DISSERTATION

EATING DISORDER BEHAVIORS, STRENGTH OF FAITH, AND VALUES IN LATE ADOLESCENTS AND EMERGING ADULTS: AN EXPLORATION OF ASSOCIATIONS

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ABSTRACT

EATING DISORDER BEHAVIORS, STRENGTH OF FAITH, AND VALUES IN LATE ADOLESCENTS AND EMERGING ADULTS: AN EXPLORATION OF ASSOCIATIONS

Adolescents entering college are often affected by eating disorders and during this transition to emerging adulthood, individuals begin to establish personal values and beliefs, which makes this population interesting when studying Eating Disorders, values, and faith. This research project seeks to examine the association among strength of religious faith, explicit and implicit value endorsements (openness, conservation, power, and benevolence), and eating disorder behaviors in adolescents and emerging adults. By exploring these factors, research may identify risk or protective factors relating to eating disorder behaviors, values, and faith.

The 99 participants (76 female) were enrolled in PSY100 at Colorado State University; they completed a survey, which included the Schwartz Values Inventory (SVI) to measure explicit values, the Santa Clara Strength of Religious Faith Questionnaire (SCSORFQ), and the Eating Attitudes Test-26 (EAT-26). Implicit Association Tests (IATs) were also administered to measure implicit values.

While no significant findings relating to the implicit data were found, a significant, negative correlation between the explicit endorsement of conformity (a sub-value of conservation) and eating disorder behaviors existed. Explicit endorsements of power or self-enhancement, as well as achievement, were positively associated with eating disorder behaviors.

A qualitative question elicited participants' reflections on specific teachings and messages about food, body, and eating. Participants identified several sources of teaching and messages about food, body, and eating; these messages fell into four categories: parents, religion, culture, and religion. Overall, participants agreed with the messages presented from these sources, with the exception of media. Participants frequently disagreed with the messages presented by media, but their responses indicated that they continue to conform to the ideals of media.

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CHAPTER ONE: INTRODUCTION

Overview

Recent literature, such as research on risk and resilience, describes participation or involvement in religious communities as a protective factor for children and adolescents who are vulnerable to many risks or challenges in life. For example, Alcorta (2006) describes religious involvement as "one factor that may enhance the ability to effectively cope with life stressors and contribute to both adolescent and adult mental and physical health" (p. 7). Participation in religious communities and endorsing religious beliefs appears to have beneficial mental health consequences in many cases, but limited research has explored the relation between these aspects of religion and specific mental health issues such as depression, suicide, and eating disorders (Alcorta). This study seeks to explore whether the strength of religious faith and endorsement of certain values serve as protective factors for eating disorder behaviors in older adolescents and emerging adults.

More specifically, while aspects of religious involvement are often examined as a tool in eating disorder recovery, little research has been conducted on the role of religion and values in preventing or encouraging eating disorder behaviors (Smith, Richards, & Maglio, 2003). By examining strength of faith and preferences toward explicit and implicit values in relation to eating disorder behaviors, this research will examine whether eating disorder behaviors are related to religious faith and specific explicit and implicit values.

Rationale

According to the National Eating Disorder Association (2005), in the United States, over 10 million females and 1 million males struggle with a diagnosable eating disorder, such as anorexia or bulimia, and millions of others struggle with another non-specified eating disorder, such as binge eating (National Eating Disorder Association). These statistics do not include the numerous people who have not reported their experiences with eating disorders or who struggle with negative body image and eating attitudes and behaviors that fall below a typical diagnosable level (NEDA). With 80-90% of women unhappy with their body size or shape, the high number of eating disorders and the increase in eating disorders is not surprising (Hutchinson, 1985).

While research indicates that incidences of eating disorders are rising, eating disorders have started to affect younger and younger children. *Newsweek* explored several cases of eating disorders and highlighted children as young as eight years old (Tyre, 2005). The article also discussed recovery among those with eating disorders noting that 50% of people who suffer from an eating disorder make a full recovery (p. 53).

Due to the many physiological complications that can result from extreme behaviors, eating disorders account for the highest rate of death (NEDA, 2005). According to Cavanaugh (1999), death rates range between 18 to 20% and for 15 to 24 year old women, anorexia causes 12 times more deaths than any other cause of death for women in this age group (p. 8).

As eating disorders begin to affect a larger span of ages, college students are often among the people most likely to develop eating disorders or disorder eating patterns.

Boyatzis and McConnell (2006) describe this phenomenon by stating "college campuses are a 'breeding ground' for poor body image and eating disorders" (p. 199).

With eating disorders becoming a more prevalent issue in our society, a need for explorations on various topics remains. Increases in eating disorders, the younger ages of eating disorder onset, and the expanding understanding of various types of eating disorders all call researchers to explore this topic more in depth, yet relatively low funding exists for research (NEDA, 2005).

While many aspects of eating disorders necessitate further exploration, this study seeks to explore specific implicit and explicit values, as well as strength of faith, as potential risk and protective factors linked to eating disorder behaviors. By examining religious faith and preferences toward specific explicit and implicit values, such as openness, conservation, benevolence, and power, this research hopes to uncover personal traits, values, or experiences that serve as buffers or catalysts in developing eating disorder behaviors.

Involvement in a religious institution or endorsement of religious beliefs or practices is usually viewed as a protective factors in risk and resilience work, but are there some areas of religion that could be detrimental to adolescents? If religious faith or personal values do influence adolescents' eating attitudes and behaviors, identification of these traits and values could be beneficial to people and institutions. Whether religious faith and values affect the development of eating disorder behaviors in positive or negative ways, though, the implications of this knowledge could influence religious education programs and give insight into the role of values passed to adolescents from family, religion, or other institutions.

Background

Cultural pressures are often blamed for causing negative body image perception or eating disorder behaviors in adolescents, but it is important to consider that many factors ranging from biological, familial, psychological and emotional pressures contribute to the onset of eating disorder behaviors. Among many factors, Esjborn-Hargens (2004) explains that perceptions and understandings of the body are culturally and religiously developed.

Religious beliefs, practices, and symbols are at the heart of many cultures throughout history (Siegel, 1995). While specific beliefs, practices, and symbols vary for different religious communities, their influence on how people perceive and interact with the world around them influences people and the values people endorse. Siegel describes religious beliefs and customs as affecting many aspects of a person's life; even control over a person's body is influenced by "religiously sanctioned morality" (p. 110).

While religious and spiritual traditions are often rooted in rich history, in the context of current cultural trends, some of the esteemed religious characteristics or traits parallel several of the characteristics that are seen in people with eating disorders. For example, fasting may be viewed as a religious or spiritual practice of control over the body to focus on the sacred; for people with anorexia, though, this practice of bodily control can be taken to extremes and lead to self starvation. Much research exists demonstrating the usefulness of drawing on an individual's spirituality or religiosity in the treatment of an eating disorder, but more recent studies are beginning to explore a possible correlation between religion and patterns of disordered eating.

Eating disorders often plague adolescents, and research indicates that eating disorders are beginning in children younger than previously identified. Developmentally, adolescents are forming their identity based on the various influences around them. Peer groups, familial pressures, media images and messages, and religious institutions are among a few key influences in their lives.

This research project seeks to examine the relation among strength of religious faith, certain explicit and implicit values, and eating attitudes and experiences in older adolescents and young adults. During adolescence and young adulthood, individuals transitioning into college are often affected by eating disorders, which makes this population of particular interest. In the transition from adolescence to young adulthood, individuals are also beginning to establish personal values and religious beliefs.

To explore these questions, college students will be asked to respond to survey questions containing demographic information and measures to evaluate values, eating disorder behaviors, and strength of religious faith. Students will also be asked to complete two Implicit Association Tests (IATs) to analyze implicit values around power/benevolence and openness/conservatism. This information will help identify whether strength of religiosity or endorsement of certain values, which may be contained within or encouraged by certain belief systems, are correlated with higher or lower eating disorder behaviors.

Research Questions

This study has the following research questions concerning religious faith, values, and eating disorder behaviors. What is the association between adolescents/young adults strength of religious faith and eating disorder behaviors? What is the association between

preferences toward openness or conservation values and eating disorder behaviors? What is the association between preferences toward power and benevolence values and eating disorder behaviors? How do participants perceive the messages they were taught about food, eating, and body image?

Delimitations

While the span of years defined as adolescence varies among scholars, this study will focus on late adolescents; this developmental time has also been referred to as emerging adulthood or young adulthood by some researchers. Because this study examines freshmen and sophomore college students from Colorado State University, the generalizability of the research will be limited. Not only will the late adolescents/young adults studied fall between 18 and 20 years old, but due to their status as college students enrolled at Colorado State University in an introductory Psychology course, they will have other unique characteristics that other later adolescents/young adults may not have.

The participants are all volunteers who have chosen to participate in this specific study based on a brief description and a certain amount of course credit that they will be awarded. As students in an introductory Psychology course, the participants must complete six hours of participation in research projects, and this study will be one research opportunity the students may select for course credit. People attracted to this topic could differ from others, and students interested in fulfilling one of six research credits needed may also differ from the general population. While there are clearly many limits on the generalizability of this study, the research should offer insights into possible relationships among adolescents' religious faith, their values, and eating disorder behaviors.

Definitions

Adolescents and Emerging Adults

Scholars vary greatly on the span of time considered as adolescence. Some suggest this time period in a person's life can begin as early as 11 or 12 and extend into a person's 30s. Arnett (2000) suggested a new stage of development exists between what was traditionally called adolescence and the stage of young adulthood. With the changes in society and the increased time between 18 to 29 individuals use for self exploration and education, rather than marrying in the early 20's as before, Arnett suggested that this is a period of emerging adulthood.

For the purposes of this research, the participants involved were freshmen and sophomores in college, which encompasses the transition between adolescence and emerging adulthood. While adolescence begins earlier as people are entering their teen years, studying this population of older adolescents/emerging adults provided greater insight into more established constructs, such as values, faith development, and eating disorder behaviors.

Eating Disorder behaviors:

Certain behaviors and attitudes about food indicate a person's tendency toward eating disorders. For example, the Eating Attitudes Test (EAT) measures overestimation of body size, bulimia or food preoccupation, and oral control factors as primary attitudes representative of eating disorder behaviors (Garner, et al., 1982). If a participant displays strong attitudes or frequent behaviors in these areas, he or she will be classified as having eating disorder behaviors.

The strength or frequency of thoughts and behaviors will be determined by using the EAT-26, which is a series of 26 questions relating to food, thought patterns, and behaviors concerning eating, purging, and limiting caloric intake. When the test is scored, responses with a score of 20 or higher have eating disorder behaviors (Garner, et al., 1982). Total scores for this measure can range from 0 to 78.

Strength of faith

Strength of faith is determined by the importance religious involvement and personal faith practices hold in an individual's daily life. It will be determined by the Santa Clara Strength of Faith Questionnaire. The measure involves 10 questions that are rated from strongly disagree (1) to strongly agree (4). The responses to the ten questions will be totaled and scores should fall in a range from 10 to 40; higher scores indicate greater strength of faith (Freiheit, S.R, Sonstegard, K, Schmitt, A., & Vye, C., 2006).

Schwartz Values Inventory

To measure the explicit values of interest in this study, the Schwartz Value Inventory (SVI) will be administered to participants. According to Schwartz, "values are concepts or beliefs, pertain to desirable end states or behaviors, transcend specific situations, guide selection or evaluation of behavior and events, and are ordered by relative importance" (Schwartz, 1992, p. 5).

The Schwartz Value Inventory contains ten subcategories of values (power, achievement, hedonism, stimulation, self-direction, universalism, benevolence, tradition, conformity, and security) that can be grouped into four primary categories of values (self-enhancement/power, self-transcendence/benevolence, openness, and conservation) (Schmitt, M.J. Schwartz, S. Steyer, R. & Schmitt, T., 1993).

Self-Enhancement (Power)

Based on Schwartz's model, the overarching value of self-enhancement, which is similar to the implicit value of power measured in the IATs, combines the values of power, achievement, and hedonism. Individuals endorsing self-enhancement as a value place a greater emphasis on the self, such as personal accomplishment, pleasure, and importance over others (Schwartz, 1992).

Self-Transcendence (Benevolence)

Self-transcendence, which parallels benevolence in the exploration of implicit values, draws on the values of universalism and benevolence. Individuals endorsing self-transcendence as a value display greater concern for others' enhancement and less need for selfish pursuits (Schwartz, 1992).

Openness

People who are driven by an openness to change and are interested in seeking pleasure typically endorse the value of openness, which combines hedonism, stimulation, and self-direction (Schwartz, 1992).

Conservation

Individuals endorsing conservation as a value prefer tradition, conformity, and security. These individuals' desire to maintain order and harmony in life and social settings, and they often display "self-restraint and submission" (Schwartz, 1992, p. 15).

Implicit Association Test:

Openness/Conservation and Power/Benevolence

Many measures examine explicit attitudes concerning topics, such as eating attitudes and religious faith, where respondents are asked to provide an evaluation of how

much they agree with statements. Implicit Association Tests (IATs), on the other hand, measure implicit attitudes. Respondents do not directly express their feelings, attitudes, or evaluations of a topic, but their attitudes concerning a topic will be determined based on their timed reactions to a concept and how they relate it to a specific attribute.

Openness and conservation will be measured by Implicit Association Tests (IATs) that participants will respond to on the computer. As words appear on the computer screen, participants categorize several words (stimulation, tradition, me, them, etc.) according to their concept or attribute (openness, conservation, self, others). Participants who tend toward openness are open to new ideas, enjoy stimulation, and move out of their comfort zone. Those who prefer conservatism adhere to traditions, rules, and established norms more readily.

Similarly, preferences toward power and benevolence will be measured by the Implicit Association Tests. Participants will be asked to categorize words, such as dominance, wealth, tolerance, wisdom, self, and they. Participants with tendencies toward benevolence display a greater concern for others' well-being, whereas those who prefer power tend to be more concerned with personal achievement and desires.

Researcher's Perspective

I have spent many years working in churches and working with adolescents. Due to my experiences with various religious teachings, I am sure I have biases related to religious teachings and values. Through my involvement in religious settings, I began questioning whether all the teachings and values presented to strengthen faith were healthy in other areas of life, such as individual's perceptions of body image.

While I tend to agree that religious involvement serves as a protective factor in adolescents who may be vulnerable for many risks, such as delinquency, drug use, or early sexual activity, I recognize that some of the teaching presented in religious settings may not be healthy for some adolescents. Religious institutions often present strict guidelines, idealistic goals, and encourage conforming to a specific standard of perfection. For adolescents willing to accept some of these ideals, it seems possible that striving for thinness may be a manner of responding to strict ideals and a desire to appear perfect. It is also possible that religious institutions provide adolescents with a positive peer group and supportive adults who may serve as a buffer toward eating disorders and other destructive behaviors.

While I have concerns about the greater implications of some teachings and behaviors encouraged in religious settings, I see great positive value for adolescents involved in religious communities. Therefore, I am questioning whether religious faith and some of the related values stand as protective factors for adolescents as the risk and resilience research suggests, or if it is possible that religious faith or involvement in religious communities can have negative developmental influences, specifically relating to eating disorder behaviors.

CHAPTER TWO: LITERATURE REVIEW
Eating Disorder Behaviors, Values, and Religious Faith

Risk, Resilience, Adolescents, and Eating Disorders

Adolescence is a time of great growth, change, and adjustment as youth continue to develop new knowledge, experiences, and perspectives on the world and themselves. While it is common to begin exploring the intellectual or cognitive development of adolescents, human development needs to focus on caring for the whole person. As Gardner (2000) explained, "youths develop intellectually, morally, socially, emotionally, and civically" (p. 101), which only begins to address the many areas of development affecting adolescents.

Not only does a comprehensive view of development have value when approaching a topic, but it is also important to recognize that all development does not occur within a single uniform context. Gardner (2000) explained that "in most traditional cultures, parents, older peers, and religious institutions act as educational agents" (p. 101). Experiences at home, work, with peers, in youth programs, through extracurricular activities, and at school all shape an adolescent's future. How adolescents interact with their multiple contexts is vital in considering their development and well-being currently and in the future. To ensure that adolescents are being nurtured or are receiving the necessary support to thrive, it is beneficial to consider the multiple aspects of adolescent well-being and development.

In *The Disciplined Mind*, Gardner (2000) explained, “certain rewards, punishments, and institutions can be evoked as models, motivators, or menaces” (p. 101). It may be particularly interesting to examine how a specific organization, such as a religious institution, may serve as a model, motivator, or menace for adolescents and young adults. Religious involvement is generally viewed as a positive experience for youth, and many researchers suggest that religiosity may serve to protect youth from many of the negative outcomes common to adolescents. Yet, are there times when religion does not protect youth? For certain youth, could particular forms or presentations of religion be actually harmful?

Gardner (2000) suggested that curriculum “should seek to elucidate current cultural conceptions of the true, beautiful, and the good” (p. 57). For churches or religious institutions so rooted in history and traditions, are religious educators or leaders considering the impact of the current culture on the faithful people of today? Taking time to consider the current cultural conceptions of truth, beauty, and goodness in opposition to the concepts that churches present, which are often rooted in biblical times, could expose an interesting disconnect that religious institutions should examine as these institutions continue to preach concepts of truth from cultural concepts over 2000 years old.

Timpson and Bendel-Simso (1996) noted that research suggests there has been “a disturbing loss of resilience among girls and young women when they enter puberty and face a primarily patriarchal world” (p. 9). While this loss of resilience often places adolescent girls at risk for a variety of negative developmental outcomes, a particular area of growing concern for adolescents involves outcomes related to perfectionism in girls.

Adolescent girls are increasingly exhibiting perfectionist characteristics, and these girls are at greater risk for depression, anxiety, eating disorders, and other related outcomes (Weiss, 1994).

Late Adolescents/Emerging Adults

Late adolescence and emerging adulthood remain times of great social, emotional, and physical development. Because of the transitional nature of this time period, college students, primarily in late adolescence or emerging adulthood, are of particular interest for studying personal values, religiosity, and eating disorder behaviors.

Socially, late adolescents are negotiating between familial values instilled throughout formative childhood years and exposure to values as wider social interactions occur through peer groups and new life experiences. During this time, many adolescents and emerging adults remain in Kohlberg's Conventional Level of Moral Development (Muuss, 1996). Children conform to the social norms and values of those around them, and they retain these socially determined morals into adolescence and often adulthood (Muuss). As adolescents enter college, social groups and norms may change, which can increase exposure to new ideas, social norms, and values. As adolescence is prolonged and young adulthood is delayed for some populations, Arnett describes this transitional period of development between 18 and 25 years old as emerging adulthood (Arnett, 2000).

As Erikson described, adolescents are caught in a process of identity formation where they struggle between past interpretations of self and developing understandings of who they are (Fowler, 1981). In this time of identity formation, adolescents and emerging adults are reassessing many facets of who they are and what they believe

(Arnett, 2000). Over time, the formation of an identity results largely from interactions with family, other important adults, and peers (Muuss, 1996). The research presented in *Soul Searching* highlights the integral role parents and other adults have in aiding the religious or moral development of adolescents (Smith & Denton, 2005).

Similarly, during their transitions, adolescents' faith "must synthesize values and information; it must provide a basis for identity and outlook" (Fowler, 1981, p. 172). With new exposure to new perspectives, Fowler describes adolescents and young adults as undergoing a time of "critical reflection" as they consider the beliefs and values instilled throughout childhood, how they developed their beliefs and values and how they are changing (p. 173).

Explorations of religion's role in later adulthood have received more attention than the influence of religion in young adulthood (Levenson, Aldwin, & D'Mello, 2005). As adolescence is a time of great developmental changes and maturation, examining spirituality after adolescence in emerging adulthood would seem to provide a rich depiction of this pivotal time. One key transition occurring during emerging adulthood is the passing down of religious beliefs and values as many young adults begin raising their own children (Levenson, Aldwin, & D'Mello).

Because late adolescents and emerging adults are experiencing a multitude of complex internal transitions, they are in an intriguing period for examining their values and faith, but they are also experiencing external transitions. New social settings and pressures may affect their self-perceptions. For example, college students are often more acutely aware of weight and dieting behaviors. Delinsky and Wilson's (2007) research indicates that eating disorder symptoms increase during the freshman year of college (p.

82). The research highlights the increased risks for developing an eating disorder that occurs in late adolescence, particularly relating to the adjustment of beginning college. Internal pressure to avoid the "Freshman 15" causes some late adolescents preoccupied with weight concerns to avoid this feared trend by developing rigid dieting or exercise behaviors (Delinsky and Wilson).

Eating Disorders and Adolescents

What are eating disorders?

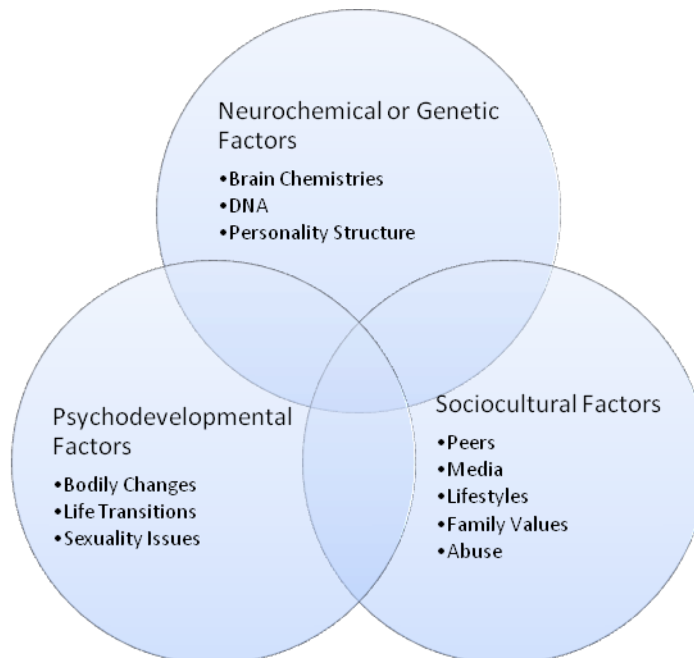
While identification of specific eating disorders becomes difficult as definitions overlap and are not strictly defined, anorexia nervosa and bulimia nervosa remain the two primary categories in eating disorder diagnoses (Palmer, 2003). The most common symptom of anorexia nervosa is lower than normal body weight, which the DSM-IV describes as 15% below normal body weight (Herzog & Delinsky, 2001). Restrictive eating behaviors, fear of gaining weight, denial of low body weight, and amenorrhea are also indications of anorexia nervosa. Bulimia nervosa generally consists of binge eating behaviors, which is often followed by purging, such as vomiting, use of laxatives or other drugs, or excessive exercise (Herzog & Delinsky). Anorexia nervosa and bulimia nervosa can occur as individual disorders, or they can occur in conjunction with each other in some people.

In addition to anorexia nervosa and bulimia nervosa, other forms of eating disorders are recognized. Adaptation of the DSM-IV provide for identification of binge eating disorders and eating disorder not otherwise specified (EDNOS). These classifications provide a diagnostic label for people who display atypical forms of

anorexia or bulimia but demonstrate many common traits of eating disorders (Herzog & Delinsky, 2001).

Causes of Eating Disorders?

Researchers have identified a variety of factors relating to the onset of eating disorder behaviors ranging from biological to psychological to social triggers. Palmer describes eating disorders as motivated "by religious ideas, ideas of fitness, ideas of ascetisim, and so on" (2003, p. 5). Natenshon (1999) categorizes eating disorders as being caused by three overarching categories: psyhodevelopmental, sociocultural, and neurochemical or genetic factors. The following Venn diagram depicts Natenshon's understanding of eating disorder causes:



This comprehensive presentation takes into account the multi-dimensional and complex network of factors contributing to eating disorders; other researchers may present the causes in different manners, but Natenshon's represents well the

understanding that eating disorders are not simply causes by one factor, such as parenting.

While many other factors influence disordered eating behaviors, examination of values and religious influences affecting susceptibility to eating disorders focuses primarily on social factors. Values are transmitted through social relationships, such as familial ties, peer groups, or other influential organizations. Similarly, cultural and religious messages are embedded in social communities and beliefs. Values and ideals are passed on through these social networks throughout the lifespan on an individual.

Developmental Perspectives

When studying any aspect of adolescence, it is important to consider the current developmental levels of adolescents, as well as how past and present experiences, contexts, and influences affect the development of individuals. For example, Bronfrenbrenner proposed an ecological perspective on development that suggests in the interaction between a person and his or her context, development occurs (Muuss, 1996). Naturally, adolescents interact within a variety of contexts, such as in the family, at school, through extra-curricular activities, and in religious communities.

While biological or neurological factors aid in cognitive development, Piaget also developed a constructionist perspective for development where children's contexts, experiences, and interactions with the world around them affected development (Muuss, 1996). Children's active involvement in experiences is essential in helping create new knowledge, add on to existing knowledge, and adapt current knowledge as it is clarified over time through interactions with the growing world around them (Muuss).

In adolescence, Piaget suggests that people reach a formal operational stage of development. During this time, adolescents begin to develop the ability to reason, think abstractly, and understand ambiguity. Because individuals develop at different rates, adolescents' cognitive abilities and levels of comprehension may vary greatly. Some adolescents may understand abstract concepts, such as God existing in a spiritual presence rather than in a physical reality; whereas other adolescents may still maintain a concrete understanding of the world around them.

Not only does an adolescent's cognitive development affect his or her understanding of religious messages, but moral development is also a related factor in adolescents' comprehension of teachings. Kohlberg, recognizing the connection between cognitive development and a person's ability to make moral judgments, builds upon Piaget's perspective of development. According to Kohlberg, adolescents are generally at a conventional level of moral development where predefined social norms or rules are accepted and followed in order to receive approval from others. Many adolescents conform to the understandings and norms of those around them when drawing on matters of belief systems or understandings of right and wrong (Muuss, 1996).

William Perry (1968) also presents a scheme of development for late adolescents, or emerging adults, that suggests college-aged students progress through nine positions of moral and intellectual development during this time. Perry's research indicates that college students begin in a state of dualism, where they view truth in terms of right and wrong based on what authority believe. As they begin to recognize that authorities provide multiple answers and conflicting ideas, students begin to choose which authorities to follow. Students adapt to the diversity of ideas and truths presented as they

move into a state of relativity, where they realize they must form personal opinions, understandings, and ideas of truth. Finally, students develop firm commitments to their own beliefs and understandings of multiple issues.

If adolescents are highly susceptible to accepting the beliefs around them, they are likely to readily believe in religious teachings presented to them. This presents a challenge, though, for some adolescents when religious teachings are not intended to be interpreted at a concrete level, but rather require abstract thinking skills to be properly understood. Because of the willingness of adolescents to accept established beliefs and their inability to properly cognitively understand these beliefs, they may begin to develop a faulty theological understanding.

Recognizing the cognitive abilities and moral development of adolescents gives insight into how individuals may interpret the messages presented to them at church, such as "you are created in the image of God" or "your body is a temple" or "be perfect like your Father in Heaven." Many adolescents may not be developmentally able to understand the figurative meaning in these statements leaving them to interpret these messages in a highly tangible way. "If I fall short of perfection, am I no longer a child of God?" "If I am created in the image of God, should I not be able to maintain a perfect physical appearance, in addition to being flawless inside?" "If I am not an example of physical and mental perfection, am I not created in God's image and am I therefore a sinful creation?" "If my body truly is a temple where the Spirit of God dwells, how can I maintain the perfect body to glorify God?" While these thoughts flow from the scriptural teachings many adolescents receive in church, they are not reflecting the ability to gain the abstract and figurative meanings intended from these scriptures.

Following Kohlberg's work on moral development, Fowler created a pattern of faith formation that took into account both theological and psychological viewpoints. Similar to Kohlberg's work, Fowler depicted adolescents as relying on the beliefs of those around them to form their own understanding of faith. As adolescents achieve more advanced cognitive abilities, they are able to begin fusing the belief systems they have encountered with emerging concepts of their personal faith. Just as adolescents undergo a time of identity formation, it is also suggested that they undergo a time of "religious or spiritual identity crisis" (Muuss, 1996, p. 272). During this time, adolescents move beyond the questions of "Who am I?" to "'Who is God?'; 'Who am I in relationship to God?'; 'Does God know me?'; 'Does God watch me?'; 'Does God love me?'; 'Does God care about me as a unique individual?'" (p. 273). While churches readily tell children that they are loved and unique individuals, are they helping adolescents answer these questions in a manner that will spur development and help adolescents develop a personalized faith, or are adolescents encouraged to remain static in their developmental levels by simply believing the teachings around them without questioning?

Because adolescents' "faith develops in relationship to others," the level of faith development that families, peers, and churches expose adolescents to is pivotal in spurring youth on to further levels of faith development (Muuss, 1996, p. 274). Religious institutions and instilled cultural values have the ability to influence an adolescent's current and future concepts of self, which can impact how adolescents interact with other contexts, experiences, and ideas in the world around them.

Biopsychosocial Model

Adolescence and young adulthood are characterized by a variety of transitions that affect the development of individuals. In considering adolescents and young adults' health and well-being, Williams, Holmbeck, and Greenley (2002) propose a biopsychosocial model of development. Biological changes, such as puberty, psychological factors, such as cognitive development, and negotiating new social expectation influence adolescents' developmental outcomes. While Williams and colleagues identify developmental outcomes, such as achievement, autonomy, identity, intimacy, psychosocial adjustment, and sexuality resulting from the biopsychosocial changes occurring during the transitions of adolescence, other outcomes identified by developmental theorists overlap and add to this perspective.

Erikson's psychosexual model of development emphasized identity and intimacy in development. Erikson primarily describes adolescents as caught in a process of identity formation where they struggle between past interpretations of self and developing understandings of who they are (Fowler, 1981). According to Erikson (1968), it is not until adolescence that individuals have reached "the prerequisites in physiological growth, mental maturation, and social responsibility to experience and pass through the crisis of identity" (p. 91).

In this time of identity formation, adolescents and young adults are reassessing many facets of who they are and what they believe. Even though identity issues are most prominent during adolescence, this identity conflict continues through development, particularly during young adulthood as individuals are confronted with new experiences and social interactions, such as in college, with new jobs, and in a family (Muuss, 1996).

As young adults continue the struggle to establish an identity, those continuing in a healthy developmental pattern enter into the conflict between intimacy and isolation. In order to truly experience intimacy in any type of friendship, relationship or professional setting, young adults must have a grounding in their own identity development (Erikson, 1968).

Nasser and Katzman (2003) describe disordered eating patterns, such as self-starvation, as an attempt for women to gain "a sense of power to develop an identity," especially when these women lack control in other aspects of their lives (p. 143). As Erikson suggests, adolescents are seeking opportunities for identity formation, and when healthy pathways to establish an identity are not available, adolescents may turn to unhealthy or destructive behaviors, such as eating disorders.

Not only does the biopsychosocial model of development relate to other developmental theories, but theories on the onset of eating disorders also parallel a biopsychosocial model. Explorations of eating disorders often focus on the psychological or social factors contributing to the onset, but research supports a multifaceted perspective of eating disorder causes (Becker, Keel, Anderson-Fye, & Thomas, 2004). Biological or genetic factors, sociocultural factors, and psychological factors interact to create unique conditions that lead to greater risks for eating disorder behaviors (Anorexia Nervosa and Related Eating Disorders, Inc.).

Eating disorders, like other psychological disorders, often reoccur within a family. While this may suggest a biological or genetic link to eating disorders, it is difficult to separate the social or environmental factors occurring within families that may also lead to the onset of eating disorders (Becker, Keel, Anderson-Fye, & Thomas, 2004). Genetic

research on eating disorders continues, yet conclusive evidence for a molecular-genetic cause of eating disorders has not been established. As researchers begin to acknowledge the multi-faceted and interrelated nature of eating disorder causes, research is beginning to explore genetic and sociocultural factors in an analogous manner (Becker, Keel, Anderson-Fye, & Thomas).

In addition to considering a biopsychosocial model and accompanying development theories, when examining values and eating disorder behaviors, a sociocultural perspective is also necessary. Developmental outcomes are rooted in the sociocultural factors and experiences of individuals; for example, characteristics of the community, work, family, and peer groups affect development in positive and negative manners (Taylor & Repetti, 1997).

Sociocultural Contributions

Bronfenbrenner proposed an ecological perspective that suggests that development occurs in the interaction between a person and his or her context (Muuss, 1996). Naturally, adolescents interact within a variety of contexts, such as in the family, at school, through extra-curricular activities, and in religious communities.

As one of the influential contexts within which adolescents engage, religious institutions have the ability to shape adolescents' development in positive and negative ways. While focusing specifically on the context and experiences from involvement in religious communities, other contexts and interactions also occur affecting how an adolescent interprets and internalizes messages from religious institutions. In addition to Bronfenbrenner's microsystems, such as schools, families, and churches, exosystems and macrosystems present contextual influences on adolescents (Muuss, 1996, p. 314). These

contexts in which adolescents come into contact with and interact within often reinforce expectations concerning academic abilities, gender expectations, ideal body images, and other societal norms. How the messages presented by religious institutions support or conflict with the experiences and messages adolescents' gain through interactions with other contexts affects developmental understandings and outcomes.

Research exploring risk and protective factors in development often draw on Bronfenbrenner's work. Resilience, an individual's ability to maintain a healthy developmental pattern despite the influence of risks, may be attributed to "individual factors, environmental factors, or the interplay of the two" (Compas, 2004, p. 266). Bronfenbrenner's ecological perspective is at the core of this description of risk and resilience as it highlights the impact of the interaction between a person and his or her environment on developmental outcomes. Specifically, Compas attributes "broad social contextual processes and individual psychological and biological processes" as contributing to risk and resilience in development (p. 263), which also corresponds to the biopsychosocial model of development.

Just as Bronfenbrenner's model suggests, the contextual or social factors influencing risk and resilience occur on a variety of levels, beginning with immediate familial contexts and expanding to include the greater community (Sameroff, Bartko, Baldwin, A., Baldwin, C., & Seifer, 1996). The developmental assets model of risk and resilience emphasizes the role of sociocultural and community influences on a person's development (Leffert, Benson, Scales, Sharma, Drake, & Blyth, 1998).

The effect of sociocultural norms on adolescent girls' development of eating disorders is one area that has received greater examination. Media, as an important and

highly visible part of many societies, has been blamed for encouraging unrealistic expectations regarding normal or healthy body images. In a study exploring the relationship between sociocultural norms and women's self worth, researchers determined that "sociocultural norms for appearance have a significant impact on women's dissatisfaction with their bodies" and their self-worth (Strahan, Lafrance, Wilson, Ethier, Spencer, & Zanna, 2008, p. 292).

When considering sociocultural influences on eating disorders, media receives much of the attention, but many other sociocultural factors also affect individuals. Familial contexts, peer influences, gender, and broader cultural norms influence adolescents' perspectives on their body.

Becker and colleagues identify social transitions, such as immigration, upward mobility, or sociocultural change" as a risk factor for eating disorders (Becker, Keel, Anderson-Fye, & Thomas, 2004, p.85). Ideals of a Westernized society, cultures praising thinness, peer groups encouraging dieting or restrictive behaviors, and social pressures from specific extra-curricular or professional groups also influence the development of disordered eating behaviors. Studies often use social comparison theory to explain reactions to these sociocultural influences that cause eating disorders in some individuals (Becker, Keel, Anderson-Fye, & Thomas).

In examining self-worth in relation to sociocultural norms, moral virtue was one construct that researchers considered an aspect of self worth potentially affected by sociocultural norms (Strahan, et al., 2008). Similar to the consideration of the influence of sociocultural norms on moral virtue, the exploration of values and religious faith as sociocultural factors may be fruitful. Values and religious faith are conveyed through

families, peers, and institutions that adolescents are in close contact with, and these ideals are transmitted in particular contexts embedded in the sociocultural norms.

As sociocultural contexts dictate particular messages about values and religious faith, these values and religious messages may encourage adolescents to develop particular concepts or understandings of themselves. Sociocultural pressure is not only passed on through media messages, but family, peers, influential organizations, and societal norms all influence the development of disordered eating patterns (Stice, 2001).

Eating disorders can only be viewed as a personal problem or individual disease to a certain extent; "research confirms that our culture is very much an influence" in perceptions of the body and development of an eating disorder (Martin, 2007, p. 3). While culture entails a messy conglomeration of media messages, political thoughts, family values, educational practices, and religious beliefs, this paper will specifically explore questions related to the affect of values and religious faith on late adolescents relating to engagement in disordered eating habits. Would the endorsement of certain values or strength of religious faith aid adolescents in developing healthy eating patterns or could certain values and religious faith unintentionally promote eating disorder behaviors leading to negative outcomes for them?

Risk, Resilience and Religion

What is Risk and Resilience?

As stated previously, Compas (2004) suggests that "resilience does not merely imply a personality trait or an attribute of the individual; rather it is intended to reflect a process of positive adaptation in the presence of risk that may be the result of individual factors, environmental factors, or the interplay of the two" (p. 266). Similarly, resilience

has been viewed as a process of positive adaptation that occurs when a person is exposed to various risks (Luthar, Cicchetti, & Becker, 2000) or the ability to achieve positive developmental outcomes in the presence of risks (Masten, 2001). These perspectives of resilience emphasize the interaction between a person and his or her environment as a primary consideration in influencing developmental outcomes.

Accounting for contextual factors in risk and resilience includes the potential effects of family, school, neighborhood, peer, media influences, and other community affiliations in both positive and negative developmental outcomes of young adults. Consideration of the individual differences in the risk and resilience model that account for the various levels of biological, cognitive, moral, emotional, and behavioral development also need recognition.

While researchers link processes of risk and resilience during adolescence to both contextual and individual factors (Compas, 2004; Masten, 2001), Compas acknowledges that "the multiple levels of context are further complicated by levels of individual functioning, including cognitive, affective, and behavioral responses to stress or efforts to cope with stress" (p. 288). Compas continues by explaining that adolescents are also affected by their biological development. It makes sense to look at the individual and contextual factors that aid in the positive development of adolescents and to consider what factors create developmental challenges. Due to the great number of variables that affect adolescent and young adult development, it seems like an enormous task to consider all the possible factors affecting development and how they interact to produce specific developmental outcomes, yet these multiple facets of development need consideration.

For example, the asset development model identifies 40 external and internal characteristics that have been identified as contributing to positive developmental outcomes (Leffert, Benson, Scales, Sharma, Drake, & Blyth, 1998). In the context of risk and resilience research, the developmental assets identified serve as protective factors as they contribute to positive development and are often found in resilient individuals. Kaplan (1999) describes protective factors as "individual or environmental characteristics that reflect the absence of risk factors or the presence of ameliorative factors and as variables that mitigate the effects of risk factors or strengthen ameliorative effects" (p. 46).

Conversely, vulnerability factors are characteristics that place an individual at greater risk for negative developmental outcomes; vulnerable individuals have greater "psychosocial proneness" to risks (Kaplan, 1999, p. 37-38). Social, psychological, and biological processes have been identified as characteristics in exploring risk and resilience in development (Compas, 2004). Following this understanding of risk and resilience, risk factors are those characteristics that increase the likelihood of negative developmental outcomes for an individual.

While much of the risk and resilience literature focuses on children and adolescents, the implications of this research can be seen in young adults' development. Because risk and resilience research takes into account social, psychological, and biological traits of a person, many of these traits contributing to outcomes in young adulthood are rooted in infancy, childhood, or adolescence (Compas, 2004). In exploring factors and processes of risk and resilience in young adults, it is necessary to consider the complete developmental span of a person from childhood to adolescence into adulthood.

The goal of ensuring healthy development in adolescents is to produce "competent adults and productive citizens," so assessing the risk and protective factors of adolescents may be helpful in exploring young adult development (Masten & Coatsworth, 1998, p. 205). For example, "developing competence in the workplace during adolescence is one signal of the emerging transition to adult roles" (p. 211). Adolescents with positive work experiences develop the skills and confidence necessary to succeed as young adults.

Risk, Resilience, Religion

In recent years, an increase in the study of adolescence, particularly relating to the mental health and well-being of adolescents, has occurred. Research often examines factors that serve as buffers or catalysts to certain types of negative or positive outcomes. Research concerning the role of religiosity in adolescent mental health often concludes that religion serves as a protective factor aiding in positive developmental outcomes. In a recent systematic review of research on the relationship between adolescents' religiosity/spirituality and their health attitudes/behaviors, Wong, et al. (2006) found that "the vast majority of studies (90%) reported positive findings in the relationships between adolescent religiosity/spirituality and mental health measures," which indicated that religion or spirituality served as a protective factor from mental health problems for adolescents (p. 176). Sullivan (2004), in her research, also found that adolescents involved in religious activities were less likely to have mental illness symptoms.

The developmental assets approach to risk and resilience in development highlights key characteristics that "enhance health and well-being" throughout development (Leffert, Benson, Scales, Sharma, Drake, & Blyth, 1998, p. 209). In

identifying characteristics that may aid in positive development, researchers focus on personal characteristics of an individual and environmental characteristics, or internal and external characteristics.

Some of the developmental assets identified as leading to positive developmental outcomes are related to spirituality. Even though spirituality is not directly identified as an asset in development, many qualities of spirituality are categorized as internal assets, such as having a sense of purpose in life, maintaining a positive view of the future, preserving an overall positive identity and positive values (Leffert, Benson, Scales, Sharma, Drake, & Blyth, 1998). As an external trait, involvement in youth programs or religious communities is also identified as an asset in positive development. Through exposure to certain environmental factors, such as programs or communities encouraging spiritual development, spirituality may be encouraged.

Research conducted by Resnick and colleagues indicated that for "nearly 88% of the population who reported having a religion, the perceived importance of religion and prayer was protective" (1997, p. 831). The participants who described religion and prayer as a protective utilized all substances, such as drugs, less than others in the population, and these participants also delayed the onset of their first sexual debut compared to peers. While prayer and other religious practices may be viewed as spiritual practices, it is not clear in this study if religious involvement served as a protective factor due to participation in these practices, due to involvement in a religious community, or due to a combination of these factors.

Other research indicates a reduction in involvement in criminal activity for individuals committed to religious beliefs and practices (Levenson, Aldwin, D'Mello,

2005). Resnick et al. (1997) described the results of their study as consistent with other studies that find religion and spirituality functioning as protective factors. Drawing upon other research, Resnick et al. also suggested that religiosity may serve as a protective factor against emotional distress.

In addition to serving as a protective factor against risky behaviors, spirituality has also been identified as beneficial in preventing emotional, psychological, and other medical concerns. Carmody and researchers (2008) studied the role of mindfulness and spirituality in well-being, and it found that psychological distress and medical symptoms were reduced for individuals with increased mindfulness and spirituality. While mindfulness is a practice rooted in Buddhist tradition, it is often linked to increases in spirituality (Carmody).

Spirituality has been linked to positive outcomes in many areas of young adults' lives, such as in better mental and physical health and decreased involvement in delinquency, risky sexual activity, experimentation with illegal substances, and other harmful behaviors. Smith (2005) identified some underlying reasons why increased spirituality may protect individuals from negative developmental outcomes. Spiritual experiences help young adults "solidify their moral commitments and constructive life practices" (p. 242). Through spiritual experiences, young people are developing a personal sense of identity and moral order, which is a positive step in healthy development.

Young adults with greater religiosity or spirituality also have the opportunity to develop more effective coping skills (Smith & Denton, 2005). As young adults encounter stressful situations, they are equipped with coping skills to help them negotiate

situations in healthy ways. The ability to cope with stressful life events in a positive manner has been identified as a primary component of resilience (Compass, 2004, p. 275-76).

While much research indicates that religiosity buffers adolescents from a variety of negative outcomes, some research also presents the potential harmful effects of religion in adolescent mental well-being. While Ellis (1986) examines more extreme religious groups, such as highly dogmatic religions, through his experience in psychotherapy and research in psychological diagnosis and treatment, he suggests that religious involvement can negatively affect a person's mental and emotional well-being. Possibly the type of religiosity presented by different institutions may account for whether religion serves as a protective factor or risk factor for certain adolescents.

Perkins, Luster, and Jank (2002) analyzed data collected by the Search Institute between 1990 and 1995. Self-report survey were administered to 254,634 students, ages 11 to 19, in a classroom setting. Perkins et al.'s analysis of this data points to types of religious motivations as a factor in determining whether religiosity serves as a protective factor or risk factor. The positive effects of religion may be most apparent "when the measure of religiosity captures the adolescents' religious convictions and spiritual beliefs rather than their attendance at religious function" (p. 394).

Baetz and colleagues' (2006) utilized a cross sectional survey with 37,000 Canadian adolescents, ages 15 years and older, to examine psychiatric disorders, worship frequency, and spiritual values. According to their research, spiritual values were related to increases in psychiatric disorders. Specifically, depression, mania, and social phobia were found in greater prevalence in participants with greater levels of spiritual values.

Other research also suggests negative developmental outcomes related to certain forms of religious teachings or spiritual practices. Levenson and researchers (2005) describe the negative impact of "putatively religious motivation of considerable destructive behavior by young adults" (p. 156). While not all religious or spiritual groups encourage self-destructive behaviors or harmful actions toward others, fundamentalists groups promoting these behaviors may also be creating other psychologically negative or detrimental impacts on people.

While the research emphasizing the risk factors resulting from increased spirituality is limited, it is also important to acknowledge that all the health benefits related to spirituality may not be directly caused by increased spirituality. Smith (2005) suggests that some personality types, such as "risk-averse, conventionalist, conformist, clean-living, and joiners," may also be more attracted to religious or spiritual practices (p. 235). The positive health outcomes related to greater spirituality may also be linked to certain personality types. Yet, Smith does not believe personality types can be used to fully explain the relationship between religion and positive outcomes.

Many factors throughout development influence young adults' spirituality and their physical, psychological, and emotional well-being. Research does not provide a clear indication on whether religiosity and spirituality consistently serve as a risk or protective factor, but the significant role that religion and spirituality plays in adolescent and young adult development is accepted (Levenson, Aldwin, D'Mello, 2005).

History of Food, Body, and Religion
And Current Messages about Food and Body

Religious Teachings

The relationship of religion and spirituality to food and body perceptions has existed throughout time. Means of spiritual control and religious dedication, such as meditation and fasting are commended and reserved for the most devoted. Many religious rites include food as the main element in worship, praise, or celebration; the Seder meal is shared during Passover in the Jewish tradition, churches partake in the Lord's Supper in Christianity, and in the Hindu tradition, prasada is offered to the deity before being given to worshipers. Possibly due to food's importance in sustaining life, it has penetrated the deepest religious rituals, and food is even manipulated or withheld as a sign of devotion, such as in fasting and sacrificial practices.

Although these religious and spiritual traditions are rooted in a rich history, in the context of current cultural trends, some of these esteemed religious characteristics or traits parallel many of the characteristics that are seen in people with eating disorders. Much research exists demonstrating the usefulness of drawing on an individual's spirituality or religiosity in the treatment of an eating disorder, but more recent studies are beginning to explore a possible correlation between an individual's participation or devotion to a religious group and patterns of disordered eating.

With the large emphasis on food throughout the Bible, such as God providing manna in the desert, the Passover meal, Jesus' miracles of feeding the multitudes, and the Last Supper, it is not a surprise that many churches place a high emphasis on food during fellowship times, in social gatherings, and in other ministries. Because food has been a prized fellowship tool and an important aspect of worship throughout time, it is

appropriate to also approach the topic of food in present times. Food is a necessary part of maintaining life on earth, which becomes most evident in ministries focusing on providing food for holiday baskets, soup kitchens, or people in less developed countries.

Paul even addressed the topic of eating in his letters to early Christian communities when people expressed concerns about food cleanliness and rituals, but the Scriptures are set in a very different context than present times. In Biblical times, food was used in different ways and prized body images took different forms than now. In the culture and society that many churches in middle class America are set, food is available in an overabundance. The combination of society's abundance of food, wasteful tendencies, and the influence of the media's unrealistic presentation of ideal body images, presents a difficult dissonance for young people to overcome as they attempt to grow into their bodies with positive self-perceptions. While perfectionism and eating disorders are personal characteristics of an individual, "our notions about the body are also religiously and culturally informed," which makes the exploration of the current cultural and religious teachings important for analyzing what messages vulnerable adolescents are receiving (Esbjorn-Hargens, 2004, p. 404).

Christian doctrines and beliefs may rattle around adolescents on Sunday mornings and possibly during youth activities scattered throughout the week, but are religious teachings actually helping individuals combat the negative pressure of society to conform to an ideal body image, especially when they maintain perfectionist tendencies making them susceptible to eating disorders? Or, are religious communities unintentionally presenting some of the traits adolescents with eating disorder display?

For example, religious communities are often thought of as emphasizing inflexible ideals, routines in religious rites, and self-control through fasting, temperate behaviors, and ascetic self-denial. These traits may be virtuous in the proper understandings, but “patients with anorexia nervosa can be characterized by their rigidity, rhythmicity and control” (Steiner, et al., 2003, p. 40), which are also common traits in perfectionists.

The onset of eating disorders in adolescence has been attributed to internal psychological attributes, social pressures, and biological traits. Recently research has also indicated that adolescents most vulnerable to eating disorders are those adolescents who are “typically overwhelmed by familial and social pressures” (Giordano, 2003, p. 221). Adolescents identify that they develop disordered eating habits as a way of coping and gaining control when overwhelmed by external pressures. These pressures can be attributed to many areas of adolescent involvement, such as academic pressure, familial pressure, athletic pressure, religious pressure, and a general drive toward perfection in all areas of life.

Churches set out with the best intentions of helping families raise their children in the religious traditions they hold as true, but children can view this as an additional pressure amidst the many challenges of childhood and adolescence. Naturally, churches range from authoritarian to lenient in their teachings; they also vary in desired levels of involvement from individuals, and there is diversity in the amount of pressure to conform to their specific ways of believing. Not all churches place the same emphasis on regulation and dogmatic understandings of faith, but some churches express their devotion to their way of believing through strict control in passing down religious beliefs

to children. Tactics of educating children in Christian values in highly authoritarian churches may add unhealthy pressure on adolescents and may teach through implicit and explicit messages that control and rigidity are cherished traits.

Eating disorders and unhealthy body image perceptions can be a result of deeply rooted issues in a person's life, such as abuse, depression, anxiety, and other disorders. Yet, in looking at the basic level of disordered eating and distorted body images, many theological issues arise that clash with what the current society and culture present as truth, beauty, and good.

From the first chapter of Genesis, the Scriptures remind the reader that people are created in God's image,[1] but what is an adolescent who does not love the image she sees of herself supposed to think when she is told she is the image of God? Some Christian communities are able to acknowledge that people are not necessarily created in the physical image of God, because "God is invisible spirit;" it is actually the spirit of life God breathed into the first human that provides humanity with a spirit or soul that fully places people in God's image (Yancey & Brand, 2004, p. 238). When talking about the image of God, though, this is a hard leap in understanding for many adolescents to make when they are situated in a highly physical reality and in a culture that prizes physical beauty.

Just after readers learn that people are created in God's image, Adam and Eve are introduced as part of God's perfect creation. Yet, as the story unfolds, Adam and Eve struggle with restrictive eating, avoiding their own "forbidden food," and bodily awareness that leads to covering up their natural beauty. Initially, when Adam and Eve were presented in the Garden of Eden, they were not ashamed, they understood their

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[1] Genesis 1:27

physicality did not encompass what made them human; they were not their bodies but existed in their bodily vessels. After the realization of the knowledge of good and evil that came from eating the apple, they lost sight of themselves as perfect humanity and sought out flaws in their physicality, their body image. Similarly, people with eating disorders often lose sight of what truly makes them unique and wonderful creations as they become more consumed with perfecting their bodily vessels to the point of harm.

Along with the new distrust and disdain for their bodily appearance that came through Adam and Eve's gained knowledge of good and evil, humanity began to experience the power of their bodies in attracting partners and lust for others. Humanity still battles with the conflicting messages of the body as a sinful creation tied to lust and impurity and the body as a wonderful, live giving creation. At a time of developing self understanding and self exploration, these conflicting messages about the body can be confusing to adolescents and emerging adults.

In considering the messages passed down to children and adolescents by religious institutions, it is important to consider the level of cognitive and moral or faith development of the youth. Milevsky and Levitt (2004) commented that "the examination of religious variables with this transitional population is particularly important because of the cognitive capacity to consider and incorporate a religious belief system emerges at this time" (p. 309). According to Fowler (1995), adolescents generally maintain a synthetic-conventional faith, which still seeks the beliefs of others in developing their personal concepts of faith. In order to correctly comprehend many religious concepts, adolescents also need to have reached a level of cognitive development that supports abstract thinking and reasoning.

Children are taught from their early Sunday School years that God loves each of God's children, and they are to love their neighbors as they love themselves, but what happens when adolescents cannot love themselves? Christians believe they are called to be good stewards of God's creation, but how can a person care for her body as God's good creation and a gift from God when she does not love her body, when society prizes a thinner body, when a body feel more like an awkward shell than her own skin?

Theological presentations challenge understandings of the relationship between the body and faithfulness. Commonly religious groups remind people "that your body is a temple."[2] The purpose of this text was to address bodily lust, yet it is often used to emphasize the importance for Christians to take great care of their bodies. While the text is actually reminding people that their bodies are gifts from God, and that they have a responsibility to care for their bodies, this religious teaching may unintentionally be encouraging a perfectionist mindset in how adolescents care for their bodies.

The teaching also calls for a dualistic understanding of how the body and mind or spirit and flesh relate. The body is a gift from God where the Spirit dwells, therefore the utmost respect should be used in caring for the body. Yet if our physical bodies are not our own, can we truly exist only within our minds or spirits? This detachment of the body and mind, which was a common practice among early mystics, does not always present a healthy or integrated self-concept for many adolescents.

For adolescents already struggling with eating disorders or distorted body image perceptions, this call to perfectionism may seem impossible if they are not able to view

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[2] 1 Corinthians 6:19-20: "Do you not know that your body is a temple of the Holy Spirit, who is in you, whom you have received from God? You are not your own; you were bought at a price. Therefore honor God with your body.

their bodies as perfect or whole or worthy of love and nourishment. Sadly, this verse was not intended to draw attention to the negative desires of the body and bodily imperfection, but the scripture is a reminder that even in the sinful state of humanity, people are still called to be God's good creation, and people are to celebrate this fact by caring for creation.

The Hebraic tradition, the root of Christianity, may provide a healthier understanding of the body and spirit; Jewish spirituality does not acknowledge a dualism between spirit and flesh. The Hebraic language does not offer separate words for body and soul; rather a person is one whole being (Bringle, 1992). Despite these positive theological roots of Christianity concerning the body, perceptions of a dualistic existence have crept into common Christian theologies of humanity. Whether this dualism began when God, the living Spirit, came to earth in the flesh of Jesus Christ, or whether the Gnostic understandings of dualism first impacted Christian thinking, or whether over centuries other cultural ideals influenced Christian theology is not clear, but throughout history, this dualistic relationship between the flesh and the spirit, the body and the mind has developed.

Some of the first Christian women to struggle with a drive toward perfectionism by attempting to master the needs and desires of the flesh to enrich or nourish the soul were the mystics, martyrs, and medieval ascetics. It was not uncommon for martyrs to starve themselves in an attempt to make a point (Martin, 2007), and for the sake of deep spiritual devotion or asceticism, women would deprive themselves of food, water, and other bodily necessities (Bringle, 1992). Catherine of Siena, one of the medieval ascetics labeled as a "holy anorexic" maintained a "rigorous program of self-denial, restricting her

diet to raw vegetables, bread, and water" (p. 79). Eventually she restricted her intake to simply chewing on bitter herbs, which she would never swallow, and water; this act of spirituality led to the deterioration of her bodily existence.

While Catherine of Siena and others have been revered for their deep devotion to God, it seems unlikely that the Church or even the God of all Creation would ordain that people engage in self-starvation or deprivation techniques. Many of the theological misconceptions received from teachings may be a societal skewing of scripture truths, yet teachings about the body, the flesh, and holiness or perfectionism remain to be the messages that many adolescents are receiving.

At a time when many adolescents need to be learning to love themselves and their bodies, they develop an understanding of the body as a sinful creation. When Adam and Eve developed an awareness of their bodies, they were shameful and distrustful of their newly discovered physicality. Physical beauty, bodily attractiveness, which present culture prizes, is viewed as an object of lust in many religions, used to lure partners. The body is depicted as a device to manipulate and expose a forbidden sexuality, preventing or distracting people from truly seeking out genuine love by presenting bodily temptation, treating a person as an object to be sought, prized, or coveted rather than cherished for true beauty. The miracle of the physical body and the purity and beauty of true humanity is overlooked when adolescents receive teachings emphasizing the dangerous, distrustful, lustful side of the body.

Instead of seeking for the image of God within each person, society and external pressures are dictating what image adolescents should crave. Are religious institutions helping adolescents discover the image of God within themselves, are churches helping

adolescents embrace the beauty found in the uniqueness of each individual creation? Or, do religious organizations encourage a spirit of conforming, control, and extreme temperance? Are these theological messages healthy, positive influences in adolescents' lives, or are they presenting added challenges to healthy development?

Existing Research on Eating Disorders, Religion, and Values

Adolescents, Eating Disorders, Religion

Common traits between religiosity and eating disorders can be identified, but research is beginning to explore whether an empirical relationship actually does exist between religion and eating disturbances. For example, using the Eating Attitudes Test (EAT), the Body Shape Questionnaire (BSQ) and the Religious Orientation Scale (ROS), extrinsic and intrinsic religious orientations can be examined according to Eating Attitudes. In using these measurements, Smith, Richards, and Maglio (2003) found that an extrinsic orientation to religion was significantly associated with a diagnosis of bulimia nervosa at a medium correlation. These results indicate that the manner in which people assimilate or personalize their religious beliefs can be related to eating behaviors. Smith, Richards, and Maglio (2003) summarize this trend by stating that "women who are involved in religion for extrinsic reasons (for personal and social gains and acceptance) tend to have more eating disorder symptoms" (p. 9). Due to the emphasis placed on fasting, asceticism, and control, research also suggests that anorexics may use religion as justification for their extreme self-restrictive behaviors (p. 9), which encourages the exploration in this research to determine if intrinsic religiosity is related to eating behaviors and attitudes in adolescents.

Individuals with anorexia nervosa often engage in a cognitive process referred to as thought-shape fusion (TSF). Similar to thought-action fusion (TAF) found in many people with Obsessive Compulsive Disorder, Radomsky, Silva, Todd, Treasure, and Murphy (2002) explain that "TSF occurs when thinking about eating certain types of food increases a person's estimate of their shape and/or weight, elicits perceptions of

moral wrongdoing, and/or makes the person feel fat" (p. 1169). For an adolescent with an obedient or dogmatic understanding of religion, finding moral wrongdoing in even thinking of the wrong foods can be highly detrimental to eating patterns. While this study highlighted the relationship between anorexia and TSF, the acknowledgement that morality is a component of anorexia nervosa strengthens the need to examine forms of religiosity encouraged through church involvement in relation to eating disorders.

While the limited research examining the relation between religiosity and eating disturbances have indicated that this is a fruitful area for future research, Smith, Richards, and Maglio's (2003) research with college students indicates that people with an intrinsic orientation to their religious views are less likely to suffer from eating disorders, which "suggests that devout, mature religious involvement does not necessarily contribute to eating disorder symptoms" (p. 9). On the surface, this research may be comforting to religious communities who are producing mature followers, but it is unlikely that most adolescents are at a level of development that would fully permit them to be considered mature in their religious commitments. While this is valuable research, it still leads to questioning if some forms of religious orientation promote characteristics or traits that make adolescents more vulnerable to eating disorders.

CHAPTER THREE: METHOD

Human development encompasses a variety of developmental changes ranging from the biological, neurological, and cognitive to the social, emotional, and behavioral. Exploration of developmental science is a "holistic enterprise" that must consider multiple facets of the development (Yoshikawa, Kalil, Weisner, & Way, 2008, p. 344). Because adolescence is often a time of heightened developmental changes, using a mixed method approach for research is most fitting to fully explore adolescents' beliefs and experiences. Yoshikawa and colleagues suggest that the world is depicted in both numbers and words; therefore, qualitative research and quantitative research, or words and numbers, should both be used as credible research tools in developmental sciences.

Methodological Overview

To explore specific explicit values endorsed by participants, their strength of religious faith, and eating disorders behaviors, surveys were used to provide a quantified understanding of these constructs. Implicit values endorsed by participants were determined by Implicit Association Tests administered on a computer. While this data may be useful in looking at relations between eating disorders and the other constructs, a richer understanding of participants' experiences was sought through the inclusion of an open-ended question concerning memories and experiences related to the topic. With respect to the dynamic nature of human development, it was most appropriate to approach this research in a holistic manner that considered what both the numerical data collected and the personal expressions of participants contributed as well as the interplay of these two perspectives.

The personal nature of eating disorders, religious beliefs, and values presented challenges to researching these topics. Individuals with eating disorders often attempt to hide their thoughts or behaviors concerning food, which provided difficulties for research (van Hoeken, Seidell, & Hoek, 2003). In order to elicit honest responses from participants about the sensitive topics being studied, surveys and computer-based responses were used. Participants did not reveal any personal information concerning eating disorders, religious beliefs, or values to the researcher.

To administer the surveys and Implicit Association Tests, the researcher met individually with participants in a quiet office. In order to reduce reactive measurement effects, the researcher waited outside the office while participants completed each portion of the research. Even though this reduced their sense of being observed, reactive measurement effects may have existed still as the participants met in an unfamiliar office with an unknown researcher (Singleton & Straits, 2005). Participants may have provided responses that they perceived as desirable rather than their true perceptions.

Participants

Students enrolled in General Psychology (PSY 100) at Colorado State University were required to participate in research studies as part of their course work. All students were directed to the CSU Psychology Department's website by their professors, and through this website, all Psychology 100 students were invited to participate in this study. Students received all the necessary information about participation in the study from the website, and they were able to sign-up for specific time slots if they wished to participate. A variety of day and evening times were available to accommodate students' schedules and to allow any interested students opportunities to participate.

All participants were enrolled in General Psychology at Colorado State University. Because the participants were from an introductory psychology course, it was thought that most participants would be freshman or sophomores in college and between the ages of 18 to 20, but participants were not excluded from the study if they were older or younger.

Measures

To evaluate strength of religious faith, explicit values, implicit values, and eating disorder behaviors, the following instruments were used.

Eating Attitudes Test- 26 (EAT-26)

While many measures have been created to test for disordered eating patterns, the Eating Attitudes Test (EAT) has been widely used in a variety of clinical and non-clinical settings (Engelsen & Hagtvet, 1999). The EAT-26 is a self-report measure consisting of 26 questions, and the authors of the study established a score of 20 or higher as representing a pattern of disordered eating. Participants rate 26 questions relating to food, thought patterns, and behaviors concerning eating, purging, and limiting caloric intake using a 6-point Lickert scale.

While the complete version of the EAT (40 questions) contains seven factors of eating attitudes and eating behaviors (food preoccupation, body image for thinness, vomiting and laxative abuse, dieting, slow eating, clandestine eating, and perceived social pressures to gain weight), the EAT-26 contains three primary factors (over-estimators of size, bulimia/food preoccupation, and oral control) (Engelsen, et al., 1999; Garner, D. M., et al., 1982).

According to Garner, et al. (1982), the original 40 questions EAT and the EAT-26 were highly correlated (r = .98). The EAT-26 had "similar significant relationships with body image variables and HSCL (Hopkins Symptom Checklist)" (p. 876). Pyschometric tests of 162 women between the ages of 16 to 35 years found the reliability analysis of the EAT-26 had a Cronbach alpha of 0.85 (Siervo, M., Boshi, V., Papa, A., Bellini, O. & Falconi, C., 2005). In further studies, Yoon (2008) found in a study of 422 college women that 5 deviant items existed in the EAT-26, which when removed, the alpha levels were between .89 and .93. In this study, 78.8% of non-treated women and 80% of women who have received treatment were correctly identified. Because the EAT-26 provides a reliable measure for eating disorder behaviors while requiring less time to administer, the EAT-26 was used in this study. The alpha reliability of EAT-26 in this sample was .891, with a Mean of 7.93 and Standard Deviation of 9.06.

Santa Clara Strength of Religious Faith Questionnaire (SCSORF)

The Santa Clara Strength of Religious Faith Questionnaire contains 10 statements concerning the importance of religious involvement and personal faith practices in an individual's life. Participants were asked to respond to the statements based on their level of agreement by rating responses on a scale of strongly disagree to strongly agree (1 to 4). The responses to the 10 statements were totaled and totals fell in a range between 10 and 40. The lower totals represented lower levels of religious faith, and the higher totals of responses indicated a greater strength of religious faith.

In Freiheit, et al.'s (2006) psychometric evaluation, research suggested that the SCSORF was strongly related to spirituality, religious behavior, and religious coping. In testing the reliability and validity of the SCSORF, 124 participants responded to five

different measures about religious faith, religious behavior, religious coping, and positive and negative effect. As a measure examining religious faith, results of Freiheit, et al.'s research indicated that the SCSORF is a valid and reliable measure. Plante, Vallaeys, Sherman, and Wallston (2002) reported high internal reliability with Cronbach alpha of .95. Several correlations support the reliability of the SCSORF; the SCSORF is significantly correlated with intrinsic religiousness measured with the Age Universal Religious Orientation Scale and with external and internal dimensions with the Religious Life Inventory (Plante, et. al., 1999). Significant correlations between the SCSORF and the AUROS (measuring intrinsic and extrinsic religiosity), the DRI (religious involvement), and the IRMS (religious motivation) also existed (Plante, et. al., 2002). The alpha reliability of SCSORF in this sample was .972, with a Mean of 24.91 and Standard Deviation of 9.60.

Schwartz Value Inventory (SVI)

Explicit values were measured using the Schwartz Value Inventory (SVI), which identifies 10 value preferences, including power, achievement, hedonism, stimulation, self-direction, universalism, benevolence, tradition, conformity, and security. The 10 values were categorized into two overarching groups of values: openness (stimulation, self-direction) versus conservation (tradition, conformity, security) and self-transcendence or benevolence (universalism, benevolence) versus self-enhancement or power (power, achievement) (Schmitt, M.J, Schwartz, S., Steyer, R., Schmitt, T., 1993, p. 108).

In the SVI, participants were asked to rank the preferences toward 45 value comparisons. The following is an example of a value comparison participants responded to:

Dutiful Achievement ☐-3 ☐-2 ☐-1 ☐0 ☐1 ☐2 ☐3

Participants valuing dutifulness as *much more important* than achievement would choose –3 as their response. Similarly, if participants value achievement as *much more important* than dutifulness, they marked 3 as their response. If a participant identified a value as *more important*, -2 or 2 would be the appropriate response, and –1 and 1 indicated that a value is *slightly more important*. Finally, if both values were equally important or unimportant, 0 would be the appropriate response.

The validity and reliability of the SVI has been well-established. The reliability of most of the scales on the SVI range between .80 and .90 (Schmitt, M.J., Schwartz, S., Steyer, R., Schmitt, T., 1993). Hedonism is the only value that falls below this range with a reliability of .70. The scales also display strong consistency with the consistency ranging from .60 to .73 for all the values except self-direction. The reliability scores for the SVI in this study also displayed acceptable reliability with the Chronbach's alpha scores for the four primary values, conservation (.76), openness (.56), self-enhancement/power (.64), and self-transcendence/benevolence (.64).

Previous research examining aspects of eating disorder behaviors and values have used the SVI and EAT as primary measurements (Antoniazzi, Zivian, & Hynie, 2005). While Antoniazzi and colleagues' research explored how eating disorder behaviors and values affected decision making in a given scenario, the use of the EAT and SVI to

explore both eating disorder behaviors and values has been used as an effective measure with college students.

Implicit Association Test (IAT): Openness and Conservation

The other measures used in this study examined explicit attitudes concerning topics, such as eating attitudes and religious faith, where respondents were asked to provide an evaluation of how much they agreed with statements. Implicit Association Tests (IATs), on the other hand, measured implicit attitudes. Respondents did not directly express their feelings, attitudes, or evaluations of a topic, but their attitudes concerning a topic were determined based on their reactions to a concept and how they related it to a specific attribute.

When the participants were ready to begin the IATs, the research entered the participant's identification number into the computer program and started the IAT. A screen with information concerning the IAT, instructions, and how to begin when the participant is ready appeared. In the two IATs examining implicit values, participants categorized several words (stimulation, tradition, dominance, tolerance, me, them, etc.) according to their concept or attribute (openness, conservation, power, benevolence, self, others). As words appeared on the computer screen, participants were asked to categorize them as quickly as possible by touching the assigned keys on either the right or left side of the keyboard to indicate if they associated the word with the concepts listed on corresponding sides of the screen. The delay in response time was the variable of interest in studying the implicit values of the participants. Each IAT contained 5-7 blocks of associating the presented words with the concepts listed on the right or left side

of the screen. Some of the blocks were practice and some were tested sessions used for the study's results.

While IATs are a fairly new measure in the field of psychology, in a methodological review seven years after their creation, researchers suggested "the IAT is showing rapid growth in maturity with a solid base of evidence for its internal, construct, and predictive validity" (Nosek, B.A., Greenwald, A.G., & Banaji, M.R., in press, p. 27). Nosek and colleagues reported that "internal consistency estimates (split-half correlations or alphas) for the IAT measures tend to range from .7 to .9" (p. 13). In this study, IATs were used to evaluate how participants react to the concepts of openness and conservation when using the attributes relating to self and others.

IATs have been created to measure implicit attitudes towards a variety of topics; convergent validity of the measure is usually established by comparing the results to responses from other measures (Greenwald, McGhee, & Schwartz, 1998). To determine the validity of the IATs evaluating preferences towards openness/conservation and power/benevolence, correlations with the explicit attitudes determined through the SVI may be determined. While correlations provide the best possible confirmation of validity, because IATs measure implicit cognitions on a topic, they may reveal associations or implicit preferences that participants explicitly avoid or deny when presenting beliefs or attitudes (Nosek, B.A. et al., in press). Therefore, correlations of implicit and explicit values may not reveal a comprehensive perspective of the validity of the IATs, although some research has found "strong evidence for convergent and discriminant validity" when IATs and corresponding self-reported measures are related (Nosek, B.A. et al., in press, p. 17).

Qualitative Question: Open-Ended Responses

While the survey questions and IATs provided different types of evidence concerning participants' attitudes about eating, religious faith, and values, including a qualitative component allowed more descriptive responses concerning experiences, memories, and attitudes. Because participants could find it difficult to honestly share thoughts, attitudes, and experiences concerning religious faith, values, and eating with an unfamiliar researcher, participants were asked to respond to the following open-ended question at the end of the survey: "Messages concerning food, eating, and body image are often taught through religious settings or through values that people are taught. Please describe any teachings or messages about food, eating, or body image that you received. What was the message or teaching? Where did you receive this message or who taught you this? How has this teaching effected your actions or attitudes about food, eating, or body image? Do you agree or disagree with this teaching or message today?"

Procedure

Students enrolled in General Psychology at Colorado State University were required to participate in research studies for partial course work credit. Professors of General Psychology provided students with a website containing brief information about several research studies from which students could choose to participate for credit. Through this website, students registered for an hour time slot to participate in this study. Even though students received credit for participation, involvement is voluntary and participants could stop their participation in research at any time without penalty.

Each participant received a cover letter containing an explanation of the research project before their participation began. Participants were assigned an identification

number that was recorded on the IATs and surveys so the researcher could link the IAT results to the survey responses. A list of participant names and identification numbers was not kept, so all results remained confidential without the ability to trace responses to specific individuals.

Participants met individually with a researcher in a quiet, comfortable office, and they were asked to complete a survey containing questions related to demographic information, values, meaning in life, eating attitudes, religious faith, self-transcendence, and values. The survey required approximately 30 minutes to complete. As described previously, participants also completed two IATs in the office to evaluate preferences toward openness or conservation and benevolence or power on the computer. Administration of the survey and IATs was counterbalanced or rotated to ensure that the order of the measures does not influence responses.

Treatment of the Data

After gathering the data, the data was input into SPSS by participants' identification numbers, and the EAT-26, SCSORF, and SVI were scored individually. The computer automatically stored the results for the IATs, and each participant's responses were linked with his or her identification number. The IAT results were transferred to SPSS for analysis and comparison to the survey results.

The IAT scores indicated whether participants implicitly endorsed openness or conservation and power or benevolence. Responses for the SVI were recoded and it was determined whether participants explicitly preferred openness or conservation and self-enhancement (power) or self-transcendence (benevolence).

To provide basic descriptive information of the sample, the demographic information provided by participants was used to analyze descriptive statistics concerning age, identification of religious institution, and amount of time spent in formal and informal religious practices.

Analysis

The research questions expressed an interest in determining relationships among the variables, so the study is associational in nature. In order to find the relationship between adolescents' strength of religious faith, values, and eating disorder behaviors, correlations between eating disorder behaviors as determined by the EAT-26 and strength of faith (SCSORF) and explicit (SVI) and implicit (IATs) values were determined.

Research question 1: What is the association between adolescents/emerging adults strength of religious faith to eating disorder behaviors?

Correlation between the original scores for the SCSORF and EAT-26 were established to determine if a relationship between strength of faith and eating disorder behaviors existed. While some research outlined in the literature review suggested a link between eating disorders and religiosity, particularly highly dogmatic teachings, most previous studies exploring religion suggested that religiosity is a protective factor against negative developmental outcomes, such as eating disorders.

Research question 2: What is the association between preferences toward openness or conservation values and eating disorder behaviors?

Correlations between the EAT-26 responses and the SVI's re-coded responses indicating preferences toward openness or conservation were determined. Similarly, EAT-26 responses were correlated with the IAT responses for openness or conservation.

In a study also using the Schwartz Values Survey and the EAT, Antoniazzi, Zivian, and Hynie (2005) determined that participants with clinical level EAT scores had higher endorsements of conformity and tradition, which are sub-values of conservation, which suggests a possible association between conservation and eating disorder behaviors.

Research question 3: What is the association between preferences toward power and benevolence values and eating disorder behaviors?

Correlations between the EAT-26 responses and the SVI's re-coded responses indicating preferences toward self-enhancement, or power, and self-transcendence, or benevolence, will be determined. Similarly, EAT-26 responses will be correlated with the IAT responses for power and benevolence. In Antoniazzi et al.'s (2005) study of values and eating disorders, values associated with power, such as hedonism, pleasure, and self-indulgence, were associated with higher EAT scores within the non-clinical range; the researchers suggest that these participants stay below the clinical level for eating disorders due to their motivation to seek enjoyment or pleasure in life.

A study using the Three Factor Eating Questionnaire (TFEQ) found self-transcendence (referred to as benevolence in the SVI) to be associated with the TFEQ, which suggests that a positive correlation between the EAT and benevolence may occur (Gendell, K., Joyce, P., Sullivan, P., & Bulik, C., 1997).

Research Question 4:

How do participants perceive the messages they were taught about food, eating, and body image?

While completing the survey portion of their research involvement, participants responded to open-ended questions: "Messages concerning food, eating, and body image

are often taught through religious settings or through values that people are taught. Please describe any teachings or messages about food, eating, or body image that you received. What was the message or teaching? Where did you receive this message or who taught you this? How has this teaching affected your actions or attitudes about food, eating, or body image? Do you agree or disagree with this teaching or message today?" The responses to these questions were coded in order to explore further relationships between values, faith, and eating disorder behaviors. While the quantitative data analysis provided one perspective of these relationships, analysis of the qualitative portion of the survey contributed supplemental, descriptive information.

After collecting the data, the participants' responses were compiled and typed into one document. Participants' responses were labeled by their identification number. In order to further explore the relationships between values, faith, and eating disorder behaviors, broad, initial coding categories were established. Throughout the coding process, these coding categories were expanded and adapted in order to best represent the experiences, beliefs, values, and attitudes of participants. Final coding categories identified the messages participants received about food, eating, and their body, who the messages were taught by, how the messages have affected the participants, and whether participants agree with these messages.

Additional Explorations

While not the focus of this research, further comparative analysis of the data could be conducted to explore the differences between participants with eating disorder behaviors and those without eating disorder behaviors. The EAT-26 recommended using a score of 20 or higher as a clinical indication of eating disorder behaviors, so the EAT-

26 could be analyzed to determine if participants demonstrated eating disorder behaviors or not. Using two groups of participants, those demonstrating eating disorder behaviors and those who do not, t-tests could be used to find differences among those with eating disorder behaviors and those without disordered eating behaviors and strength of religious faith, which was measured using the SCSORF. Similarly, the difference among those eating disorder behaviors and those without disordered eating could be found in relation to the endorsement of openness or conservation and power or benevolence using t-tests. Using three EAT-26 subgroups (below clinical low EAT, below clinical high EAT, clinical level and above EAT scores), ANOVAs could also provide further analysis of the data in exploring differences between EAT subgroups relating to values and strength of faith.

CHAPTER 4: RESULTS AND FINDINGS

The following chapter includes descriptive statistics, quantitative data analysis in response to the first three research questions, and qualitative analysis addressing the fourth research question. Upon collection of the data, all the quantitative data was input into SPSS, and all analysis was performed on this program.

For the EAT-26, the final question needed to be reversed and then the sum of the 26 questions provided a total EAT-26 scores. The final EAT-26 score was found for each participant and was used in responding to the research questions concerning eating disorder behaviors. Similarly, the sum of participants' SCSORF responses were summed to find a final score for strength of faith, which is used in the first research question addressing strength of faith and eating disorder behaviors.

The SVI responses will first be analyzed to identify participants' value preferences toward the initial 10 values (power, achievement, hedonism, stimulation, self-direction, universalism, benevolence, tradition, conformity, and security). Following this analysis, values preferences for the two categories (openness versus conservation and self-transcendence/benevolence versus self-enhancement/power) will be identified. The two overarching value categories found in the SVI (explicit values) are used to compare to the same value preference identified in the IATs (implicit values).

In order to determine participants' implicit value preferences, Greenwald, et al. (2003) suggested seven steps. First, any of the trials that were over 10,000 msec were deleted. Secondly, if over 10% of a participant's trials had a latency less than 300msec,

the participants were removed from the IAT analysis. Third, the inclusive standard deviation for trials in Stages 3 and 6, as well as Stages 4 and 7, were computed. Fourth, for each of the four stages (Stages 3, 4, 6, and 7), the mean latency of the responses was computed. Fifth, the two sets of mean differences were determined; next, each of the resulting mean differences was divided by its respective inclusive standard deviation. Finally, the resulting *D* score is the "equal rate average of the two resulting ratios" (Greenwald, et al., 2003).

Frequencies were determined through SPSS to ensure that participant responses were logical and did not need to be removed. Finally, participant's handwritten responses to the qualitative questions were compiled into a Word document for analysis.

Descriptive Data

The sample (n = 99) consisted of men (n = 23) and women (n = 76) enrolled in Colorado State University's Psychology 100. Participants' ages ranged from 18 to 25 years, with the average participant age at 19.06 (*SD* = 1.203).

As Table 1 indicates, most participants in the sample were European American (89.9%), while the remaining 9.1% were of an African American, Latino/Hispanic, or "other" ethnic background.

Over half of the participants identified a branch of Christianity as their religious affiliation (44.4% Protestant, 19.2% Catholic), and 23.2% participants were not affiliated with any religion. The remaining 13 participants were affiliated with either Agnostic/Atheist, Buddhist, Jewish, Muslim, or "other" religious organizations.

Table 1

Descriptive Statistics of Sample (n = 99)

	Number	Percentage
Gender	99	100.0
Male	23	23.2
Female	76	76.8
Age (years)	95	96.0
Over 21	8	8.1
20	6	6.1
19	37	37.4
18	44	44.4
Missing	4	4.0
Race/Ethnicity	99	100.0
European American	89	89.9
African American	1	1.0
Latino/Hispanic	8	8.1
Other	1	1.0
Religious Affiliation	99	100.0
Agnostic/Atheist	3	3.0
Buddhist	2	2.0
Catholic	19	19.2
Jewish	4	4.0
Protestant	44	44.4
Muslim	1	1.0
Other	3	3.0
No Affiliation	23	23.2

Research Questions

Correlations were calculated using Pearson's Correlation and with Listwise deletion. Because this research is exploratory, 2-tailed significance was used, and significance is set at the .05 level.

Question One: What is the association between adolescents/emerging adults' strength of religious faith and eating disorder behaviors?

Using participant responses from the SCSORF and EAT, a bivarite correlation was conducted, and no significant association was found between the strength of faith and eating disorder tendencies in late adolescents and emerging adults (r = -.01, n.s.).

Question Two: What is the association between preferences toward openness or conservation values and eating disorder behaviors?

Eating disorder behaviors and implicit preferences toward conservation were not significantly correlated, (r = .06, n.s.). Similarly, no significant correlation was found between eating disorder behaviors and explicit endorsement of openness (r = -.04, n.s.) or conservation (r = -.15, n.s.).

While explicit values of openness and conservation were not found to be significantly associated with eating disorder behaviors, conformity, a value related to conservation in the SVI, was found to be negatively correlated to eating disorder behaviors ($r = -.26$, $p < .05$). The more strongly participants explicitly endorsed conformity, the fewer eating disorder behaviors they displayed; in other words, as the importance of conformity increased in participants, eating disorder behaviors decreased. Tradition and security, the other two values that are associated with conservation in the SVI, presented no significant correlation with eating disorder behaviors.

Table 2

Eating Attitudes Test and explicit associations toward conformity: Correlations and descriptive statistics (n = 94)

Variables	1	2
1. Eating Disorder Behaviors	–	–
2. Conformity	-.256*	–

*Correlation is significant at the 0.05 level (2-tailed)

Question Three: What is the association between preferences toward power and benevolence values and eating disorder behaviors?

Eating disorder behaviors were not significantly correlated with implicit preferences toward power and benevolence (r = .04, n.s.). Although there is no significant association between the implicit endorsement of power/benevolence and eating disorder behaviors, eating disorder behaviors are significantly correlated with the explicit endorsement of power or self-enhancement (r = .32, p < .05). This positive association indicates that the stronger participants endorsed power, the greater the eating disorder behaviors within a participant.

Table 3

Associations between preferences toward power and benevolence and eating disorder behaviors: Correlations and Descriptive Statistics (N = 94)

Variables	1	2
1. Eating Disorder Behaviors	–	–
2. Enhancement (power)	.318*	–

*Correlation is significant at the 0.05 level (2-tailed)

Similarly, achievement, a value associated with self-enhancement /power in the SVI also had a significant positive correlation with eating disorder behaviors. An association was detected between eating disorder behaviors and achievement ($r = .28$, $p < .05$). Eating disorder behaviors and the explicit endorsement of benevolence were not significantly correlated ($r = -.15$, n.s.).

Table 4

Associations between eating disorder behaviors and explicit value of achievement: Correlations and Descriptive Statistics (N = 94)

Variables	1	2
1. Eating Disorder Behaviors	–	–
2. Achievement	.278*	–

*Correlation is significant at the 0.05 level (2-tailed)

Summary of Quantitative Results

To summarize the quantitative results, a multiple regression was run, and the overall relationship of the factors was significant (F (7, 88) = 2.56, $p < .05$), although, it was found that sex (B = 4.70, SE = 2.15, $p < .05$) and self-enhancement (B = 6.24, SE = 2.10, $p < .05$) were the only significant predictors.

Question Four: How do participants perceive the messages they were taught about food, eating, and body image?

Participants identified media, parents and family, religion, and culture as the most influential messages concerning food, eating, and body image. While participants discussed these four primary sources from which they received messages about food, eating, and body images, most participants concluded that they received messages from various sources rather than just one influential source. With the exception of teachings presented by the media and society, participants overwhelmingly agreed with the messages they were taught. None of the participants found the messages from the various sources of media, such as television and magazines, as healthy or positive, although they acknowledged that these messages were still highly influential in how they perceived their own body image, eating behaviors, and food choices. While most participants strongly agreed with teachings from parents and family members about food, eating, and body image, a few participants recognized that they did not benefit from parental messages and ultimately disagreed with these messages.

An in-depth exploration of the teachings, sources of teachings, and how the participants perceived these teachings follows. It should first be noted that participants

struggled with only identifying one source of teachings; almost all the participants discussed several origins of messages on food, eating, and body image. Most of these sources fall into one of the four main categories discussed, but the following are some of the numerous sources of teachings discussed: parents, siblings, peers, school, health class, coach/sports, television, celebrities, magazines, religion, youth workers, and culture. One participant commented, “being a female, many teachers, friends, and family engage in such conversation often” when describing how common messages on food, body, and eating are from many different sources.

Parents

Most of the participants recognized parents and family as a major influence in food choices, eating behaviors, and body perception. While the majority of participants stated agreement with the messages presented by their parents, a few participants recognized that these messages did not result in healthy outcomes. For example, one participant recounts, “I was taught that there are good and bad foods, and if you eat bad foods (sweets, snacks) you will be fat. I was taught to eat when I am stressed or upset…I was taught that food was the enemy and you had to be very careful with it…My dad overeats, my mom under eats – therefore I cumulated [*sic*] their messages into my own eating disorder…I hate food, eating, and my body.” The participant did acknowledge that he or she disagrees with these messages and knows what a healthier relationship between food and body is, but finds this an ongoing struggle to actually achieve a healthy balance and understanding.

A few participants recognized the negative impact of messages received from families, like the previous example, but overall participants accepted parental messages

as positive influences. One participant recalls, “My parents taught me this. They always did active things with us, like hiking and biking and they got me into running, which has kept me healthy and happy.” Recalling the positive message from family, a participant shares, “I’ve always been taught to love who you are. Fat, skinny, gaining or losing weight, who cares? The important thing is that you’re healthy.”

These comments similarly represent the sentiments of many participants as they recall receiving and internalizing messages about food, eating, and their bodies.

Religion

In addition to messages received by parents, several participants also discussed religious messages that shaped their attitudes and perceptions of food, eating, and their body. A few students recalled messages concerning gluttony as a sin when describing religious messages about food and eating, but overall participants shared positive messages from religion that influenced their attitudes and perceptions.

Most of the religious messages discussed pertained to loving yourself and your body as you were created and caring for yourself because your body is a gift from God or a temple of God. For example, “God made you and therefore you are beautiful and you should love and take care of the body He gave you” Similarly, “God created us and, therefore, we are all beautiful the way He made us.”

It was also common for participants to describe God as loving all people, and appreciating the differences in people as something good. “I was brought up Christian, in the songs and such it says God loves everyone thick or thin, big or small.”

In addition to messages about loving self and body, some participants described religious laws or commands they received concerning food, such as "do not eat dirty animals (pig, crustaceans, etc) because that's what is said in the bible."

Culture

While culture is the next main theme discussed, some participants shared messages about food choices and eating behaviors that originated from both religion and culture. "As a Muslim, we are not allowed to eat any pork or ham…On the other hand, in my culture we are expected to eat healthy food daily which included eating three times a day and eating at least some source of protein daily…I do agree with this teaching because as a Muslim you have to be clean in and out and eating food that is forbidden in the Islamic religion is not good."

Another participant reflectively described cultural messages received about body image and how she balances different messages received from culture and society. "Growing up in a Hispanic/Latino family I learned that average sized women, with a little more curve, are more attractive than extremely thin women with no shape." She continues by explaining how society still encourages people to see "thin as beautiful," and as a result of this message, she tries to stay away from certain foods and continues to worry about her weight and body image.

Media

The topic of media messages about food, eating, and body was a commonly discussed theme by participants, which clearly demonstrated the broad influence of the media in society. One participant summarized this well in saying "media, movies, books, magazines, television, video games. Every aspect of the media has something to say

about food, eating, and body image." Other participants' comments suggested similar feelings, which is interesting because while no participants agreed with the messages taught by media or society, they continued to acknowledge how the media heavily influenced them. One participant summarizes the messages taught by saying, "through the media and society, a common message is that 'thin is in.'" Similarly, another participant suggested, "In magazines, they always have really skinny and thin models. This is basically telling young girls that if you aren't skinny, you won't be successful."

While several participants acknowledged receiving these messages from media, some attempted to challenge it. "You work out for masculinity and to look better for the ladies…I disagree. You don't have to be buff or built to be attractive."

Even though the participants did not agree with societal and media messages concerning their bodies and eating behaviors, these messages were still influential in the attitudes and actions of the participants. Participants clearly struggled with how to interpret and integrate the media messages that conflicted with healthier messages they had also received. They overwhelming agreed with positive messages from family, religion, and culture, but they still admitted to wanting to be thin like the media portrays. A gap between messages society and media presented and healthy messages remained for the adolescents and emerging adults that one participant described saying, "I often am torn between eating the way my parents taught me and the way the media says you should eat. I know I am in shape and healthy, but I am always worrying about gaining weight or being fat and I wish I didn't worry so much." Another participant similarly recalled positive messages from a mother and peers, yet concluded "unfortunately, I still

skip meals, cut back on calories, and worry constantly about how I look and how what I'm eating affects that."

It was amazing how in one breath or stroke of the pen, participants recited healthy, positive teachings about food, eating, and body image, and in the next breath they described their personal struggles with food, eating, and body image. While this conflict between the positive messages from parents, religion, and culture versus messages from the media battled within the adolescents and emerging adults interviewed, one participant left a helpful insight in keeping media messages in perspective. "At the end of the day I think about the fact that all the girls on magazine covers are not real, like me."

CHAPTER 5: DISCUSSION

Introduction and Overview

This study was an exploration of the associations among eating disorder behaviors, strength of faith, and implicit and explicit value endorsements of power, benevolence, openness, and conservation in adolescents and emerging adults. Test – 26 (EAT-26), Santa Clara Strength of Religious Faith Questionnaire (SCSORF), the Schwartz Values Inventory (SVI), Implicit Association Tests (IATs), and an open-ended qualitative question, the research specifically examined four research questions. Question 1: What is the association between adolescents/young adults' strength of religious faith and eating disorder behaviors? Question 2: What is the association between preferences toward openness or conservation values and eating disorder behaviors? Question 3: What is the association between preferences toward power and benevolence values and eating disorder behaviors? Question 4: How do participants perceive the messages they were taught about food, eating, and body image?

Summary of Results/Key Findings and Related Literature

Research Question 1

While the first research question did not indicate significant quantitative associations between eating disorder behaviors and strength of faith, analysis of the qualitative revealed that participants who discuss religion described it as a source of positive messages and teaching concerning their body, food, and eating. A more in-depth explanation of the role of religion in body, food, and eating behaviors is revealed through participants' responses when the qualitative data is discussed.

Research Question 2

In analyzing the data, the only significant results were found in associations between the EAT, or disordered eating behaviors, and the explicit values of openness and conservation in the SVI; the value endorsements measured by the IATs did not show significant results relating to the EAT. When examining the explicit values of openness and conservation no significant results were identified, but there was a trend toward a negative association between conservation and the EAT. Similarly, greater explicit endorsement of conformity (a sub value of conservation) was correlated with fewer disordered eating behaviors. Tradition and security, other sub-values related to conservation, did not display similar significant correlations.

This study suggests a negative association between conformity and disordered eating behaviors, whereas, Antoniazzi, Zivian, and Hynie's (2005) research found women with eating disorders (clinical sample) more strongly endorse values associated with tradition and conformity. While Antoniazzi, et al.'s study reveals differences from this study relating to disordered eating behaviors and the endorsement of conformity, the researchers utilized similar measures to this study (EAT and SVI). Antoniazzi, et al. also found that women with eating disorders not only endorsed conformity more than a non clinical sample, but they also have higher religiosity ratings, which the researchers suggest indicates "that they place greater value on the customs and ideas that tradition and/or religion provide" (2005, p. 464).

On the opposite end of the conservation/conformity scale, Antoniazzi and colleagues (2005) found an association between LoEat (participants who displayed low tendencies toward disordered eating) participants and stimulation, a sub-value of

openness. No significant associations between EAT scores and values relating to openness were identified by this research study, though. Possibly the discrepancy is due to the fact that a clinical sample was not used in this research, yet due to the vast differences in the studies, more exploration in this area needs to be done to more definitively identify associations between conservation values, religiosity, and eating disorders.

Research Question 3

Examining the associations between eating disorder behaviors and the explicit values of power and benevolence led to significant correlations. The explicit endorsement of power/self-enhancement was significantly, positively correlated with eating disorder behaviors. Similarly, stronger explicit endorsement of achievement, a sub-value of power/self-enhancement in the SVI, was associated with more disordered eating behaviors. Power, another sub-value of power/self-enhancement in the SVI, displayed a definite trend toward a positive association with eating disorder behaviors.

Catrina Brown (1990), like many clinicians and researchers, identified issues of control as a factor leading to eating disorders. Brown further suggests that "control is related to power" (p. 3). While little research specifically addresses self-enhancement, power, and achievement values as associated with disordered eating, participants who value these characteristics likely seek to have control in aspects of their lives. For participants valuing power, developing disordered eating behaviors presents an outlet to exercise power or control through their restrictive, dietary or food choices, and their own body. These findings add further support that the field needs to explore ways to

counteract the association between disordered eating behaviors and individuals' emphases on power and control.

Thompson-Brenner and colleagues' (2007) research on personality types and eating disorders identifies "high-functioning/perfectionistic" personality types as displaying negative associations to comorbidity, including eating disorders, and displays greater adaptive functioning, which is contrary to the results explored in this study and Brown's emphasis on control in eating disorders. A high-functioning/perfectionistic personality is described as setting strong expectations for achievement and personal success (Thompson-Brenner, et. al.). While these traits relate to the values of self-enhancement and achievement explored, this research study found positive associations between the values and eating disorder tendencies.

Supporting the findings in this paper, high achievement, perfectionism, and placing strong demands on self are identified by eating disorder patients (mainly after recovery) in interviews 8 and 16 years after initial admission to a treatment center as reasons they believed they developed anorexia nervosa (Nilsson, Abrahamsson, Torbiornsson, Hagglof, 2007). While much research supports the positive association between self-enhancement and eating disorders, due to conflicting results on the role of self-enhancement in eating disorders, the field would benefit from more research in this area and greater exploration of other related factors or confounding factors.

As explained above, this study identified positive associations between self-enhancement/power and eating disorder behaviors; conversely, participants who explicitly endorsed benevolence, a sub value of benevolence/self-transcendence, had fewer eating disorder behaviors. While not an association directly examined in the

research questions, hours of personal religious practice a week also demonstrated a negative association with eating disorder behaviors. In a study examining personality traits (novelty seeking, harm avoidance, reward dependence, persistence, self directedness, cooperativeness, and self-transcendence) as the traits related to eating disorders, researchers found that neither high nor low levels of self-transcendence were linked to either anorexia or bulimia (Fassino, et al., 2002). While not directly contradicting Fassino and researchers' findings, this research suggested that participants who endorse benevolence, a sub-value relating to self-transcendence/benevolence in the SVI, displayed fewer disordered eating behaviors. Further research could clarify whether endorsing self-transcendence or benevolence remains a neutral or helpful value when associated with eating disorders, or whether specific types of eating disorders (anorexia, bulimia, NOS, and so on) are associated with certain traits. The different results in Fassino's research and this study may also be due to differences sample sizes, locations, ages, and so on.

Another interesting revelation in the quantitative data (Research Question 2 and 3) was the fact that the explicit values resulted in more significant associations than the implicit data. Possibly the explicit values produced more significant results because the four explicit values in the SVI (openness, conservation, self-enhancement, self-transcendence) are further broken into ten sub-variables or possibly the explicit values produced more significant results because the participants were adolescents and emerging adults still in the process of forming value endorsements, causing discrepancy between the implicit and explicit values endorsed. While there may be several other possible causes for this, it is interesting to note and future research may benefit from exploring

why the explicit values resulted in more significant results and the implications for exploring values in adolescents.

Implications and Applications of Quantitative Research Questions

This research and similar studies may help provide educators, youth workers, parents, and counselors in identifying values that may help children and adolescents navigate the developmental process in a healthy manner. Identifying value endorsements that could lead to risky behaviors, such as eating disorders, could lead to preventative actions to help identify and reduce them number of adolescents and emerging adults that may be vulnerable to eating disorders. Values and personality traits that lead to healthy outcomes may be encouraged and taught by families, educators, and counselors. If religious groups are unintentionally encouraging healthy or unhealthy behaviors in their young followers, religious leaders and educators should be aware so they can adapt programs in order to build on the protective factors and reduce the negative outcomes.

Research Question 4: Qualitative

While the quantitative data did not reveal a significant association between eating disorder behaviors and religion in the first research question, the qualitative data suggests a strong connection between the religious messages received by participants and their perceptions of body, food, and eating. In addition to religious messages, participants also described family, culture, and the media as influential sources for information on body image, food, and eating. With the exception of media, participants overwhelming described these sources as presenting positive messages with which they continue to agree. Media, on the other hand, was described as a source of negative or unhealthy messages. Even though participants stated that they did not agree with messages from

the media, they did acknowledge the strong power these messages continue to have on their perceptions of their body, food, and eating.

As eating disorders continue to grow in prevalence and breadth, research has attempted to more accurately describe, define, and identify the causes, types, and treatment options for individuals with eating disorders. In exploring possible causes or links to disordered eating behaviors, research has moved from simplistic explanations to acknowledging the depth and complexity of factors contributing to disordered eating behaviors. Miller-Day and Marks (2006) state “little is known about the etiology of disordered eating behaviors other than that they are multidetermined, arising from a complex web of various factors” (p. 153).

The results of this study also found disordered eating to be linked to a complexity of factors, although it sought to explore and possibly identify some of these various factors contributing to disordered eating. In responding to open-ended questions about messages received about food, body, and eating, and whether participants identify these messages as positive or negative, a few key factors emerge as most commonly discussed by participants, such as parents, religion, culture, and media.

While many studies have targeted parents and families when studying causes of eating disorders, it is interesting that participants in this study overwhelmingly identified parents and families as sources of positive, healthy messages that they continue to follow. A few participants did acknowledge that the teachings and example of their parents did not provide them with a healthy outlook on their own bodies or eating patterns. Many studies conclude that parents’ communication patterns, parents’ maladaptive eating (Miller-Day & Marks, 2006), and parental messages about weight, body shape, and

exercise (Stanford & McCabe, 2005) may be associated with eating disorders. Further exploration on the role of parents in helping adolescents remain resilient to eating disorders would be beneficial.

Religion was another key factor participants discussed as a source of positive messages concerning body, eating, and food. While much of the literature in the Literature Review presented the potentially helpful and the potentially harmful effects of religion on eating behaviors and body image, the participants in this study described religion as serving as a protective factor rather than a risk. In addition to participants' positive assessments of religion in the qualitative data, the quantitative data found no association (positive or negative) between disordered eating behaviors and religion.

While culture was not discussed as prevalently as religion or family factors, the participants who discussed the role of culture in forming their ideas of body, food, and eating highlighted the positive aspects of culture. Along with describing their agreement with the positive teachings of their cultures, the participants also concluded with acknowledging how societal norms and media counter the teachings of their cultures. Despite the best teaching passed down through cultures and the best intentions of adolescents and emerging adults in following these teachings, some overwhelming quality about society and media messages has permeated the minds of participants causing them to live in an awkward balance clinging to the wisdom of their culture yet wanting to conform to the unhealthy norms of society. While research studies acknowledge the pitfalls of media messages, adolescents and emerging adults (and many others) would benefit from future research exploring how media and society remain so

powerful when people recognize the fallacy of the teachings and how individuals can break the mind control media has over many well-intentioned, bright people.

As mentioned, media has been a heavily studied area in relation to eating disorders and body dissatisfaction. The participants recognized the negative and detrimental messages they received from various sources of media (television, magazines, celebrities, and so on), yet they also described how the media still affected their own body images and dietary choices. Many participants summarize the media's messages as "thin is success" or "beauty is power." Inch and Merali (2006) explained that sources of media "actively promote continued self-improvement, equating physical beauty with high self-esteem and personal achievement" (p. 109). In the quantitative data analysis, a greater emphasis on achievement, power, and self-enhancement was associated with higher levels of disordered eating. Even though the participants recognized the absurdity of linking physical appearance with success, happiness, achievement, it appears that the desire to continually strive for self-enhancement is power, which is possibly why participants give in to media messages, while still recognizing the fallible nature of the messages. Despite the vast research on media and adolescents, the extent to which media still plagues adolescents and young adults with misleading messages of physical beauty and inner beauty, suggests that efforts to apply this research are needed.

Future Explorations

While the participants of this study identified parents, religion, culture, media, and a limited number of other factors as contributing to their understanding of body, food, and eating, many factors not identified may also be influential when exploring

disordered eating behaviors. Future research and explorations on these factors and other factors linked to eating disorders would be beneficial as the field of eating disorders continues to affect more people and as new forms of disordered eating behaviors are identified. Fassino, et al. (2002) identified different personality traits common in the different forms of eating disorders; future research may also explore if individuals with different forms of eating disorders display differing value endorsements. Breaking future studies into more specific eating disorder groups, as well as considering other values and factors may help to better depict the complex nature of eating disorders and the unique individuals affected by them.

This research is another reminder that adolescents and young adults need to be considered holistically; it is not possible to isolate one cause for eating disorders, but through a compilation of numerous developmental factors research may begin to help individuals develop positive understandings of food, eating, and their body.

My current career path as the Director of Children and Youth Ministries at a church inspires me to look beyond the scope of this research to explore the broader implications of faith, values, and other protective factors on children and youth. Religious affiliation, faith, and spirituality are often used in recovery and treatment of addictive behaviors. Treatment centers may draw upon individuals' faith, and religious organizations often sponsor Alcoholics Anonymous and other similar recovery-focused programs. While these are important contributions to helping individuals with addictive behaviors, I would also like to explore how the church may contribute to a proactive or preventative approach to addictive or risky behaviors.

As the church community or a youth director, what can we do to help prevent negative developmental outcomes, such as eating disorders, cutting, alcohol abuse, drug use, and other risky behaviors? If we house recovery-focused groups, how can we also be committed to providing opportunities for prevention, and what would these opportunities look like?

Drawing on the risk and resilience research and the Search Institute's Developmental Assets, religious organizations and youth workers may begin to incorporate this research in to their programs to provide opportunities that instill healthy habits, attitudes, and life skills. For example, for adolescents, the role of healthy relationships between teens and adults, as well as among their peers, has been identified as a key protective factor in preventing a variety of negative developmental outcomes. Churches and religious organizations are community-oriented groups, so how can these communities help foster authentic relationship building for adolescents, or even other ages groups? This can be done in a variety of ways, such as intentionally planning intergenerational programs that provide opportunities for adults and youth to meet and build relationships. It is also important for religious organizations to find adult volunteers and staff to interact with youth that genuinely care about the teens and that will communicate with youth through their accepted means of communication, such as facebook or texting. Within the youth group, it is also necessary to facilitate relationships though planning relationship-building activities; challenge courses, retreats, and studies that require teens to think critically about their faith and their lives are often effective.

While the relationships youth have with adults and other adolescents may serve as one of the strongest protective factors, religious organizations must also consider how

faith or spirituality will aid youth in positive development. As adolescents encounter difficult situations or struggle with understanding life events, faith can be drawn upon as a context to help discuss or discern issues; discussing with youth ways that faith may impact their perspective on daily life and how they responds and adapt to difficult situations may help youth think more critically, and youth may learn to draw on their faith and the stories of their faith traditions when they need a comforting voice or while they are developing healthy coping strategies to handle the challenges of life.

While these are some concrete ideas churches may utilize to incorporate protective factors within their programs to instill positive developmental outcomes in adolescents and beyond, youth workers should also explore other areas that would support adolescents and families throughout development. Many resources and research exist concerning how to encourage positive development in children and adolescents, but religious communities can begin developing their own approaches with new, creative ideas to address the specific needs of the youth and families in their care. As communities filled with diverse people from a variety of educational and occupational experiences, religious organizations need to draw upon these resources and knowledge. Based on the expertise represented in their community, congregation members may be equipped to teach parent education classes that would enable parents to better support the needs of their children at various developmental levels. Other educational opportunities may be beneficial as well, such as classes on maintaining good mental health for youth or adults, providing round table discussions on pertinent topics, like bullying, internet use, and media messages, or forming support groups for parents with adolescents, and so on. Churches have many connections with service oriented or volunteer organizations that

may provide youth and families with outlets to serve the community. Encouraging youth to take leadership roles in service projects and within the church help adolescents feel like a valued part of a community.

While much of my research focused on eating disorder behaviors in adolescents, many of the ideas discussed in this section would not specifically target eating disorder prevention; yet, it seems most fruitful to approach development holistically, with the hopes that if an adolescents have opportunities to care for themselves, to experiment with new ideas and experiences within a supportive environment, to build relationships, and to feel validated and supported, that overall healthy development of the whole person will follow.

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APPENDIX A: Schwartz Values Inventory and Implicit Association Tests

Schwartz Values Inventory

The SVI contains 4 primary values and 10 sub-values, which are listed below according to how the sub-values relate to the primary values.

Openness: stimulation, self-direction, some hedonism

Conservation: security, tradition, conformity

Self-enhancement: achievement, power, some hedonism

Self-transcendence: universalism, benevolence

Implicit Association Tests

In the IATs, participants were asked to match attributes (see below) with target-concepts in order to determine which values (target-concept groups) participants endorsed implicitly. First participants responded to attributes as they were matched to power and benevolence categories, and later participants responded to attributes as they were matched to openness and conservation. Below are examples of the attributes and target-concept groups participants responded to in the IATs.

Attribute A:	**Attribute B:**
I	Their
Me	They
Mine	Them
Self	It
My	Other

Power:	**Benevolence:**
Dominance	Equality
Social recognition	True friendship
Exciting life	Spiritual life
Wealth	Wisdom
Pleasure-enjoying life	Social justice
Authority	Tolerance
Ambitious	Humility
Influential	Meaning in life
Indulgent	Helpful
Achievement	

Openness:	**Conservation:**
Freedom	Sense of belonging
Respect for oneself	Dutiful
Creativity	Politeness
Self-discipline	Reciprocity of favors
Novelty & Change	Respect for tradition
Independent	Preserving public image
Self-reliant	Family security
Daring	Healthy
Responsible	Honoring parents & elders
Curious	Devout

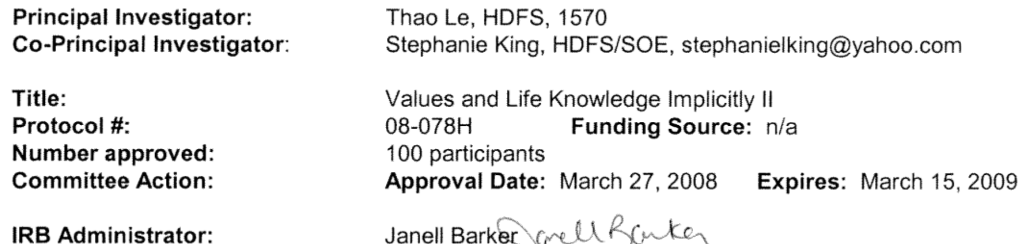
APPENDIX B

Human Subject Review: H100 Form and Approval

Colorado State University

Research Integrity & Compliance Review Office
Office of Vice President for Research
Fort Collins, CO 80523-2011
(970) 491-1553
FAX: (970) 491-2293

Notice of Approval for Human Research



Principal Investigator: Thao Le, HDFS, 1570
Co-Principal Investigator: Stephanie King, HDFS/SOE, stephanielking@yahoo.com

Title: Values and Life Knowledge Implicitly II
Protocol #: 08-078H **Funding Source:** n/a
Number approved: 100 participants
Committee Action: **Approval Date:** March 27, 2008 **Expires:** March 15, 2009

IRB Administrator: Janell Barker

Consent Process:
Because of the nature of this research, it will not be necessary to obtain a signed consent form. However, all subjects must receive a copy of the approved cover letter printed on department letterhead. The requirement of documentation of a consent form is waived under § _ _.117(c)(2).

Investigator Responsibilities:

- It is the PI's responsibility to obtain consent from all subjects.
- It is the responsibility of the PI to immediately inform the Committee of any serious complications, unexpected risks, or injuries resulting from this research.
- It is also the PI's responsibility to notify the Committee of any changes in experimental design, participant population, consent procedures or documents. This can be done with a memo describing the changes and submitting any altered documents.
- Students serving as Co-Principal Investigators must obtain PI approval for any changes prior to submitting the proposed changes to the IRB for review and approval.
- The PI is ultimately responsible for the conduct of the project.
- A status report of this project will be required within a 12-month period from the date of review. Renewal is the PI's responsibility, but as a courtesy, a reminder will be sent approximately two months before the protocol expires. The PI will be asked to report on the numbers of subjects who have participated this year and project-to-date, problems encountered, and provide a verifying copy of the consent form or cover letter used. The necessary continuation form (H-101) is available from the RICRO web page http://ricro.research.colostate.edu.
- Upon completion of the project, an H-101 should be submitted as a close-out report.
- If approval did not accompany a proposal when it was submitted to a sponsor, it is the PI's responsibility to provide the sponsor with the approval notice. This approval is issued under Colorado State University's OHRP Federal Wide Assurance 00000647.
- **Should the protocol not be renewed before expiration, all activities must cease until the protocol has been re-reviewed.**

Please direct any questions about the Committee's action on this project to me for routing to the Committee. Additional information is available from the RICRO web site at http://ricro.research.colostate.edu.

Attachment Date of Correspondence: 4/8/08

Animal Care and Use · Drug Review · Human Research · Institutional Biosafety
321 General Services Building · http://ricro.research.colostate.edu

APPENDIX C

Communication to Participants: Recruitment Text, Letters and Consent Forms

Recruitment Text for PSY 100 Students

Values and Life Knowledge Implicitly II
Recruitment Text on PSY100 website

Values and Life Knowledge Implicitly
Study description: This is a pilot study to examine the relation between cultural values, life knowledge, and eating attitudes. As a participant in this, study you will be asked: 1) to complete a short survey that will take about 30 minutes to complete, and 2) to complete an implicit association test about cultural values on the computer. In total, 60 minutes will be required.

Special Requirements: **- PSY100 Only - -** This study is limited to PSY100 participants.
Credits:1
Contact: Stephanie King

Letter of Consent

Knowledge to Go Places
Human Development
and Family Studies

1570 Campus Delivery
Fort Collins, CO 80523-1570
(970) 491-5558
FAX (970) 491-7975
www.colostate.edu/Depts/HDFS

Dear Participant,

You are invited to participate in a project titled: *Values and Life Knowledge Implicitly II,* conducted as part of a pilot test through the Psychology and Human Development and Family Studies Department at Colorado State University by Dr. Thao Le. You are being asked to participate in this study because we need volunteers to take the survey and Implicit Association Task who are healthy adults.

If you choose to take part in this project, you will answer questions related to demographics, values, life satisfaction, life knowledge, religious faith, and eating attitudes. You will also be asked to complete an Implicit Association task on a computer. The survey and Implicit Association Task will be administered to you by the study's investigators. Your participation will take approximately 60 minutes of your time.

It is not possible to identify all the potential risks involved in the research procedures, but the researchers have taken reasonable safeguards to minimize any known or unknown risks.

The information collected in the study will only be used for research purposes. This means that the information will only be presented as combined to other researchers, with no personal identification possible. The information from this study may be published and used at professional meetings. This study is anonymous, meaning that none of the researchers will know that the information comes specifically from you. The information you submit will be safely stored and protected. All data and records from this project will be deleted or destroyed as soon as the study is completed.

Before you begin participation in the study, you will sign in on an attendance sheet. Your signature on the attendance sheet will be used to give you one research credit from PSY 100; credit is recorded online through the Psychology department within 24 hours of your participation in the study. Your signature on the attendance sheet will not be linked to the identification number you are assigned on your survey and IATs.

Your participation is completely voluntary. If you decide to participate in the study, you may withdraw your consent and stop participating at any time without penalty. Before you decide whether to accept this invitation to take part in the study, please ask any questions that might come to mind now. Later, if you have any questions, please contact the lead investigator, Dr. Thao Le at tle@cahs.colostate.edu or 970-491-2804. We will give you a copy of this cover letter to take with you.

Participants will be provided with additional pertinent information through debriefing after participation. If you have any questions about your rights as a volunteer in this research, contact Janell Barker, Human Research Administrator, at 970-491-1655.

Sincerely,

Dr. Thao Le

Debriefing Information

Project Title: Values and Life Knowledge Implicitly II

Investigator:

Dr. Thao Le
tle@cahs.colostate.edu; (970) 491-2804

Purpose of Study:

This is a pilot study to assess for the discrepancy between explicit vs. implicit endorsement on values as an assessment of personality integration, life knowledge, and eating attitudes. The hypothesis is that higher scores on a life knowledge scale will be negatively related to value discrepancy score (i.e. less discrepancy between explicit and implicit assessment of cultural values). A second hypothesis suggests that higher levels of conservation, self-transcendence, strength of religious faith, and meaning in life will lead to lower levels of eating disorder tendencies.

Methods/Procedures:

As a participant in this study, you were asked to complete a survey containing questions related to demographics, values, life satisfaction, life knowledge, religious faith, and eating attitudes. You were then asked to complete an Implicit Association Test on a computer. This is a commonly used protocol to assess for the strength of the association between target words (e.g. insect or flower) and an attribute (e.g. unpleasant or pleasant). For this study, the target words of interest are the different cultural values (e.g. dutiful and universalism), and the attribute is *me* or *not me*. You were then asked to press a button on a computer as fast as you could as soon as you saw a target word displayed on the monitor. Then 5-7 blocks of the Implicit Association Task were shown, with some blocks being a practice session and others as test sessions. The delay shown in reaction time is the outcome variable of interest.

Use of the Data:

All of the responses given in this study are strictly confidential and cannot be traced to you in any way. Your information will be combined with information from other people taking part in the study. Information and results from this study will be shared with other researchers only in the form of combined data to avoid personal identification.

Thank you for participating in this study. If you are interested in learning about the results of this study once the data has been collected, analyzed, and interpreted, please notify the lead investigator. Since this study is currently running with more participants, it would be appreciated that the content remains confidential.

Sincerely,

Dr. Thao Le

APPENDIX D

Research Protocol

Research Protocol – Fall 2008

1. Attendance Sheet (Stephanie will have this printed out and on the table).

2. Have participants sign attendance sheet.

3. Show participants the “cover letter” on the computer.

4. Check Master List to see what number the participant is and write that number on the survey (use this number on the IATs too). Assign conditions according to number (IAT or survey first, which IAT comes first, etc).

5. When surveys are complete, have participants place them in the box on the file cabinet.

6. Debrief: Ask participants…Did you know what this study was about? Did you try to manipulate your responses?

7. Show participants the “debriefing letter” on the computer. (If they would like a copy of this letter, make a note of this on the attendance sheet and I will email them a copy when take attendance.)

8. Sign/Initial on Master List next to participant ID so we know that number has been used. Note any comments (such as remarks from the debriefing).

9. Log out of computer when you’re done for the day!

Thanks!

APPENDIX E

Survey

Values and Life Knowledge Implicitly

Participant ID#:

I. Demographics

For each of the following questions, please circle or write in the answer which is the most appropriate for you.

1) What is your sex? 1 ☐ male 2 ☐ female

2) What year were you born?

3) How would you describe your racial or ethnic background?
a. ☐ European American
b. ☐ African American
c. ☐ Asian/ Asian American
d. ☐ Latino/Hispanic
e. ☐ Other

4) With which religious group do you currently identify?

a. ☐ No affiliation
b. ☐ Agnostic/Atheist
c. ☐ Buddhist
d. ☐ Catholic
e. ☐ Hindu
f. ☐ Jewish
g. ☐ Muslim
h. ☐ Protestant
i. ☐ Other

5) How many hours per week do you spend in formal religious/spiritual practice (e.g., church, temple, group meditation)?
hrs/week

6) How many hours per week do you spend in personal religious/spiritual practice (e.g., prayer, contemplation, meditation, reading scriptures)?
hrs/week

I. Knowledge Scale

The following section asks you about your opinion and feelings. How strongly do you agree or disagree with the following statements?

	Strongly Agree	**Agree**	**Neutral**	**Disagree**	**Strongly Disagree**
1.In this complicated world of ours, the only way we can know what's going on is to rely on leaders or experts who can be trusted.	☐1	☐2	☐3	☐4	☐5
2. I am annoyed by unhappy people who just feel sorry for themselves	☐1	☐2	☐3	☐4	☐5
3. Life is basically the same most of the time.	☐1	☐2	☐3	☐4	☐5
4. People make too much of the feelings and sensitivity of animals.	☐1	☐2	☐3	☐4	☐5
5. You can classify almost all people as either honest or crooked.	☐1	☐2	☐3	☐4	☐5
6. I would feel much better if my present circumstances changed.	☐1	☐2	☐3	☐4	☐5
7. There is only one right way to do anything.	☐1	☐2	☐3	☐4	☐5
8. There are some people I know I would never like.	☐1	☐2	☐3	☐4	☐5
9. It is better not to know too much about things that cannot be changed.	☐1	☐2	☐3	☐4	☐5
10. Things often go wrong for me by no fault of my own.	☐1	☐2	☐3	☐4	☐5
11. Ignorance is bliss.	☐1	☐2	☐3	☐4	☐5
12. I can be comfortable with all kinds of people.	☐1	☐2	☐3	☐4	☐5
13. A person either knows the answer to a question or he/she doesn't.	☐1	☐2	☐3	☐4	☐5
14. It's not really my problem if others are in trouble and need help.	☐1	☐2	☐3	☐4	☐5
15. People are either good or bad.	☐1	☐2	☐3	☐4	☐5

How much are the following statements true of yourself ?

	Definitely true of myself	**Mostly true of myself**	**About half-way true**	**Rarely true of myself**	**Not true of myself**
1. I try to look at everybody's side of a disagreement before I make a decision.	☐1	☐2	☐3	☐4	☐5
2. If I see people in need, I try to help them one way or another.	☐1	☐2	☐3	☐4	☐5
3. When I'm upset at someone, I usually try to "put myself in his or her shoes" for a while.	☐1	☐2	☐3	☐4	☐5
4. There are certain people whom I dislike so much that I am inwardly pleased when they are caught and punished for something they have done.	☐1	☐2	☐3	☐4	☐5
5. I always try to look at all sides of a problem.	☐1	☐2	☐3	☐4	☐5
6. Sometimes I feel a real compassion for everyone.	☐1	☐2	☐3	☐4	☐5
7. I try to anticipate and avoid situations where there is a likely chance I will have to think in depth about something.	☐1	☐2	☐3	☐4	☐5
8. When I look back on what has happened to me, I can't help feeling resentful.	☐1	☐2	☐3	☐4	☐5
9. I often have not comforted another when he or she needed it.	☐1	☐2	☐3	☐4	☐5
10. A problem has little attraction for me if I don't think it has a solution.	☐1	☐2	☐3	☐4	☐5
11. I either get very angry or depressed if things go wrong.	☐1	☐2	☐3	☐4	☐5
12. Sometimes I don't feel very sorry for other people when they are having problems.	☐1	☐2	☐3	☐4	☐5
13. I often do not understand people's behavior.	☐1	☐2	☐3	☐4	☐5

	Definitely true of <u>myself</u>	**Mostly true of <u>myself</u>**	**About half-way <u>true</u>**	**Rarely true of <u>myself</u>**	**Not true of <u>myself</u>**
14. Sometimes I get so charged up emotionally that I am unable to consider many ways of dealing with my problems.	☐1	☐2	☐3	☐4	☐5
15. Sometimes when people are talking to me, I find myself wishing that they would leave.	☐1	☐2	☐3	☐4	☐5
16. I prefer just to let things happen rather than try to understand why they turned out that way.	☐1	☐2	☐3	☐4	☐5
17. When I am confused by a problem, one of the first things I do is survey the situation and consider all the relevant pieces of information.	☐1	☐2	☐3	☐4	☐5
18. I don’t like to get involved in listening to another person’s troubles.	☐1	☐2	☐3	☐4	☐5
19. I am hesitant about making important decisions after thinking about them.	☐1	☐2	☐3	☐4	☐5
20. Before criticizing somebody, I try to imagine how I would feel if I were in their place.	☐1	☐2	☐3	☐4	☐5
21. I’m easily irritated by people who argue with me.	☐1	☐2	☐3	☐4	☐5
22. When I look back on what’s happened to me, I feel cheated.	☐1	☐2	☐3	☐4	☐5
23. Simply knowing the answer rather than understanding the reasons for the answer to a problem is fine with me.	☐1	☐2	☐3	☐4	☐5
24. I sometimes find it difficult to see thing from another person’s point of view.	☐1	☐2	☐3	☐4	☐5

III. ASTI

We would like to know whether your view of life is different today than it was five years ago. We would appreciate you reading the statements listed below and indicating the extent to which you agree or disagree.

1 = Disagree Strongly	**2 = Disagree Somewhat**	**3 = Agree Somewhat**	**4 = Agree Strongly**

☐1 ☐2 ☐3 ☐4 1.) I am more likely to engage in quite contemplation.

☐1 ☐2 ☐3 ☐4 2.) I feel that my individual life is part of a greater whole.

☐1 ☐2 ☐3 ☐4 3.) I have become less concerned about other's people opinions of me.

☐1 ☐2 ☐3 ☐4 4.) I feel that my life has less meaning.

☐1 ☐2 ☐3 ☐4 5.) I am more focused on the present.

☐1 ☐2 ☐3 ☐4 6.) I feel a greater state of belonging with both earlier and future generations.

☐1 ☐2 ☐3 ☐4 7.) My peace of mind is not easily upset as it used to be.

☐1 ☐2 ☐3 ☐4 8.) I feel more isolated and lonely.

☐1 ☐2 ☐3 ☐4 9.) I am less interested in seeking out social contacts.

☐1 ☐2 ☐3 ☐4 10.) My self-importance has decreased as I get older.

☐1 ☐2 ☐3 ☐4 11.) My sense of self is less dependent on other people and things.

☐1 ☐2 ☐3 ☐4 12.) I do not become angry as easily.

☐1 ☐2 ☐3 ☐4 13.) I take myself less seriously.

☐1 ☐2 ☐3 ☐4 14.) I have less patience with other people.

☐1 ☐2 ☐3 ☐4 15.) I find more joy in life.

☐1 ☐2 ☐3 ☐4 16.) Material things mean less to me.

☐1 ☐2 ☐3 ☐4 17.) I am less optimistic about the future of humanity.

☐1 ☐2 ☐3 ☐4 18.) I feel much more compassionate, even toward my enemies.

☐1 ☐2 ☐3 ☐4 19.) I enjoy my inner life more than my outer life.

☐1 ☐2 ☐3 ☐4 20.) I can easily see the sacredness in nature and in others.

IV. <u>Values</u>

Using the scale below, please indicate which of the values you assign more importance as a guiding principle in your life.

-3 = left value is much more important
-2 = left value is more important
-1 = left value is slightly more important
0 = both values are equally important or unimportant
1 = right value is slightly more important
2 = right value is more important
3 = right value is much more important

Example:
Power *Dutiful* *(If you value dutiful much more than power, you should put 3. If you value power slightly more than dutiful, you should put -1.)*

		YOUR RATING						
1.Self-Direction	Dutifulness	☐-3	☐-2	☐-1	☐0	☐1	☐2	☐3
2.Social/ecological concerns	Social relationships	☐-3	☐-2	☐-1	☐0	☐1	☐2	☐3
3.Power	Pleasure/enjoying life	☐-3	☐-2	☐-1	☐0	☐1	☐2	☐3
4.Stimulation	Tradition	☐-3	☐-2	☐-1	☐0	☐1	☐2	☐3
5.Dutiful	Achievement	☐-3	☐-2	☐-1	☐0	☐1	☐2	☐3
6.Pleasure/enjoying life	Self-direction	☐-3	☐-2	☐-1	☐0	☐1	☐2	☐3
7.Security	Achievement	☐-3	☐-2	☐-1	☐0	☐1	☐2	☐3
8.Social relationships	Security	☐-3	☐-2	☐-1	☐0	☐1	☐2	☐3
9.Dutiful	Power	☐-3	☐-2	☐-1	☐0	☐1	☐2	☐3
10.Pleasure/enjoying life	Social/ecological concerns	☐-3	☐-2	☐-1	☐0	☐1	☐2	☐3
11.Stimulation	Self-direction	☐-3	☐-2	☐-1	☐0	☐1	☐2	☐3
12.Security	Power	☐-3	☐-2	☐-1	☐0	☐1	☐2	☐3
13.Achievement	Pleasure/enjoying life	☐-3	☐-2	☐-1	☐0	☐1	☐2	☐3
14.Social/ecological concerns	Dutiful	☐-3	☐-2	☐-1	☐0	☐1	☐2	☐3
15.Social relationships	Power	☐-3	☐-2	☐-1	☐0	☐1	☐2	☐3
16.Tradition	Achievement	☐-3	☐-2	☐-1	☐0	☐1	☐2	☐3
17.Self-direction	Security	☐-3	☐-2	☐-1	☐0	☐1	☐2	☐3
18.Achievement	Social relationships	☐-3	☐-2	☐-1	☐0	☐1	☐2	☐3
19.Stimulation	Social/ecological concerns	☐-3	☐-2	☐-1	☐0	☐1	☐2	☐3

20.Pleasure/enjoying life	Tradition	☐-3	☐-2	☐-1	☐0	☐1	☐2	☐3
21.Dutiful	Pleasure/enjoying life	☐-3	☐-2	☐-1	☐0	☐1	☐2	☐3
22. Social/ecological concern	Security	☐-3	☐-2	☐-1	☐0	☐1	☐2	☐3
23.Power	Achievement	☐-3	☐-2	☐-1	☐0	☐1	☐2	☐3
24.Stimulation	Dutiful	☐-3	☐-2	☐-1	☐0	☐1	☐2	☐3
25.Security	Stimulation	☐-3	☐-2	☐-1	☐0	☐1	☐2	☐3
26.Tradition	Power	☐-3	☐-2	☐-1	☐0	☐1	☐2	☐3
27.Social relationships	Dutiful	☐-3	☐-2	☐-1	☐0	☐1	☐2	☐3
28.Self-direction	Social relationships	☐-3	☐-2	☐-1	☐0	☐1	☐2	☐3
29.Self-direction	Social/ecological concerns	☐-3	☐-2	☐-1	☐0	☐1	☐2	☐3
30.Achievement	Stimulation	☐-3	☐-2	☐-1	☐0	☐1	☐2	☐3
31.Power	Social/ecological concerns	☐-3	☐-2	☐-1	☐0	☐1	☐2	☐3
32.Achievement	Self-direction	☐-3	☐-2	☐-1	☐0	☐1	☐2	☐3
33.Tradition	Security	☐-3	☐-2	☐-1	☐0	☐1	☐2	☐3
34.Dutiful	Security	☐-3	☐-2	☐-1	☐0	☐1	☐2	☐3
35.Pleasure/enjoying life	Stimulation	☐-3	☐-2	☐-1	☐0	☐1	☐2	☐3
36.Self-direction	Tradition	☐-3	☐-2	☐-1	☐0	☐1	☐2	☐3
37.Power	Self-direction	☐-3	☐-2	☐-1	☐0	☐1	☐2	☐3
38.Social/ecological concern	Tradition	☐-3	☐-2	☐-1	☐0	☐1	☐2	☐3
39.Stimulation	Social relationships	☐-3	☐-2	☐-1	☐0	☐1	☐2	☐3
40.Social relationships	Tradition	☐-3	☐-2	☐-1	☐0	☐1	☐2	☐3
41.Pleasure/enjoying life	Social relationships	☐-3	☐-2	☐-1	☐0	☐1	☐2	☐3
42.Achievement	Social/ecological concern	☐-3	☐-2	☐-1	☐0	☐1	☐2	☐3
43.Tradition	Dutiful	☐-3	☐-2	☐-1	☐0	☐1	☐2	☐3
44.Power	Stimulation	☐-3	☐-2	☐-1	☐0	☐1	☐2	☐3
45.Security	Pleasure/enjoying life	☐-3	☐-2	☐-1	☐0	☐1	☐2	☐3

V. LS

7=Strongly agree 6=Agree 5=Slightly agree
4=Neither agree nor disagree
3= Slightly disagree 2=Disagree 1=Strongly disagree

☐7 ☐6 ☐5 ☐4 ☐3 ☐2 ☐1 In most ways my life is close to my idea.

☐7 ☐6 ☐5 ☐4 ☐3 ☐2 ☐1 The conditions of my life are excellent.

☐7 ☐6 ☐5 ☐4 ☐3 ☐2 ☐1 I am satisfied with my life.

☐7 ☐6 ☐5 ☐4 ☐3 ☐2 ☐1 So far I have gotten the important things I want in life.

☐7 ☐6 ☐5 ☐4 ☐3 ☐2 ☐1 If I could live my life over, I would change almost nothing.

VI. SH

For each of the following statements and/or questions, please check the point on the scale that you feel is most appropriate in describing you.

1. In general, I consider myself:
Not a Very happy person ☐1 ☐2 ☐3 ☐4 ☐5 ☐6 ☐7 A very happy person

2. Compared to most of my peers, I consider myself:
Not a Very happy person ☐1 ☐2 ☐3 ☐4 ☐5 ☐6 ☐7 A very happy person

3. Some people are generally very happy. They enjoy life regardless of what is going on, getting the most out of everything. To what extent does this characterization describe you?
Not a Very happy person ☐1 ☐2 ☐3 ☐4 ☐5 ☐6 ☐7 A very happy person

4. Some people are generally not very happy. Although they are not depressed, they never seen as happy as they might be. To what extent does this characterization describe you?
Not a Very happy person ☐1 ☐2 ☐3 ☐4 ☐5 ☐6 ☐7 A very happy person

VII. Meaning in Life

Please take a moment to think about what makes your life and existence feel important and significant to you. Please respond to the following statements as truthfully and accurately as you can, and also please remember that these are very subjective questions and that there are no right or wrong answers. **Please answer according to the scale below:**

Absolutely Untrue	**Mostly Untrue**	**Somewhat Untrue**	**Can't Say True or False**	**Somewhat True**	**Mostly True**	**Absolutely True**
1	**2**	**3**	**4**	**5**	**6**	**7**

1.	☐1	☐2	☐3	☐4	☐5	☐6	☐7	I understand my life's meaning.
2.	☐1	☐2	☐3	☐4	☐5	☐6	☐7	I am looking for something that makes my life feel meaningful.
3.	☐1	☐2	☐3	☐4	☐5	☐6	☐7	I am always looking to find my life's purpose.
4.	☐1	☐2	☐3	☐4	☐5	☐6	☐7	My life has a clear sense of purpose.
5.	☐1	☐2	☐3	☐4	☐5	☐6	☐7	I have a good sense of what makes my life meaningful.
6.	☐1	☐2	☐3	☐4	☐5	☐6	☐7	I have discovered a satisfying life purpose.
7.	☐1	☐2	☐3	☐4	☐5	☐6	☐7	I am always searching for something that makes my life feel significant.
8.	☐1	☐2	☐3	☐4	☐5	☐6	☐7	I am seeking a purpose or mission for my life.
9.	☐1	☐2	☐3	☐4	☐5	☐6	☐7	My life has no clear purpose.
10.	☐1	☐2	☐3	☐4	☐5	☐6	☐7	I am searching for meaning in my life.

Eating Attitudes

Please answer the following questions as honestly as you can by marking the appropriate box following the statements according to the how frequently you agree with the statement.

1 = Never 2 = Rarely 3 = Sometimes 4 = Often 5 = Usually 6 = Always

Statement						
*1. **Am terrified about being overweight**.*	☐*1*	☐*2*	☐*3*	☐*4*	☐*5*	☐*6*
*2. **Avoid eating when I am hungry**.*	☐*1*	☐*2*	☐*3*	☐*4*	☐*5*	☐*6*
*3. **Find myself preoccupied with food**.*	☐*1*	☐*2*	☐*3*	☐*4*	☐*5*	☐*6*
*4. **Have gone on eating binges where I feel that I may not be able to stop**.*	☐*1*	☐*2*	☐*3*	☐*4*	☐*5*	☐*6*
*5. **Cut my food into small pieces**.*	☐*1*	☐*2*	☐*3*	☐*4*	☐*5*	☐*6*
*6. **Aware of the calorie content of foods that I eat**.*	☐*1*	☐*2*	☐*3*	☐*4*	☐*5*	☐*6*
*7. **Particularly avoid food with high carbohydrate content (i.e. bread, rice, potatoes, etc.)***	☐*1*	☐*2*	☐*3*	☐*4*	☐*5*	☐*6*
*8. **Feel that others would prefer if I ate more**.*	☐*1*	☐*2*	☐*3*	☐*4*	☐*5*	☐*6*
*9. **Vomit after eating**.*	☐*1*	☐*2*	☐*3*	☐*4*	☐*5*	☐*6*
*10. **Feel extremely guilty after eating**.*	☐*1*	☐*2*	☐*3*	☐*4*	☐*5*	☐*6*
*11. **Am preoccupied with a desire to be thinner**.*	☐*1*	☐*2*	☐*3*	☐*4*	☐*5*	☐*6*
*12. **Think about burning up calories when I exercise**.*	☐*1*	☐*2*	☐*3*	☐*4*	☐*5*	☐*6*
*13. **Other people think that I am too thin**.*	☐*1*	☐*2*	☐*3*	☐*4*	☐*5*	☐*6*
*14. **Am preoccupied with the thought of having fat on my body**.*	☐*1*	☐*2*	☐*3*	☐*4*	☐*5*	☐*6*
*15. **Take longer than others to eat my meals**.*	☐*1*	☐*2*	☐*3*	☐*4*	☐*5*	☐*6*
*16. **Avoid foods with sugar in them**.*	☐*1*	☐*2*	☐*3*	☐*4*	☐*5*	☐*6*
*17. **Eat diet foods**.*	☐*1*	☐*2*	☐*3*	☐*4*	☐*5*	☐*6*
*18. **Feel that food controls my life**.*	☐*1*	☐*2*	☐*3*	☐*4*	☐*5*	☐*6*
*19. **Display self-control around food**.*	☐*1*	☐*2*	☐*3*	☐*4*	☐*5*	☐*6*
*20. **Feel that others pressure me to eat**.*	☐*1*	☐*2*	☐*3*	☐*4*	☐*5*	☐*6*
*21. **Give too much time and thought to food**.*	☐*1*	☐*2*	☐*3*	☐*4*	☐*5*	☐*6*
*22. **Feel uncomfortable after eating sweets**.*	☐*1*	☐*2*	☐*3*	☐*4*	☐*5*	☐*6*

*23. **Engage in dieting behavior**.*	☐ *1*	☐ *2*	☐ *3*	☐ *4*	☐ *5*	☐ *6*
*24. **Like my stomach to be empty**.*	☐ *1*	☐ *2*	☐ *3*	☐ *4*	☐ *5*	☐ *6*
*25. **Have the impulse to vomit after meals**.*	☐ *1*	☐ *2*	☐ *3*	☐ *4*	☐ *5*	☐ *6*
*26. **Enjoy trying new rich foods**.*	☐ *1*	☐ *2*	☐ *3*	☐ *4*	☐ *5*	☐ *6*

Faith Questionnaire

Please answer the following questions about religious faith using the scale below. Indicate your level of agreement or disagreement for each statement.

1 = strongly disagree 2 = disagree 3 = agree 4 = strongly agree

1. My religious faith is extremely important to me.	☐ 1	☐ 2	☐ 3	☐ 4
2. I pray daily.	☐ 1	☐ 2	☐ 3	☐ 4
3. I look to my faith as a source of inspiration.	☐ 1	☐ 2	☐ 3	☐ 4
4. I look to my faith as providing meaning and purpose in my life.	☐ 1	☐ 2	☐ 3	☐ 4
5. I consider myself active in my faith or church.	☐ 1	☐ 2	☐ 3	☐ 4
6. My faith is an important part of who I am as a person.	☐ 1	☐ 2	☐ 3	☐ 4
7. My relationship with God is extremely important to me.	☐ 1	☐ 2	☐ 3	☐ 4
8. I enjoy being around others who share my faith.	☐ 1	☐ 2	☐ 3	☐ 4
9. I look to my faith as a source of comfort.	☐ 1	☐ 2	☐ 3	☐ 4
10. My faith impacts many of my decisions.	☐ 1	☐ 2	☐ 3	☐ 4

Please respond to the follow questions.

Messages concerning food, eating, and body image are often taught through religious settings or through values that people are taught. Please describe any teachings or messages about food, eating, or body image that you received. What was the message or teaching?

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Where did you receive this message or who taught you this?

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How has this teaching effected your actions or attitudes about food, eating, or body image?

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Do you agree or disagree with this teaching or message today?

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