correlations Between Variables*

Variable	Religiosity	Age	Gender	Ethnicity	SES
Religiosity	1	-.03	.13***	-.05	.14***
		1028	1028	1024	998
Parent relationship	.27**	-.18***	-.06	-.11***	.12***
	1028	1043	1043	1039	1001
Right & wrong	.20**	-.15***	-.00	-.04	-.00
	1027	1042	1042	1038	1001
Sexual behavior	-.23**	.39***	-.04	-.01	-.04
	1011	1028	1028	1024	986
Academic achievement	.32**	-.08***	.18***	-.10***	.24***
	1016	1032	1032	1028	992
Ideal marry age	-.05	.03	-.07*	.14***	.08*
	1009	1022	1022	1018	981
Cohabit	-.40**	.10***	-.12***	.02	-.06
	1017	1030	1030	1026	989
Divorce	-.21**	-.00	.11***	-.00	-.04
	982	997	997	994	958

\* $p < .05$ ; \*\* $p < .01$ ; \*\*\* $p < .001$ .



Appendix N. Mainline Protestant Subsample Correlations Between Variables

Table 24

*Mainline Protestant Subsample Correlations Between Variables*

Variable	Religiosity	Age	Gender	Ethnicity	SES
Religiosity	1	.03	.12*	.07	-.04
		338	338	333	324
Parent relationship	.28***	-.19***	.01	-.01	.13
	337	346	346	341	332
Right & wrong	.17**	-.16**	.10	-.05	-.00
	336	345	345	340	331
Sexual behavior	-.15**	.41***	-.08	-.03	.02
	337	345	345	340	331
Academic achievement	.25***	-.02	.19***	.02	.17**
	335	344	344	339	330
Ideal marry age	-.04	.16**	-.00	.03	.08
	331	340	340	335	329
Cohabit	-.33***	.08	-.12*	-.11	.06
	335	343	343	338	329
Divorce	-.16**	.05	.17**	-.02	.09
	322	330	330	326	318

\* $p < .05$ ; \*\* $p < .01$ ; \*\*\* $p < .001$ .

Appendix O. Black Protestant Subsample Correlations Between Variables

Table 25

*Black Protestant Subsample Correlations Between Variables*

Variable	Religiosity	Age	Gender	Ethnicity	SES
Religiosity	1	.01	-.01	.06	.11*
		392	392	392	361
Parent relationship	.25***	-.25***	-.07	.01	.13*
	389	397	397	397	367
Right & wrong	.02	-.18***	.07	-.02	-.03
	391	399	399	399	368
Sexual behavior	-.13*	.43***	-.19***	-.05	-.08
	382	390	390	390	360
Academic achievement	.24***	-.11*	.14**	.05	.16**
	388	396	396	396	365
Ideal marry age	-.03	.03	-.13**	.02	.16**
	385	391	391	391	360
Cohabit	-.16**	.14**	-.14**	-.05	.00
	379	386	386	386	355
Divorce	-.05	.11*	.10	-.00	.19***
	381	387	387	387	356

\* $p < .05$ ; \*\* $p < .01$ ; \*\*\* $p < .001$ .

Appendix P. Catholic Subsample Correlations Between Variables

Table 26

*Catholic Subsample Correlations Between Variables*

Variable	Religiosity	Age	Gender	Ethnicity	SES
Religiosity	1	.01	.11**	.05	-.02
		802	802	799	741
Parent relationship	.28***	-.22***	.00	-.10**	.13***
	802	819	819	816	757
Right & wrong	.11**	-.11**	.02	-.09*	-.06
	802	818	818	815	756
Sexual behavior	-.22***	.40***	-.13***	-.01	.02
	792	809	809	806	747
Academic achievement	.22***	-.06	.16***	-.13***	.25***
	790	807	807	804	745
Ideal marry age	.04	.01	-.01	.03	.03
	792	809	809	807	747
Cohabit	-.17***	.22***	-.12**	-.02	.06
	788	802	802	799	741
Divorce	-.10**	.10**	.13***	.04	.01
	780	795	795	792	733

\* $p < .05$ ; \*\* $p < .01$ ; \*\*\* $p < .001$ .

Appendix Q. Jewish Subsample Correlations Between Variables

Table 27

*Jewish Subsample Correlations Between Variables*

Variable	Religiosity	Age	Gender	Ethnicity	SES
Religiosity	1	-.13	.08	-.04	-.09
		112	112	111	95
Parent relationship	-.08	-.19*	.05	.03	.19
	110	112	112	111	95
Right & wrong	-.04	-.23*	.02	.01	-.07
	112	114	114	113	97
Sexual behavior	-.21*	.55***	-.09	-.04	-.04
	111	113	113	112	97
Academic achievement	-.07	-.27**	.30**	.12	.16
	112	114	114	113	97
Ideal marry age	-.16	.13	-.05	-.03	.06
	110	113	112	111	96
Cohabit	-.33***	.13	.04	-.03	.05
	108	110	110	109	93
Divorce	-.122	.30**	.22*	.11	.17
	106	108	108	107	91

\* $p < .05$ ; \*\* $p < .01$ ; \*\*\* $p < .001$ .



Appendix R. LDS Subsample Correlations Between Variables

Table 28

*LDS Subsample Correlations Between Variables*

Variable	Religiosity	Age	Gender	Ethnicity	SES
Religiosity	1	.14	.23	.16	.26*
		70	70	70	64
Parent relationship	.37**	-.10	.29*	.17	.15
	70	72	72	71	66
Right & wrong	.36**	.11	.36**	.11	-.04
	69	71	71	70	65
Sexual behavior	-.55***	.20	-.17	-.24*	-.20
	70	71	71	71	65
Academic achievement	.40**	.14	.38**	.11	.34**
	70	72	72	71	66
Ideal marry age	-.25*	.21	-.14	-.05	-.17
	69	69	69	69	63
Cohabit	-.78***	-.04	-.23	-.18	-.18
	70	72	72	71	66
Divorce	-.24*	-.01	-.25*	-.18	.15
	68	70	70	69	64

\* $p < .05$ ; \*\* $p < .01$ ; \*\*\* $p < .001$ .

Appendix S. Other Christian Subsample Correlations Between Variables

Table 29

*Other Christian Subsample Correlations Between Variables*

Variable	Religiosity	Age	Gender	Ethnicity	SES
Religiosity	1	-.12	.04	-.21*	-.00
		112	112	111	102
Parent relationship	.25**	-.28**	.00	-.14	-.00
	105	108	108	107	97
Right & wrong	.02	-.09	.09	.08	-.12
	111	115	115	114	104
Sexual behavior	-.22*	.35***	-.16	.02	-.05
	112	117	117	116	106
Academic achievement	-.08	-.21*	.22*	.08	.04
	110	115	115	114	104
Ideal marry age	-.12	.19*	-.11	-.20*	.16
	110	115	115	114	105
Cohabit	-.39***	.28**	.00	.31**	.01
	107	110	110	109	101
Divorce	-.16	.15	.18	.16	-.04
	110	114	114	113	104

\* $p < .05$ ; \*\* $p < .01$ ; \*\*\* $p < .001$ .

Appendix T. Not Religious Subsample Correlations Between Variables

Table 30

*Not Religious Subsample Correlations Between Variables*

Variable	Religiosity	Age	Gender	Ethnicity	SES
Religiosity	1	-.12*	.14**	-.37***	-.28***
		327	328	323	314
Parent relationship	.18**	-.29***	-.03	.05	.03
	326	403	404	398	383
Right & wrong	.06	-.15**	.05	-.00	-.04
	326	404	405	399	384
Sexual behavior	-.11	.48***	-.01	.09	-.03
	324	402	403	397	382
Academic achievement	.05	-.06	.19***	.04	.25***
	320	398	399	393	378
Ideal marry age	-.10	.12*	-.13**	-.12*	.05
	320	397	398	392	378
Cohabit	-.24***	.21***	.01	.16**	.16**
	323	400	401	396	380
Divorce	-.26***	.11*	.02	.11*	.11*
	315	391	392	386	386

\* $p < .05$ ; \*\* $p < .01$ ; \*\*\* $p < .001$ .

## CURRICULUM VITAE

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## EDUCATION

- Ph.D. Utah State University, Degree Seeking, Fall 2005–Present  
Dissertation Defense, 18 April 2008  
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Major: Family, Consumer, and Human Development  
Area of Interest: Adolescent Religiosity  
Graduate Chair: Thomas R. Lee, Ph.D.
- M.S. Brigham Young University, 2005  
Major: Marriage, Family and Human Development  
Area of Interest: Eating Disorders in a Family Context  
Graduate Chair: J. Kelly McCoy, Ph.D.
- B.S. Brigham Young University, 1998  
Brigham Youth University Jerusalem Center for Near East Studies, 1996  
Major: Therapeutic Recreation  
Minor: Family Science

## RESEARCH &amp; TEACHING EXPERIENCE

- Jan. 2007-  
April 2008 *Instructor*  
Family, Consumer, and Human Development  
Utah State University  
Class: FCHD 1500, Human Development through the Lifespan, (5 sections)
- Sept. 2006-  
April 2008 *Research Assistant*  
Family, Consumer, and Human Development  
Utah State University  
Project: 4-H Youth & Families with Promise  
Principle Investigator: Brian Higginbotham, Ph.D.

- Sept. 2006-  
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- Teaching Assistant*  
Family, Consumer, and Human Development  
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Class: FCHD 2400, Marriage and Family Relationships  
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- Summer  
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- Sept. 2005-  
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- Research Assistant*  
Marriage, Family and Human Development  
Brigham Young University  
Study: Eating Disorder Research  
Principle Investigators: J. Kelly McCoy, Ph.D., & Steven  
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- Feb. 2003-  
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- Research Assistant*  
Marriage, Family and Human Development  
Brigham Young University  
Study: Forever Families  
Principle Investigator: Steven Duncan, Ph.D.

#### PUBLICATIONS AND PRESENTATIONS

- Preparing for  
Submission
- MacArthur, S., Higginbotham, B., & Ho, E. The effect of non-academic mentoring on school-related cognition: A pilot study.
- Under Review
- Higginbotham, B., MacArthur, S., & Dart, P. C. (under review). Youth and families with promise: Adult engagement and the development of youth strengths.
- December 2007
- Dimick, K., Higginbotham, B., MacArthur, S., & Poulson, M. (2008). Recruiting college students to be youth mentors.



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- October 2007                      MacArthur, S., & Higginbotham, B. (2007) *Report for the Department of Education Grant: Utah County*
- November 2006                      National Council on Family Relations  
Minneapolis, MN  
Poster Presentation  
Title: 4-H Mentoring: Youth & Families with Promise  
Authors: Stacey MacArthur, M.S., Edward Ho, Ph.D., Kort Prince, Ph.D., Brian Higginbotham, Ph.D., & Thomas R. Lee, Ph.D.
- November 2006                      National Council on Family Relations  
Minneapolis, MN  
Poster  
Title: Enhancing At-Risk Youth Development Programs  
Authors: Brian Higginbotham, Ph.D., Stacey Huffaker, B.S., Victor Harris, Ph.D., Thomas Lee, Ph.D., Stacey MacArthur, M.S., & James Marshall, Ph.D.

#### PROFESSIONAL CONFERENCES

- November 2006                      National Council on Family Relations  
“Unanswered Questions in Marriage & Family”  
Minneapolis, MN
- March 2005                              Family Outreach Conference  
Brigham Young University, Provo, Utah
- April 2004                                Utah Council on Family Relations  
Utah State University, Logan, Utah
- March 2004                                Families in Poverty Conference  
Brigham Young University, Provo, Utah

#### RELEVANT WORK EXPERIENCE

- July 2004-  
Aug 2005                              Provo City 351 West Center Street Provo, UT  
Victim Assistance Aid  
Taught weekly domestic violence class, 4-12 year olds, Spanish speaking. Responsible to develop, teach, and

process age-appropriate lessons on domestic violence.

- Oct 2002-  
Feb 2003      Provo City 351 West Center Street Provo, UT  
Victim Assistance Aid  
Taught weekly domestic violence class, 5-7 year olds,  
(English). Responsible to develop, teach, and process age-  
appropriate lessons on domestic violence.
- Nov 2001-  
Oct 2003      Center for Change 1790 North State Street Orem, UT  
Therapeutic Recreation Specialist  
Responsible for planning and implementing weekend  
therapeutic recreation groups for patients with eating  
disorders. Responsible for evaluating and charting patient  
progress during groups.
- Nov 1999-  
Aug 2002      Utah State Hospital 1300 E. Center Street Provo, UT  
Therapeutic Recreation Specialist, Girls Youth Dorm  
Responsible for charting patient weekly/monthly progress  
notes on ICTP. Responsible for planning and implementing  
patient recreation therapy activities. Involved in treatment  
evaluation team. CPR and Lifeguard certified. Involved in  
Eastwood High (in hospital) education planning and  
teaching.
- Oct 1998-  
Feb 2000      Sabinsa Corporation 594 S. American Way Payson, UT  
Executive Assistant / Marketing Assistant  
Responsible for travel & seminar arrangements. Company  
representative to advertising agents. Inventory  
Receptionist.
- July 1997-  
Feb 1998      Youth Corrections 205 W. 900 N. Springville, UT  
Intern—Therapeutic Recreation  
Involved in the Explorer's program: responsibilities  
included; planning and implementing youth activities.

#### HONORS AND AWARDS

- 2008      Graduate Instructor of the Year. Family, Consumer, and  
Human Development, Utah State University.
- 2007-2008      Dissertation Fellowship. School of Graduate Studies, Utah  
State University.
- 2006-2007      Phyllis R. Snow Scholarship. Family, Consumer, and

Human Development, Utah State University.

2005-2006

Fellowship. Family, Consumer, and Human Development,  
Utah State University.

#### PROFESSIONAL QUALIFICATIONS

2003-Present

Member of National Council on Family Relations (NCFR)

May 1999-Present

Certified Therapeutic Recreation Specialist (CTRS)

November 1999-Present

Therapeutic Recreation Specialist License—Utah  
DOPL

2000–2004

Member of Utah Recreation Therapy Association  
(URTA)