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Childhood Religious Stress as a Predictor of Adult Substance Use Disorders Among Sexual Minorities

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This is to certify that the doctoral dissertation by

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Abstract

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by

Jennifer Schindler

MA, University of Phoenix, 2011

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Dissertation Submitted in Partial Fulfillment

of the Requirements for the Degree of

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Abstract

Researchers have taken considerable interest in the relationship between religious stress in childhood and substance use disorders in adulthood among sexual minorities because more individuals who identify as lesbian, gay, and bi/pansexual have a substance use disorder compared to heterosexuals. However, researchers have not yet completed an integrated analysis of religious stress, mental health, and age of awareness among sexual minorities. This study was important now because the societal climate has shifted to more extremes of intolerance and less acceptance for sexual minorities. The purpose of this study was to examine religious stress as a predictor variable for substance use disorders among sexual minorities using age of awareness as the covariate. Bowlby's attachment theory provided a foundation for the study. The Religious, Spiritual, and Sexual Identities Questionnaire, its subscale Total Control, and the Short Michigan Alcohol Screening Test were used in a web-based survey to examine the variables age of awareness, religious stress, and substance use disorders. A sample of 105 self-selected participants who identified as lesbian, gay, or bi/pansexual completed the survey. Data were analyzed using correlational analysis and multiple regression. The results indicated that there was no significant correlation between the variables. This study contributes to the existing literature, social change, and provides a basis of understanding for mental health professionals to aid in their practice with sexual minorities who might have experienced religious stress. Clinicians may be able to help their sexual minority clients to validate their experience of religious stress, which may directly impact their worth, dignity, and personal development and improve their overall quality of life.

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Chapter 1: Introduction to the Study

Childhood religious stress may be a predictor of adult substance use disorders among sexual minorities. Sexual minorities, like gay, lesbian, and bisexuals, experience religious stress in childhood when their families and religious organizations are nonaccepting of sexual orientation due to the influence of religion (Hamblin & Gross, 2014; Longo, Walls, & Wisneski, 2013; Page, Lindahl, & Malik, 2013). Religious stress is detrimental to the development of identity. It may increase substance use disorders in adulthood because sexual minorities are at a higher risk for developing mental health disorders. After all, substances are used for coping with various types of stress, whether minority stress, internalized gay-related stress, or identity stress (Hamblin & Gross, 2014; Kerridge et al., 2017, Livingston, Oost, Heck, & Cochran, 2015; Page et al., 2013).

The topic of religious stress for sexual minorities has had minimal research; the research thus far has been done on individuals under the age of 24, males, and in specific geographic locations. In the current research study, I addressed these gaps in the literature by including anyone over the age of 18, all genders, and individuals throughout the United States. Being more inclusive in terms of age range, location, and gender may offer more insight about the effects of religious stress, specifically on substance use disorders, among sexual minorities.

In addition, this study may further the understanding of the experiences of the sexual minority community by providing more information about how religion has contributed to the stress of individuals. Specifically, this study adds to the body of research on substance use disorders, sexual minorities, religious stress, and attachment

theory. In reviewing the literature, I found that a study has yet to be completed to determine if there is a relationship between the research variables, despite there being several studies of the variables separately. This study needed to be conducted to highlight the impact of substance use to cope with stress on the quality of life of individuals who are sexual minorities; substance use can lead to a lower quality of life, according to researchers (Hamblin & Gross, 2014; Kerridge et al., 2017, Livingston, Oost, Heck, & Cochran, 2015; Page et al., 2013).

The potential positive social change implications of this study include demonstrating how parents with religious convictions can positively influence the development of individuals within the sexual minority community. By positively improving their children's development, parents may be able to improve the quality of their children's lives in adulthood. Researchers have found that the quality of life is lower for sexual minorities (Hamblin & Gross, 2014) compared to heterosexuals and is significantly worse for those who have experienced religious stress (Page et al., 2013).

Chapter 1 contains an overview of the study and the rationale for conducting it. The chapter includes the background of the study, problem statement, purpose of the study, and research questions and hypotheses. The chapter also includes the theoretical foundation for the study; the nature of the study; definitions; and the assumptions, scope and delimitations, limitations, and significance of the study.

Background of the Study

In this study, I investigated the relationship between religious stress in childhood and substance use disorders in adulthood among sexual minorities. This study was

inclusive of everyone in the United States who was at least 18 years old and who identified as a sexual minority (e.g., lesbian, gay, bisexual, or pansexual) at the time the study was conducted. I examined whether childhood religious stress within the sexual minority community has a relationship to substance use disorders in adulthood.

Heterosexual experience

Religion is a protective factor for heterosexual individuals (Moore & Leach, 2016). Heterosexual individuals and individuals whose religion is both accepting and tolerating of their sexual orientation have access to the protective factor of religion on their individual's mental health, specifically substance use disorders (Hamblin & Gross, 2014; Rosenkrantz, Rostosky, Riggle, & Cook, 2016). Individuals who conform to the social standards of a religion can benefit from the group dynamic and the feeling of belonging. Generally, families ascribe to the same religion, which could maintain the secure attachment that individuals experience with their primary caregivers.

Additionally, individuals may experience a secure attachment with the deity of their ascribed religion. Heterosexuals struggle with substance use disorders at a lower rate than sexual minorities (Hughes, Wilsnack, & Kantor, 2016). One theory of substance use disorders is that it is a lack of connection (Fletcher, Nutton, & Brend, 2015). Thus, substance use disorders can affect individuals in all walks of life who struggle with connections to others. Heterosexuals do not have to come out to friends and family as heterosexual and risk alienation from their friends and family in the same way that sexual minorities do. As such, heterosexuals may experience more connection to others, which

may reduce their likelihood of having a substance use disorder, compared to sexual minorities.

Sexual Minority Experience

Religious stress is the internal conflict that a sexual minority may feel because of their religion (Beagan & Hattie, 2015; Page et al., 2013). Religious stress is the critical factor in the individual's internal conflict between sexual orientation and religious preference as both religion and sexual orientation are important aspects of identity (Hamblin & Gross, 2014; Longo et al., 2013). The stress may be more significant if the individual discovers in childhood that their sexual orientation is different from the heteronormative paradigm offered in many religious doctrines (Hamblin & Gross, 2014). The individual may be more sensitive to developing a substance use disorder if growing up in a family and religion where anti-equal rights rhetoric is prominent (Hughes et al., 2016). Religious stress can be damaging to sexual minority youth as they are developing their identity, causing individuals to repress or deny their identity for fear of losing the safety of their parents and their religion, which can have a lasting impact on the individual (Page et al., 2013).

Page et al. (2013) focused on how gay-related stress rather than religious stress was the type of stress that a sexual minority individual experiences due to their sexual orientation in society. Page et al. used the minority stress theory to guide their research, and one of their conclusions was that religious stress was significantly correlated with depression. However, gay-related stress was not significantly correlated to depression. Many other research studies (Budge, Thai, Tebbe, & Howard, 2016; Hatzenbuehler,

2017; Pachankis, Cochran, & Mays, 2015; Williams, 2017) have suggested that depressive symptoms, anxiety symptoms, suicide ideation, and noninjurious self-harm are elevated sexual minorities.

The age of awareness of sexual identity for this study was the age at which an individual becomes aware of their sexual identity. Page et al. (2013) described this as the age of coming out to one's self, which is an essential concept because an individual may have an awareness of their own sexual identity but may or may not share that awareness with others. Furthermore, sexual minorities may not share their sexual orientation with their families because of the fear of being disowned, which includes the loss of protection, security, and belonging that the family and the religion provides (Longo et al., 2013). Sexual minority youth may not be aware that they have a different sexual orientation because of the nature of the childhood home until much later in life (Page et al., 2013). Those individuals who are aware of their sexual orientation as youth may feel stress from their families who communicate about religious doctrine, thereby creating a deep inner conflict between religious identity and sexual orientation identity (Hamblin & Gross, 2014).

Hamblin and Gross (2014) surmised that substance use disorders are more prevalent within the lesbian, gay, and bi/pansexual community as a significant mental health concern; one likely explanation for this effect is the influence of religious stress in childhood. The American Psychiatric Association (APA, 2019) classifies substance use disorders into four groups: impaired control, social impairment, risky use, and pharmacological criteria. These groups apply to all individuals, regardless of sexual

orientation; however, the increase in the rate of substance use disorders among sexual minorities suggests other environmental factors can influence the rate of development of substance use disorders as well (Livingston et al., 2015).

The Gap in the Knowledge Base

The authors of these studies excluded individuals who were over the age of 24. In this study, I included participants who were at least 18 years old at the time of the study and who resided in the United States and identified as a sexual minority. Another gap in the literature is that these studies have been conducted in local communities in the United States, which tend to be urban areas, rather than the United States as a whole. I conducted an Internet survey to reach a more accurate representation of individuals. This study was needed to understand the relationship between substance use disorders and religious stress in childhood. Religious stress contributes to the development of substance use disorders that strain societal resources (Hamblin & Gross, 2014; Hughes et al., 2016; Longo et al., 2013; Page et al. 2013); understanding the correlation between religious stress and substance use could save society an immense financial cost as well as save the lives of sexual minorities.

Problem Statement

There may be a relationship between religious stress in childhood and substance use disorders in adulthood for sexual minorities. Either religious stress, substance use disorders, or the relationship between the two could cause lower quality of life. As Page et al. (2013) noted, sexual minorities with substance use disorders who experienced religious stress as children may experience a lower quality of life in adulthood. Sexual

minorities have a higher rate of developing substance use disorders compared to heterosexuals; about 45% of individuals who identify as homosexual have a substance use disorder compared to 28% of heterosexuals (Hatzenbuehler, 2017; Hughes et al., 2016; Kerridge et al., 2017; Livingston et al., 2015). Limiting the development of substance use disorders for sexual minorities would lower the societal economic impact. Results from the 2016 National Survey on Drug Use and Health showed that the estimated overall cost of drugs and alcohol in the United States is around $440 billion annually (Center for Behavioral Health Statistics and Quality, 2017). Substance use disorders also have a significant impact on an individual's daily functioning and quality of life, on the individual's family, and society. A substance use disorder may also cut an individual's lifespan short, in some cases significantly (Schneeberger, Dietl, Muenzenmaier, Huber, & Lang, 2014). Limiting the development of substance use disorders would start with acceptance, tolerance, respect, and understanding from religious families that their children may not be heterosexual (Dermody, Marshal, Burton, & Chisolm, 2016).

Currently, there is a significant gap in the literature on mental health and substance use disorders among sexual minorities as far as age is concerned (Hatzenbuehler, 2017; Hughes et al., 2016; Page et al., 2013). In only one study thus far has the variable religious stress, which was correlated with a broad variable of general mental health, been used instead of a more specific variable such as substance use disorders (Page et al., 2013). Religious stress in childhood could be a contributing factor to substance use disorders in adulthood among individuals within the lesbian, gay, and

bi/pansexual community (Page et al., 2013). Religion has been shown to improve mental health in heterosexuals; however, for those within the lesbian, gay, and bi/pansexual community, it may have the opposite effect because individuals who are sexual minorities can feel discriminated against and can experience stress due to their religious identity (Mustanski, & Liu, 2013; Woodward, Pantalone, & Bradford, 2013). Researchers have studied the relationship between religious stress and mental health in youth (Hamblin & Gross, 2014) and the stress from religion on coming out to self (Page et al., 2013) but not the combination of these three variables among sexual minorities.

Purpose of the Study

The purpose of this nonexperimental quantitative study was to examine the relationship between religious stress in childhood and substance use disorders in adulthood among sexual minorities. More specifically, I conducted the study to determine whether there is a significant difference between the independent variable in the study, which was the religious stress of sexual minorities in childhood, and the dependent variable, which included measures of substance use disorders. Age of awareness of sexual orientation, sexual orientation, and religious denomination were covariates as well as age, race, household income, and other demographics. Study results will contribute further understanding of these variables, which have not been previously studied in combination, according to my review of the literature.

Research Questions and Hypotheses

I sought to answer the following research questions (RQs) and hypotheses in this quantitative, causal-comparative study:

RQ1. Does the age of awareness of sexual orientation influence childhood religious stress a predictor of adult substance use disorders in sexual minorities?

$H_0$1. There is no significant relationship for sexual minorities between religious stress in childhood as measured by the Total Conflict score of the RSSIQ and substance use disorders in adulthood, as measured by the SMAST.

H_A1. There is a significant relationship for sexual minorities between religious stress in childhood as measured by the Total Conflict score of the RSSIQ and substance use disorders in adulthood, as measured by the SMAST.

RQ2. Is there a relationship between the age of awareness of sexual orientation and religious stress in the childhood home for sexual minorities?

$H_0$2. There is no significant relationship for sexual minorities between the age of awareness of sexual orientation and religious stress in childhood, as measured by the Total Conflict score of the RSSIQ.

H_A2. There is a significant relationship for sexual minorities between the age of awareness of sexual orientation and religious stress in childhood, as measured by the Total Conflict score of the RSSIQ.

RQ3. Is there a relationship for sexual minorities between the age of awareness of sexual orientation and substance use disorders in adulthood?

$H_0$3. There is no significant relationship for sexual minorities between the age of awareness of sexual orientation as measured by the RSSIQ and substance use disorders in adulthood, as measured by the SMAST.

H_A3. There is a significant relationship for sexual minorities between the age of awareness of sexual orientation as measured by the RSSIQ and substance use disorders in adulthood, as measured by the SMAST.

RQ4. Is there a relationship for sexual minorities between demographics – age, gender, race, and religious denomination – and religious stress?

H_04. There is no significant relationship between demographics as measured by the demographics questionnaire and religious stress, as measured by the Total Conflict score of the RSSIQ.

H_A4. There is a significant relationship between demographics as measured by the demographics questionnaire and religious stress, as measured by the Total Conflict score of the RSSIQ.

Theoretical Foundation

John Bowlby (1969) suggested that there is significant evidence for the influence of maternal involvement and mental health individuals. Attachment theory (AT) determined that the parent-child relationship was significant to the mental health of the child and was based on the observation that infants' bond with their primary caregiver based on the primary caregiver's consistent responses to cries (Bowlby, 1969; Fearon, & Roisman, 2017). The further development of the theory suggested that there are different categories for the types of attachments that an individual can develop. The four different types of connections are secure, disorganized insecure, anxious, insecure, and avoidant insecure.

Attachment Theory

AT was developed by John Bowlby (Bowlby, 1969) as a radically different approach to the field of psychology at the time because AT has the point of view of looking from infancy or childhood, with an event or an experience to explain personality or psychology later in life. AT was different from the traditional Freudian psychoanalysis, which looks from the current personality trait or psychology, backward to determine the causal factors. AT heavily relies on the direct observation of behavior received criticism because of not analyzing or tapping into the psyche or mind. Another difference from AT and Freudian psychoanalysis was the use of animal data to extrapolate from other species' patterns of behavior to humanity.

Relationship of Attachment Theory to the Study

Research suggests that AT has a relationship with religion because of having a safe place and individual for an individual to attach (Granqvist, 2014). An individual can attach to a deity, much like the individual can attach to an individual. The deity becomes the security and the protector, like the primary caregiver. An individual will also seek safety and security from the primary caregiver. If the primary caregiver places high importance on religious conformity, then the individual will feel the need to conform to religion. However, if that religion is not accepting of the individual based on sexual orientation, then the individual may experience religious stress based on the fear of losing the safety and protection of the deity and the primary caregiver (Page et al., 2013).

If a child is aware of their sexual orientation as a sexual minority, then the type of attachment may change because they are unable to trust that their primary caregiver will

provide the safety and security that they need because of the possible persecution and damnation from the religion. Children who grow up knowing that they are different from the rest of the family may not feel entirely accepted as who they are as individuals because there are not living their lives authentically or honestly. Authentic living and honesty about identity can lead to ostracism from the family and religious group; thus, losing the protection and security of the family unit (Almeida et al., 2009).

Previous research suggests that insecure attachments or traumatic childhood experiences have a significant correlation to substance use disorders (Fletcher et al., 2015). Individuals who were not nurtured or responded to as infants and children may be looking for external sources to feel loved and secure. Individuals who have an insecure attachment may be attempting to fill their internal subconscious parental void with substances.

AT explains how a child aware of their sexual orientation who has experienced religious stress from their religion may lead to substance use disorders (Starks, Millar, Tuck, & Wells, 2015). AT guides the research by providing context to the variables. The RQ investigates the relationship between religious stress and substance use disorders, both of which have a strong influence through AT. AT and the relationship to the variables will be discussed in further detail in Chapter 2.

Nature of the Study

I used a quantitative approach because it is appropriate to use to determine a relationship between variables. In contrast, a qualitative approach would be better suited for the earlier stages of research. This approach is better suited for the research design

than an experiment because effecting change with individuals could have a detrimental impact on mental health and quality of life. The advantages of the quantitative approach are the ease of data collection and data analysis. The limitation of a quantitative approach is that it is a snapshot in time as that it can explain that there is a relationship between the variables but it does not explain why the relationship between the variables exists. The research design will allow for an examination of the differences in religious stress, substance use disorders, and age of awareness. Religious stress in childhood was the independent variable. The dependent variable was substance use disorders in adulthood, with covariate variables of the age of awareness of sexual orientation and demographic variables race, gender, age, and religious denomination. I used two self-report survey instruments, the RSSIQ and the SMAST, to gather data for this study. A demographics questionnaire was presented to the participants to address the covariates of race, gender, age, and religious denomination.

The research data will be collected from adult participants who identify as sexual minorities using Internet research, and the survey method is the most appropriate to address the RQs because the Internet can reach a diverse population. One benefit of the Internet research is that the anonymity of the individuals would be intact, thus securing the confidentiality, as well as the removal of bias from the research. An Internet research study is appropriate because the previous research has been in person with pen and paper studies. Much of that research had a significant limitation to the research population, in which the Internet research study will more effective in addressing the gap in the literature of age and location.

Definitions

Age of awareness of sexual identity: The age at which an individual becomes aware of their sexual identity, also described as the age of coming out to the self (Page et al., 2013).

Alcohol use disorder: A disorder that is defined in the DSM-5 by four overall groupings; impaired control, social impairment, risky use, and pharmacological criteria (APA, 2019).

Religious stress: The conflict that a sexual minority feels *from* their religion (Page et al., 2013).

Sexual minorities: Individuals who self-identifies as not heterosexual. Lesbian, gay, bisexual, pansexual, asexual, demisexual, gynesexual, skoliosexual, and androsexual are some options for how individuals choose to identify their sexual orientation. However, these labels o not account for individuals who have a sexual preference that differs from their sexual orientation, which can include individuals who identify as heterosexual (Mustanski & Liu, 2013). An individual who is a gender minority (transgender/gender-nonconforming) was able to participate in the study as long as they were also a sexual minority. In this study, I used gay, lesbian, and bi/pansexual as the options for sexual orientation.

Assumptions

This study involved several assumptions. One assumption is that all participants will provide honest responses to the assessments and the questionnaires included in the study. Another assumption is that participants will have an interest in the research and

will not be coerced into participation by another individual. It is assumed that all participants will understand the purpose, procedures, potential risks, and benefits by reading the informed consent. The individuals and families who are religious also share the values of the religion, and the assumption is necessary to the nature of the study because religious stress is inherent to the values of the religion.

Sexual orientation is separate from gender identity because individuals who identify as lesbian, gay, or bi/pansexual are individuals of all genders (Budge et al., 2016). The assumption is necessary to the nature of the study because this study is not meant to discriminate against any individual but rather to focus on the sexual orientation of the individual. All individuals who identify as a sexual minority will also identify as within the labels of lesbian, bi/pansexual, and gay (Budge et al., 2016). The assumption is necessary because of the RSSIQ measures within those parameters. Individuals with a substance use disorder will be active in the substance use disordered behavior; this does not account for individuals who are in recovery from their substance use disorder (Allen, & Mowbray, 2016). This assumption is necessary because of the SMAST measures within those parameters. The assumption is that an individual will be able to recall their age of awareness, and this is necessary because of the RSSIQ measures within those parameters. The participants will be informed that they can withdraw consent to partake at any time during the study. Lastly, the research will assume that the purposive sample will represent a larger sample of sexual minorities.

Scope and Delimitations

Some topics were identified in the presented literature that warrants a discussion about the scope and delimitations of the study. The researcher will gather the perceptions of religious stress in childhood and the presence of substance use disorders in adulthood. This study will be delimited to the definitions of sexual minority and substance use disorder used in the survey questionnaires considered in this study. This specific issue was chosen because of the RSSIQ and the SMAST measures for those factors specifically. To address other issues would be beyond the scope of this study.

This study will be open to anyone who identifies as lesbian, gay or bi/pansexual and who is at least 18 years old; therefore, the study excludes minors – under than age of 18 years old and individuals who do not fit within the labels of lesbian, gay, or bi/pansexual. The study excludes anyone outside of the United States. The results of this study can be generalized to the larger population of lesbian, gay, and bi/pansexual individuals as well as to those with religious affiliations whose children may be members of the lesbian, gay, and bi/pansexual community. The results of this study can be generalized to individuals who have substance use disorders and insecure attachments. The results of this study could potentially be generalized to individuals who do not identify as a sexual minority but who have developed a substance use disorder because of religious stress.

Limitations

Possible challenges in conducting this study could include the sampling technique, potential weaknesses of the utilized scales, and participant bias. The researcher

will use a convenience sampling technique through the Internet to recruit potential participants in the study; therefore, the study will be limited to potential participants who have access to a computer with reliable Internet access because it is a self-selected sample of convenience. Not all individuals within the United States at least 18 years old and identify as a sexual minority have Internet access; thus, only participants are those who have Internet access will be able to partake in the survey, which may result in not capturing all of the relevant data available.

This study could be limited by the potential deception of participants. Participants in every study may not be candid with their responses because of either unintentional motivations or intentional motivations as a result of response bias. Response bias is the individual responding to questions in a socially acceptable manner. Unintentional motivations include a faulty memory, misunderstanding of a question, wanting to give the correct response to a question. Intentional motivations include wanting to skew the results of the study and lack of maturity with the seriousness of the study. Having enough participants to reduce the impact of a few individuals will address the limitation. Response bias will be addressed because the survey is anonymous, which will minimize the amount of bias.

Difficulty recalling information, or recall bias, is different from dishonesty because an individual may have answered all survey questions honestly and to the best of their ability but still not have the awareness to know their age of awareness. Thus, not every participant may know when they experienced the first age of awareness. Additionally, individuals may simply not be recalling information correctly after many

years of having memories shift to fit their narrative. This limitation will be addressed by having enough participants to minimize the effect of the bias.

The consistency of the measurements used in the research is generally necessary for the credibility of the research outcomes. The RSSIQ (Appendix A) does not have well-documented reliability or validity supporting it as it was developed for the original study as a survey tool and has only been used in one study. However, the use of the RSSIQ in this study will add to the body of research, which will increase the validity of the measure will address the limitation.

Biases of this study include that religions are harmful to sexual minorities and will lead to the development of substance use disorders and other mental health issues. By recognizing that not all religions are harmful, the individuals within those religions may choose to reject those values that lead to harm, and that some religions are welcoming to sexual minorities and can provide them with the protective factor of religion, will address the biases.

Researcher bias includes confirmation bias, which will be addressed through challenging assumptions throughout the data collection and analysis process, relying on the data to challenge the bias instead of relying on a bias to challenge the data. Question-order bias and leading question bias have been addressed because the survey is based on another study, whose authors have addressed these biases.

Significance of the Study

Significance to Theory

Attachment theory (Bowlby, 1969) gives an appropriate lens to examine the intricacies of religious stress in childhood and substance use disorders in adulthood. Although the role of AT is the primary focus of this study, it is necessary to understand how the relationship between how events in childhood with authority figures can influence behavior in adulthood, which will add to the body of AT research (Bowlby, 1969; Rosario, Reisner, Corliss, Wypij, Calzo, Austin, 2014). Children feel the need to conform to the religious identity of their family for survival through belonging as viewed through the lens of attachment (Bowlby, 1969; Granqvist, 2014). When the religious identity of the family does not match, the sexual minority can feel stressed because their survival and belonging are threatened (Page et al., 2013). The experience of religion for sexual minorities is different from heterosexuals because, for heterosexuals, their survival and belonging are not threatened (Hamblin & Gross, 2014). This study will add to the body of research for AT in understanding the stress of an individual who must determine their identity and their place in belonging to the family if their identity then does not conform to the standards of the religion. The study will examine how childhood religious stress among sexual minorities can lead to the development of substance use disorders, which will further inform researchers on the relationship between substance use disorders and AT (Fletcher et al., 2015).

Contribution to Practice

This study will contribute to mental health to help with an understanding of how religious stress as the core issue has influenced substance use disorders as well as the inner conflict between the religious identity and sexual orientation identity that may not be fully processed (Bidell, 2014). Mental health professionals will benefit from an understanding that substance use disorders can develop from a variety of factors to include religious stress in childhood (Allen & Mowbray, 2016). The quality of the therapeutic interventions will increase as the mental health provider becomes more competent and understanding; as the quality of life improves for clients, then the quality of life for future generations is improved.

Significance to Social Change

This study could provide an understanding of how religious stress can be damaging to sexual minorities because, while religion has a protective factor for heterosexuals, individuals that are sexual minorities do not have the same protection (Hamblin & Gross, 2014). Religion could have a protective factor for sexual minorities if religions changed their acceptance and tolerance values for sexual minorities. This study may also provide insight into which religions are accepting and tolerating sexual minorities (Balkin, Watts, & Ali, 2014; Bean & Martinez, 2014).

This study has the potential to influence religious organizations about the discrimination of sexual minorities from religious institutions, which could lead to a positive impact of more acceptance and inclusion by those religious organizations.

This study could improve the quality of life for sexual minorities currently by revealing religious stress as a significant factor and could improve the quality of life for future generations of sexual minorities, but not those currently suffering from a substance use disorder, by increasing tolerance of religion and an understanding of the development of substance use disorders. As the quality of life for future generations is improved by this study, then the potential reduction of social funds spent on the overall cost of substance use disorders could be reduced since these disorders occur at a higher rate for sexual minorities (Hughes et al., 2016). This study may improve the quality of life for sexual minorities by validating their experience of religious stress, which will directly impact their worth, dignity, and personal development. This study will improve the quality of life for sexual minorities by adding to the body of research for religious organizations and institutions to be accepting of sexual minorities of faith. This acceptance would have a positive effect on both culture and society.

Summary

In this chapter, several components of the research study, including the background, problem statement, purpose, RQs and corresponding hypotheses, the theoretical framework, and nature of the study. The chapter also included definitions of frequently used terms throughout the study. Also included was a description of the assumptions, delimitations, and limitations as well as the significance of the study.

In Chapter 1, there was a brief overview of the research that has investigated substance use disorders with sexual minorities, as previously discussed in this chapter, and has also focused on substance use disorders and religious stress separately. The study

by Page et al. (2013) researched religious stress and mental health disorders. This current study will follow their model and will research childhood religious stress and substance use disorders in adulthood with an age of awareness of sexual orientation as an influencing factor on the rate of substance use disorders. The study will use an online survey to research the factors and the gap in the literature, specifically regarding the age of participants. The online survey will be able to research a more diverse population of individuals across the United States. The gap in the literature and previous research will be explained in more detail in the next chapter.

Chapter 2 includes a lengthy literature review of current research and trends. A thorough review of Attachment Theory (Bowlby, 1969) will be featured as the theoretical framework for the comprehensive review of how each of the variables examined throughout the study. Additionally, the chapter provides an in-depth look at the nature of the study and a discussion of why the study is needed to fulfill the evident gap in the literature.

Chapter 2: Literature Review

Findings from a national government study indicate that the estimated overall cost of drugs and alcohol for U.S. society is around $440 billion annually (Center for Behavioral Health Statistics and Quality, 2017). According to several studies, sexual minorities have a higher rate of developing substance use disorders than heterosexuals (Hatzenbuehler, 2017; Hughes et al., 2016; Livingston et al., 2015). The development of substance use disorders among sexual minorities therefore has economic implications for the broader economy. The additional problem is that sexual minorities with substance use disorders may be suffering from a lower quality of life especially if they have also experienced religious stress (Page et al. 2013). The purpose of this quantitative study using a correlational design was to examine the relationship between religious stress in childhood and substance use disorders in adulthood for sexual minorities. Previous researchers have focused on religious stress for sexual minorities (Beagan & Hattie, 2015; Longo et al., 2013) and substance use disorders in adulthood (Hatzenbuehler, 2017; Livingston et al., 2015) as separate variables; researchers have yet to examine whether there is a correlation between the variables.

For sexual minorities, religious stress in childhood could have a lasting impact on mental health into adulthood, specifically, the presence of substance use disorders. Religion is a protective factor for heterosexual individuals; however, individuals who are sexual minorities either do not benefit from this protective factor or experience harm from the conflict between religious identity and sexual identity (Longo et al., 2013). Previous researchers have only included individuals who are under the age of 24. I sought

to address this gap in the literature by including adults over the age of 24 in my study. I also expanded the category of sexual minorities to include those who identify as gay, lesbian, and bi/pansexual. This chapter includes the literature search strategy, theoretical foundation, and literature review, followed by a summary of key points.

Literature Search Strategy

I accessed Walden University Library databases and search engines, including Google Scholar and EBSCOhost databases, to gather literature about the independent and dependent variables. The literature review includes studies published between 2013 and 2018. All results were restricted to peer-reviewed studies and full-text articles, excluding dissertations. Inclusion factors included publication within the last 5 years. All studies were relative to the independent and dependent variables.

The key search terms used included *religion*, *religious stress*, *sexual orientation*, *the age of awareness*, *substance use disorders*, *substance use*, and *attachment theory*. The key search terms, variations, and the combinations of the independent variables included those such as *religious stress* and *sexual orientation* and *sexual orientation* and *religious aspects.* A similar search for substance use disorders was also conducted, including terms such as *religion* and *substance use disorders, sexual orientation* and *substance use disorders, sexual orientation* and *substance use disorders,* and *sexual orientation* and *substance abuse.* Last, the following terms were entered in a search *age of awareness* and *sexual orientation*; *religion* and *attachment theory*; and *religion, attachment theory, substance use disorders,* and *sexual orientation.* Current research includes some studies of sexual orientation and religion as well as sexual orientation and substance abuse.

However, there is no overlapping research between the variables; therefore, it was necessary to break down the search terms to identify information on the broader factors.

Theoretical Foundation

The theoretical framework upon which this study was based was AT, which was proposed by John Bowlby as a different approach to the field of psychology at the time (Bowlby, 1969). Bowlby (1969) surmised that individuals could develop attachments, which were special bonds, to their primary caregivers based on how the primary caregivers responded to the individual as an infant and in early childhood. Bowlby's approach was to examine an event or experience in infancy or childhood, such as a child's extended stay in a hospital setting, to predict personality or psychology later in life, which is one the things that made it different from other psychological theories.

Origin of Attachment Theory

In 1969, when Bowlby's theory was published, clinicians used traditional Freudian psychoanalysis to examine the current personality issue back to the individual's childhood to determine the event or experience that caused the issue the individual was experiencing. AT takes its cue from the scientific method as it relies on the direct observation of behavior, a strategy which received criticism from other psychologists, who referred to direct observation as superficial (Fonagy, 2018). Another critical difference in which AT departs from Freudian psychoanalysis was the use of animal data to extrapolate from other species' patterns of behavior to humanity, an approach referred to as ethology. The theory is closely related and built upon the existing instinctive behavior theory and control theory within the psychodynamic framework, as well as

Charles Darwin's theory of evolution, as AT relies on observable data, and it is testable (Bowlby, 1969). It is important to note that Bowlby described homosexuality as functionally ineffective, based on the assumption that the only reason for sexual acts and partnership is to produce offspring (Bowlby, 1969).

Major Theoretical Propositions

Several important tenets of Bowlby's theory are important for understanding how the theory was applied to the current study. Bowlby (1969) introduced and built on the work of many other researchers to describe the phases of separation between mother and infant, the communication between mother and infant, the importance of using observation of behavior over emotion, the significance of early childhood, and types of attachment that can develop in infancy. In this section, I will describe these concepts.

Phases of separation. Before the publication of Bowlby's theory in 1969, various researchers worldwide reported several observational studies of children under the age of 4 years old being separated from the mother-figure. Bowlby (1969), using the work of Robertson, noted many consistencies of how the children would respond during the separation, despite so many other variables. He observed three phases of separation of the child from the mother and the child's natural environment. The three phases were protest, crying, or physical outburst; despair or being withdrawn, inactive, sad, and hopeless; and detachment, welcoming of the new environment, and losing interest when the mother-figure returns (Bowlby, 1969). Because Bowlby's research was done in a hospital setting as children were admitted for various ailments, the cycle was observed first with mothers; it was then repeated with nurses until the child did not seek attachment from people but

rather from material possessions. The research intervention was not in Bowlby's estimation responsible for the phases; instead, it was the absence of the mother-figure.

Communication between mother and infant. Bowlby drew upon the work of Darwin, who identified that facial expression and body language are the first types of communication between mother and infant (Bowlby, 1969). Bowlby (1969) discussed the role of emotion as also having an accompanying *appraisal process*, which has three roles; first is to assess environmental changes, the second is to monitor the self, and the third is the basis of communication. As such, bonds between individuals, such as mother-figure and infant, are often pleasurable and therefore develop quickly and are more likely to last long-term, especially in humans who have a much slower rate of development compared with other animals. Communication between mother and infant is related to the current study because religious stress is based on the premise that the individual experiences stress between their sexual identity and their religious identity, which is often indoctrinated by parents (Bowlby, 1969 & Kirkpatrick, 2012) thus, this conflict is more significant because of the bond between mother and child.

Behavior over emotion. Emotions are an integral part of AT; however, the language of emotions is difficult to separate and can become a complication to communication. Emotions can have a different interpretation for different people, even when using the same word to describe the same emotion. Self-reported emotion is not as reliable as the observable behavior, which is why Bowlby recommended using the language of behavior due to the consistency and lack of misinterpretation. Behavior over

emotion is related to the current study because the substance use disorder in adulthood will be measured by behaviors.

Early childhood. The most sensitive time in an individual's life was discovered by both Bowlby and Freud as they both investigated trauma processes and that this sensitive time is due to more than just an innate biological connection. Bowlby and Freud focused on the trauma period of life to the developing person during the first five to six years in which an individual may be more susceptible to various types of trauma. According to Bowlby (1969), Freud believed that trauma at an early age has a lasting consequence because of a weak ego. Bowlby described a large number of behavioral systems within an individual develop all fully functioning when an individual is young; thus, when a system is not functioning correctly, the cause can usually be identified during the early developmental period (Bowlby, 1969). The behavioral systems are the same from a developing individual and an adult individual, regardless of species. Bowlby observed through literature and then compared attachment to humans to the attachment in primates as further evidence of the biological drive for protecting and caring for the young as a means to further perpetuate the species (1969). Bowlby illustrated that a child desires comfort from the mother-figure rather than just food, as previously thought by Freud and other like-minded theorists. Early childhood relates to the current study because religious stress that happens in childhood is the independent variable.

Types of attachment. Bowlby (1969) stated there was significant evidence for the influence of maternal involvement in the parent-child relationship and mental health individuals. The direct observation of infants bonding with their primary caregiver is

based on the primary caregiver's consistent responses to cries. The theory was developed further to suggest that there are different categories for the types of attachments that an individual can develop. The two main different types of attachment are secure and insecure, and the three types of insecure attachments are; disorganized insecure, anxious, insecure, and avoidant insecure (Bowlby, 1969; Fearon & Roisman, 2017). Secure attachments promote mental health; whereas, insecure attachments are considered a risk factor for mental health disorders (Turan, Hoyt, & Erdur-Baker, 2016). Insecure attachments result from the unresponsiveness or unpredictable responsiveness by the mother (Bowlby, 1969). Types of attachments do not apply to the current study.

Relationship of Theory to Study

Religious stress. Research suggests that AT has a relationship with religion because of having a safe place and individual for an individual to attach (Bowlby, 1969, Ellison, Bradshaw, Flannelly, & Galek, 2014; Granqvist, 2014). An individual can attach to a deity much like the individual can attach to a primary caregiver as the deity is viewed as the security and the protector (Bowlby, 1969; Ellison et al., 2014). In the same way that an individual can have different types of attachment to their primary caregiver, as the individual can have a different type of attachment to their deity. An individual will also seek safety and security from the primary caregiver. If the primary caregiver places high importance on religious conformity, then the individual will feel the need to conform to religion. However, if that religion is not accepting of the individual based on sexual orientation, then the individual may experience religious stress based on the fear of losing the safety and protection of the deity and the primary caregiver (Page et al., 2013).

Age of awareness. If a child is aware of their sexual orientation as a sexual minority, then the type of attachment may change because they are unable to trust that their primary caregiver will provide the safety and security that they need because of the possible persecution and damnation from the religion (Page et al., 2013). Children who grow up knowing that they are different from the rest of the family may not feel entirely accepted as who they are as individuals because there are not living their lives authentically or honestly (Page et al., 2013). Authentic living and honesty about identity can lead to ostracism from the family and religious group; thus, losing the protection and security of the family unit (Page et al., 2013).

Substance use disorders. Previous research suggested that insecure attachments or traumatic childhood experiences have a significant correlation to substance use disorders (Fletcher et al., 2015). Researchers found that individuals who were not nurtured or responded to as infants and children may be looking for external sources to feel loved and secure, such as substances, and may also develop an attachment to their drug of choice rather than to the people around them (Fletcher et al., 2015). Relating this research to AT, individuals who have an insecure attachment may be attempting to fill their internal subconscious parental void with substances.

AT explains how a child, who is aware of their sexual orientation and has experienced religious stress from their religion, is likely to develop substance use disorders because of the nature of the attachment to authority figures. The RQ investigates the relationship between religious stress and substance use disorders, both of which have a strong influence through AT. The RQs build upon the existing theory by

identifying how the relationship between the age of awareness of sexual identity, childhood religious stress, and adult substance use disorders of sexual minorities has been impacted by the systemic influence of religion. AT guides the research by providing context to each of the variables and the RQs which investigate the relationship between religious stress and substance use disorders.

Literature Review Related to Key Variables

Religious stress in childhood could be a contributing factor to substance use disorders in adulthood of individuals within the lesbian, gay, and bi/pansexual community. Religion has been shown through research to improve mental health in heterosexuals; however, those who identify as sexual minorities have the opposite effect from religion (Beagan & Hattie, 2015; Hamblin & Gross, 2014; Longo et al., 2013; Page et al., 2013). Research has studied the religious stress and the mental health in youth (Hamblin & Gross, 2014) and the stress from religion on coming out to self (Page et al. 2013) but not the combination of these three variables. These research studies found that the conflict between religious identity and sexual identity can cause stress for sexual minorities (Hamblin & Gross, 2014; Page et al., 2013). Other studies have identified mental health challenges such as depression or suicide ideation or attempts as occurring at a higher rate for sexual minorities (Beagan & Hattie, 2015; Budge et al., 2016; Hamblin & Gross, 2014; Longo et al., 2013; Pachankis et al., 2015; Page et al., 2013; Williams 2017; Woodward et al., 2013) and Hatzenbuehler (2017) included substance use disorders within his criterion for mental and behavioral health consequences for sexual minorities. Thus, substance use disorders have a significant impact on an

individual's daily functioning, quality of life, on the individual's family, and society. An individual's substance use disorder not only has an impact on daily functioning but can cut an individual's lifespan short, in some cases significantly.

Table 1. Literature Review Matrix.

Heterosexual vs. sexual minority	
• Budge et al., 2016 • Hamblin & Gross, 2014 • Hatzenbuehler, 2017 • Hughes et al., 2016 • Mustanski & Liu, 2013	• Pachankis et al., 2015 • Page et al., 2013 • Rosenkrantz et al., 2016 • Williams, 2017 • Woodward et al., 2013
Religious stress	
• Hamblin & Gross, 2014 • Page et al., 2013	
Age of Awareness	
• Page et al., 2013	
Substance Use Disorders	
• Hughes et al., 2016 • Page et al., 2013	
Sexual Minorities – Religious Stress	
• Beagan & Hattie, 2015 • Hamblin & Gross, 2014 • Longo et al., 2013 • Page et al., 2013 • Pachankis et al., 2015 • Riggle, Rostosky, Black, & Rosenkrantz, 2017 • Rosenkrantz et al., 2016 • Williams, 2017	
Age of Awareness	
• Riggle et al., 2017	
Substance Use Disorders	
• APA, 2019 • Hatzenbuehler, 2017 • Hughes et al., 2016 • Livingston et al., 2015 • Page et al. 2013	

Heterosexual Experience

Religious stress. According to Hamblin and Gross (2014), religion can have a protective factor for the mental health of heterosexual individuals. Heterosexual individuals and individuals whose religion is both accepting and tolerating different sexual orientations have access to that protective factor of religion (Hamblin & Gross, 2014). Sexual minorities do not have that protective factor of religion that is afforded to heterosexuals, and they are likely to endure life-long consequences from religion (Hamblin & Gross, 2014).

Age of awareness. Heterosexuals do not have an age of awareness of sexual orientation because society promotes heterosexuality as a norm. Many heterosexual women and men never have to think about their sexual orientation because of the heteronormative nature present in society. Sexual minorities exist in the heteronormative society and who grow up with religious stress in the household may not be aware of their sexual orientation until later in life; however, those who are aware of the sexual orientation may be more susceptible to the religious stress (Page et al., 2013).

Substance use disorders. Substance use disorders occur at a lower rate for heterosexuals than they do for sexual minorities (Hughes et al., 2016); as about 45% of individuals who identify as homosexual have a substance use disorder compared to 28% of heterosexuals (Kerridge et al., 2017). One possible explanation for the higher rate of substance use disorders for sexual minorities is the religious stress in childhood, because of the inner conflict between religious stress and religious identity. Page et al. (2013) suggested that gay-related stress related to mental health issues; however, their study did

not support that. Another possibility is minority stress, which other studies have linked to the stress that sexual minorities feel from society; however, this study is investigating the stress from religion, not society.

Sexual Minority Experience

Religious stress. Research by Riggle et al. (2017) has suggested that sexual minorities are susceptible to minority stress as members of a marginalized group. Research by Page et al. (2013) suggests that minority stress is a more specific form of stress, stress *from* religion. According to Page et al., religious stress is the conflict that a sexual minority might feel from religion. Religious stress is the critical factor with the individual's internal struggle between sexual orientation and religious preference as both religion and sexual orientation are important aspects of identity because religious identity is a choice where religious stress is an experience of authority figures impressing values onto the individual (Hamblin & Gross, 2014). Whereas heterosexual individuals have access to the protective factor of religion, but that protective factor is not available for sexual minorities (Beagan & Hattie, 2015). Sexual minorities internalize shame of their sexual orientation because of the stress of conforming to religion or rationalizing both their religious identity and sexual orientation, which impacts mental health (Pachankis et al., 2015; Williams, 2017).

Research in the field of the effects of religious stress for sexual minorities as Page et al. developed the RRSIQ to measure religious stress with the intent to determine if gay-related stress or religious stress was correlated with depression rates for individuals who identify as gay, lesbian, or bi/pansexual. They concluded that the religious stress was

correlated significantly with depression but that stress from identifying as a sexual minority, which the authors refer to as, gay-related stress, was not significant. Therefore, the stress an individual feels from their religion is more stressful and debilitating than the stress and shame that an individual feels about their sexual orientation.

However, this difference between stress coming from religion, the external source being more impactful than the internal source of stress, is not valid for all religions, as demonstrated by Rosenkrantz et al. (2016). Their research found that intersecting religious or spiritual identity with sexual minority identity may contribute cyclically to personal and spiritual growth and development. This research was specific to positive and accepting religions and emphasized the importance of the support from the religious or spiritual community; however, this is not the typical experience of most religions within the United States. The factors of religion and religiosity on non-suicidal self-injury among sexual minority youth have both protective and risk factors, which is subject to the specific religion, such as those with the Christian religion, were at the most risk for non-suicidal self-injury (Longo et al., 2013).

The gaps in the literature from these studies are that the authors excluded individuals who did not fit into the labels of gay, lesbian, or bi/pansexual; the study also excluded individuals who were over the age of twenty-four. Page et al. is the only study that encompasses the concepts of gay stress impacting the quality of mental health within the lesbian, gay, and bi/pansexual community; however, there is currently not a study that researches the specific variables of religious stress and substance use disorders within the lesbian, gay, and bi/pansexual community. Therefore, the following examines how the

different variables are all supported by the theoretical framework as well as may influence other variables. AT suggests that religious stress is a disconnect from secure attachments.

Age of awareness. The age of awareness of sexual identity for this study is the age of when an individual becomes aware of their sexual identity. Page et al. (2013) describe this as the age of coming out to the self, which is an important concept because an individual may have an awareness of their own sexual identity but may or may not share that awareness with others.

Sexual identity is how an individual conceptualizes the self, based on which gender they are attracted to both romantically and sexually. Sexual identity does not limit an individual based on sexual behavior. It is not the same as a sexual orientation which, is how others view the individual based on the relationships the individual chooses to engage. Sexual identity is an internal concept whereas sexual orientation is an external concept. An individual may choose to express any portion of their sexual identity or to conceal it; generally, the degree to which an individual honestly expresses their sexual orientation is the same as the degree that the individual experiences an internal peace (Riggle et al., 2017).

An important concept for the RQs is that the development of sexual identity is likely to occur in childhood; however, an individual may not be aware of their own sexual identity. What causes an individual to be aware of their sexual identity could be related to environmental factors such as religious stress.

Sexual orientation may or may not have biological causation; however, the purpose of this study is not to understand the development of the identity of sexual orientation, rather how those who express a sexual orientation other than heterosexual experience religious stress in childhood and the implications of substance use disorders in adulthood. Therefore, the study is not stating that religious stress is causing or influencing sexual orientation rather that it is influencing the development of substance use disorders within the sexual minority population.

Substance use disorders. Substance use disorders were defined in the DSM-5 by four overall groupings; impaired control, social impairment, risky use, and pharmacological criteria (APA, 2019). Impaired control refers to using more of the substance and, more often, the inability to regulate substance use, the time spent planning, using, and recovering from the substance, and craving (APA, 2019). Social impairment includes the inability to fulfill obligations at work, school, or home, continued use of the substance despite social problems caused by substance use or made worse by substance use, and the loss in hobbies and interests (APA, 2019). Risky use refers to using when it is hazardous to do so because of the physical or psychological effects on the individual or used in dangerous situations, such as driving while under the influence of substances, and the individual is unable to refrain from substance use despite the problems that the user is having (APA, 2019). Pharmacological criteria include tolerance and withdrawal (APA, 2019). Substance use disorders generally develop in adolescents, which is also the same time as the age of awareness of sexual orientation (Page et al., 2013).

Hatzenbuehler (2017) included substance use disorders within his criterion for mental and behavioral health consequences for sexual minorities. Recent research investigated the specific gender patterns of alcohol use disorder within various heterosexuals and sexual minorities based on gender, which indicated that lesbians had more than three times greater odds of lifetime alcohol use disorders and more than three times greater odds of any lifetime substance use disorder than did heterosexual women neglect (Hughes et al., 2016). Lesbians who reported childhood neglect had more than 30 times the odds of alcohol dependence as heterosexual women who reported neglect (Hughes et al., 2016). Thus, substance use disorders have a significant impact on an individual's daily functioning, quality of life, on the individual's family, and society. An individual's substance use disorder not only has an impact on daily functioning but can cut an individual's lifespan short, in some cases significantly. The protective factors of religion are not available to sexual minorities, which may lead to higher rates of substance use disorders.

Summary and Conclusions

Sexual minorities are at an increased rate of developing mental health disorders for a variety of reasons relating to social influence and self-perception. Society has been influenced significantly by religion, which traditionally has held a negative perception of sexual minorities (Bean & Martinez, 2014). This negative perception of religion has caused stress and inner conflict with individuals. AT (Bowlby, 1969) examines the impact of stressful relationships on individuals in infancy and early childhood. Religious stress in childhood may increase the rate of substance use disorders in adulthood on

individuals who identify as sexual minorities because the protection that religion offers heterosexual individuals for their mental health may not be available to individuals who feel persecuted by religion. The age of awareness of sexual orientation and religious stress has been researched previously, once; however, substance use disorders have not been researched in conjunction with the other variables.

Additionally, specific religious denominations have not been studied with variables or religious stress and substance use disorders. Religious stress has a relationship with mental health, religious stress, and age of awareness of sexual orientation have a relationship, and substance use disorders have a relationship with mental health. The present study fills the gap in the literature by having individuals at least 18 years old as participants, whereas other research did not use participants over the age of 24.

Chapter 3 includes a description of the research study and details the research design. Such as the research design, recruitment of participants through an online survey posted to multiple gay, lesbian, and bi/pansexual Facebook pages, and the instrumentation. The survey will mimic the RSSIQ used by Page, et al. will ask about the awareness of sexual orientation, as well as a survey for substance use disorders the Short Michigan Alcohol Screening Test. Additionally, the chapter will illustrate how the research study will be conducted and the validity of the research study.

Chapter 3: Research Method

The purpose of this nonexperimental quantitative study was to examine the relationship between religious stress in childhood and substance use disorders in adulthood among sexual minorities. This chapter includes a discussion of the research design and statistical procedures used in this study. Key topics include the research design and rationale; methodology includes participants, data collection procedures, instrumentation, and statistical analysis techniques; and threats to validity, including ethical procedures.

Research Design and Rationale

I chose a quantitative descriptive correlational research design to examine the relationship between the variables. Finding causality is nearly impossible due to individual differences and the vast number of variables that each participant naturally brings with them and cannot be manipulated (Creswell, 2013). For this reason, I decided to use a descriptive correlational design to determine if the variable of religious stress has a positive or negative correlation with substance use and the age of awareness of sexual orientation. Because the phenomenon of religious stress have been identified and quantified, a qualitative research design would have been prudent to use (Tabachnick & Fidell, 2007). The predictor variable for this study was religious stress, and the criterion variables were substance abuse and age of sexual orientation. I used regression analysis to determine the relationship between the dependent and independent variables.

Methodology

Population

The target population for this dissertation was individuals who self-identified as sexual minorities--specifically, individuals who self-identified as lesbian, gay, and bi/pansexual; who were at least 18 years old; and who were living in the United States at the time of the study. Individuals who did not meet the criteria or who did not complete the survey were excluded from the study. The total respondents for this study were 105 individuals.

Sampling and Sampling Procedures

I conducted an a priori power analysis to determine the minimum number of participants required to conduct this particular research with three variables. The calculations were done using the G*Power 3.1.9.2 (Faul, Erdfelder, Buchner & Lang, 2014). Several critical pieces of information are required to determine the number of participants needed for a given study. In this study, the alpha level (α), desired effect size, desired power, and the number of predictor variables were established to determine the number of participants required. Faul et al. (2014) described the alpha level, p-value, which is generally set to .05 for most social sciences.

Moreover, the alpha level represents the probability of a Type I error (false positive). A Type I error is described as the rejection of the null hypothesis (McGrath, 2011). The power level of the study must also be examined to predict the probability that the null hypothesis will be rejected. Typically, the power level is set at .80 (McGrath,

2011). This means there is an 80% chance that the null hypothesis will be rejected (McGrath, 2011).

The effect size for this study was established at .15 because a low to moderate effect size is the typical indicator of the relationship between variables. The effect size is also known at the correlational coefficient. This represents how strong the relationship between the variables is (McGrath, 2011). I used the G*Power 3.1.9.2 software to calculate a priori power analysis with the discussed alpha level of .05, the power level of .80, the effect size of .15, and three predictor variables. Per the calculations, a minimum sample size of 77 would be required. This means that 77 participants were required for an 80% chance of rejecting the null hypothesis.

Procedures for Recruitment, Participation, and Data Collection

Participants learned of the survey by seeing a Facebook post with the survey link attached. The social media letter (see Appendix A) accompanied the post as the first introduction to the survey. The link to the survey site opened to a copy of the informed consent. The participants had to acknowledge the informed consent on the website before beginning the survey, as well as indicate that they were over the age of 18, living in the United States, and identified as a sexual minority. The participants were not required to disclose their names or information that could identify them.

Instrumentation and Operationalization of Constructs

The Religious, Spiritual and Sexual Identity Questionnaire (RSSIQ). I used the RSSIQ to measure the age of awareness of sexual orientation and the subscale of total control, RSSIQ-TC (Page et al., 2013), to measure religious stress. The RSSIQ-TC is a

five-item self-report measure that assesses the spiritual conflict between religion and sexual orientation (Page et al., 2013). The participants' responses were measured on a 5-point Likert scale, and each scale was tallied separately. The results of this subscale measure religious stress.

The RSSIQ-TC was appropriate for the current study because it measures religious stress and the age of awareness of sexual orientation. I obtained permission from the developer, Kristen Lindahl, to use the instrument (see Appendix B). The previous population that the RSSIQ was used included 170 adolescent and young adults aged 14–24, 45% identifying as female and 55% identifying as male, and from an ethnically diverse population (Page et al., 2013). The authors of the previous study using the RSSIQ did not document the established validity and reliability.

Short Michigan Alcohol Screening Test (SMAST). The SMAST (Selzer, Vinokur, & van Rooijan, 1975) is a 13 question, self-report measure, including only *yes* or *no* answers to measure the likelihood of alcohol use disorder. The scores are totaled; a score of 0–2 indicates no problem, a score of 3 indicates a borderline problem, and a score of 4 or more indicates the potential of alcohol abuse (Shields et al., 2007). The SMAST is in the public domain; therefore, permission from the developer was not necessary to use the instrument. The instrument developers calculated that the weight reliability suggests adequate reliability; it is adequate for research purposes, but clinical use should be performed with caution in some instances (Shields et al., 2007).

Demographic questionnaire. I used a demographics questionnaire to determine participants' age, race, gender, and location. Participants answered these items on the

survey site before answering the other assessment tools. The rationale for using these variables was discussed in Chapter 2.

Data Analysis Plan

For this research study, I used the Statistical Package for the Social Sciences (SPSS) to analyze the data gathered from Survey Monkey. The data that were collected and analyzed were the information from the RSSIQ, SMAST, and demographic questions. The screening process included proofreading the data to ensure the data were entered correctly. Second, a check for missing data was done to determine if the incomplete data was due to random chance or a pattern. If no pattern to the missing data was discovered, the guidelines for missing variables (Tabachnick & Fidell, 2014) were followed. The participants had to complete both surveys, or their information would not be included in the study.

I obtained descriptive statistics from the RSSIQ and SMAST and then analyzed the data using SPSS software. A simultaneous multiple linear regression analysis was used to answer the first RQ regarding religious stress, and the age of awareness was a predictor for substance use disorders. It should be noted that the dependent variable was substance use disorders and religious stress was the independent variable. I used a correlational analysis to understand the relationship between the variables. The data were entered and processed using the SPSS statistics software.

I sought to determine the relationship between religious stress in childhood, the age of awareness of sexual orientation, and substance use disorder in adulthood. For this research study, the online survey platform, Survey Monkey, was used to gather the data

from the participants. The data collected was the information from the participants, who self-selected to take the survey after seeing it posted on the LGBT Facebook page. The screening process included three questions, which asked if the individual was over the age of 18, living in the United States, and identified as a sexual minority; if the individual answered *no* to any of those questions, they were unable to access the survey. When the required number of participants had completed the survey, the data was imported to SPSS. The data underwent a check for missing data, those individuals who did not complete the entire survey had their scores removed, to determine if the complete data was due to random chance or pattern. The study will use a correlational analysis and multiple regression to test the RQs to determine if there is a relationship between the variables.

The RQ and hypotheses were used to examine the relationship between the data. RSSIQ-TC was used to measure religious stress. The SMAST was used to measure substance use disorder. The demographics questionnaire was used to measure the individual characteristic of the participants.

The RQs and hypotheses were as follows:

RQ1. Does the age of awareness of sexual orientation influence childhood religious stress a predictor of adult substance use disorders in sexual minorities?

$H_0$1. There is no significant relationship for sexual minorities between religious stress in childhood as measured by the RSSIQ-TC and substance use disorders in adulthood, as measured by the SMAST.

H_A1. There is a significant relationship for sexual minorities between religious stress in childhood as measured by the RSSIQ-TC and substance use disorders in adulthood, as measured by the SMAST.

RQ2. Is there a relationship between the age of awareness of sexual orientation and religious stress in the childhood home for sexual minorities?

H_02. There is no significant relationship for sexual minorities between the age of awareness of sexual orientation as measured by the RSSIQ and religious stress in childhood, as measured by the RSSIQ-TC.

H_A2. There is a significant relationship for sexual minorities between the age of awareness of sexual orientation as measured by the RSSIQ and religious stress in childhood, as measured by the RSSIQ-TC.

RQ3. Is there a relationship for sexual minorities between the age of awareness of sexual orientation and substance use disorders in adulthood?

H_03. There is no significant relationship for sexual minorities between the age of awareness of sexual orientation as measured by the RSSIQ and substance use disorders in adulthood, as measured by the SMAST.

H_A3. There is a significant relationship for sexual minorities between the age of awareness of sexual orientation as measured by the RSSIQ and substance use disorders in adulthood, as measured by the SMAST.

RQ4. Is there a relationship for sexual minorities between demographics – age, gender, race, and religious denomination – and religious stress?

$H_0$4. There is no significant relationship between demographics as measured by the demographics questionnaire and religious stress, as measured by the RSSIQ-TC.

H_A4. There is a significant relationship between demographics as measured by the demographics questionnaire and religious stress, as measured by the RSSIQ-TC.

Table 2
Summary of Data Analyses Procedures

RQ#	Statistical Test	Independent Variable	Dependent Variable	Covariate
RQ1	Correlational Analysis/ Multiple Regression	Religious stress	Substance use disorders	Age of awareness
RQ2	Correlational Analysis	Age of awareness of sexual orientation	Religious stress	
RQ3	Correlational Analysis	Age of awareness of sexual orientation	Substance use disorders	
RQ4	Correlational Analysis	Religious stress	Demographics	

Threats to Validity

External Validity

External validity is affected by the reliability of instruments, data assumptions, sample size, research design, types of analysis, and data collection. The reliability of the instruments the RSSIQ does not have any published measures of validity, and the SMAST has a published validity rate of .8, which is satisfactory for research purposes (Shields et al., 2007). The ability to generalize the results of this study is a threat to external validity because the participants are self-selected through a sample of

convenience and these participants may not be representative of the population as a whole because they are drawn to this type of study.

Internal Validity

Many of the thoughts on internal validity – history, testing, instrumentation, statistical regression, experimental mortality, and selection-maturation interaction are non-issues because this is a cross-sectional study. The threats to internal validity include technological difficulties, fatigue from the length of the survey, self-report bias, recall bias, and researcher bias. Technological difficulties could include software, hardware, Internet connectivity, power failure of a device, and the maintenance of the website itself. Fatigue from the length of the survey is a concern, which the reason for the use of SMAST instead of the MAST. The self-selection of the participants may present bias in the sample population of those participants who have had negative experiences with religion in the past being more willing to participate in the study than those individuals who have not had negative experiences with religion. The technological difficulties will not be able to be addressed, such as software issues, Internet connection issues, and issues on the Survey Monkey site. The fatigue from the survey has been addressed as much as possible, still maintaining the integrity of the survey because of the length of the RSSIQ study. The self-selection of the participants will hopefully resolve itself with more participants so that there is a more balanced representation to include more than just the negative experiences with religion. Self-report bias is when the participant responds to the survey in a manner to make themselves seem more socially desirable. This has been addressed by the anonymity of the survey. The recall bias is the difficulty that a

participant may have when attempting to remember the facts accurately. Recall bias will be addressed by having the individual recall significant events while doing the RSSIQ. Researcher bias includes confirmation bias, which will be addressed through challenging assumptions throughout the data collection and analysis process. Relying on the data to challenge the bias instead of relying on a bias to challenge the data. Question-order bias and leading question bias have been addressed because the survey is based on another study, whose authors have addressed these biases.

Construct Validity

The threats to statistical conclusion validity include not having enough participants, violating assumptions of statistical tests, and the reliability of the measures. Having less than the required number of participants would significantly impact the statistical results because it would not be a represented sample of the population to be studied. The reliability of the measures is a concern because the RSSIQ does not have any published measures of validity, and the SMAST has a published validity rate of .8, which is satisfactory for research purposes (Shields, 2003). The construct validity will be addressed by gathering enough participants after drumming up support and interest from specific Facebook pages and groups. Violating assumptions of statistical tests will be addressed by following the guidelines of research. The reliability of the measures will be addressed by using the research study to add to the body of research.

Ethical Procedures

The ethical procedures will be described by the ethical issues related to the research problem, ethical issues related to the RQs and problems, ethical issues in data

analysis and interpretation, ethical issues in data analysis and interpretation, and ethical issues in writing and disseminating research.

The ethical issues related to the research problem include the vulnerable, delicate, sensitive, and private nature of the variables and the protective and secretive nature of the participants. Religion can be a sensitive and private topic for individuals who have not experienced religious stress, so for individuals who have experienced religious stress, religion and childhood experiences may not be a topic that participants are readily willing to disclose. Additionally, substance use disorders are by nature, secretive, and pervasive; thus, to remedy these issues, every effort will be taken to provide the participants with informed consent and a description of the research study. Upon completing the survey, resources will be provided to the participants in the form of national hotline numbers to discuss any mental health concerns from the survey that may have been triggering from the survey process. The sensitive and private nature of the study will be addressed because all of the data will be anonymous, which will ensure privacy and confidentiality.

Working with human subjects requires an application to the Walden Internal Review Board before proceeding with the data collection. The ethical issues related to the RQs and the purpose of the study is the reliance on the participants' memory. The recruitment process is posting the survey to various LGBT Facebook pages; there are no known ethical concerns related to the recruitment process. The ethical concerns related to data collection, such as participants dropping out early is to omit all of their data. The participants will access the survey using a secure survey website to protect the identity of the participants, ensuring anonymity.

The ethical issues in data analysis and interpretation are the protection of the data. The data will only be accessed by the researcher through Survey Monkey's secure website, the employees undergo annual training in security and HIPPA, passwords are complex, and the data is encrypted in transit using TLS cryptographic protocols (SurveyMonkey, 2018). The raw data will be stored on the Survey Monkey site, the analyzed data will be stored on the researcher's personal computer, and the data will be destroyed years after the completion of the dissertation project based on Walden's requirements. The data collection and storage procedures for the Survey Monkey website will keep the participants anonymous to protect the participants' confidentiality.

Ethical issues in writing and disseminating research. The ethical issues in writing and disseminating research include the impact on participants, their families, sexual minorities, and religious organizations. The impact that the research results could have on participants, their families, sexual minorities, and religious organizations will depend on the results of the research. If the results show that religious stress in childhood has a correlation to substance use disorders in adulthood, then the results could validate the experience of the participants and sexual minorities. If the results show that religious stress in childhood does not correlate to the substance use disorders in adulthood, then the results could validate the religious organizations' and families' practice.

Summary

Chapter 3 presented the research methodology, population, instrumentation, and operationalization, threats to validity, and ethical concerns. The purpose of this quantitative, causal-comparative study was to examine the relationship between religious

stress in childhood and substance use disorders in adulthood among sexual minorities. The study will be conducted to determine whether there is a significant difference between the independent variable in the study, religious stress, and the dependent variable, which includes a measure of substance use disorders. Age of awareness of sexual orientation, sexual orientation, and denomination are covariates.

The study will use the information gathered from the participants through the use of the survey link posted to various LGBT Facebook pages. The survey will include informed consent, a background questionnaire, RSSIQ, and SMAST. There are limited concerns about reliability, validity, and ethical concerns. Chapter 4 will provide a presentation and a discussion of the research of the data analyses.

Chapter 4: Results

The purpose of this nonexperimental quantitative study was to examine the relationship between religious stress in childhood and substance use disorders in adulthood among sexual minorities. I used the RSSIQ-TC, SMAST, and a demographics questionnaire to address the RQs. The results provide further understanding of variables previously studied by Page et al. (2013). The focus of RQ1 was on examining if there was a relationship between religious stress, age of awareness, and substance use disorders as well as on determining if religious stress was a predictor of substance use disorders. With RQ2, the aim was to examine if there was a relationship between religious stress and age of awareness. RQ3 centered on the relationship, if any, between the age of awareness and substance use disorder and RQ4, on whether there was a relationship between religious stress and the demographics age, race, and gender. The hypotheses concerned whether there was a correlation between the variables in each RQ. In this chapter, I report the characteristics of the obtained sample, the descriptive statistics for the study's variables, and the results of the study hypotheses.

Data Collection

Time Frame and Recruitment

Before the participants began the survey process, they learned of the survey by seeing a Facebook post with the survey link attached. The social media letter (see Appendix A) accompanied the post as the first introduction to the survey. Upon following the link to the SurveyMonkey site, the participant had a copy of the informed consent. The participants had to acknowledge the informed consent on the website before

beginning the survey, as well as indicate that they were over the age of 18, living in the United States, and identified as a sexual minority. The participants were not required to disclose their names or information that could identify them. In order to comply with federal laws and institutional policies related to research, I obtained permission to conduct the study from Walden University on June 12, 2019, with an Institutional Review Board approval number of 06-12-19-0424679 and an expiration date of June 11, 2020.

Response Rate

As noted in Chapter 3, I conducted an a priori power analysis to determine the minimum number of participants required for this survey. A sample size of 77 was determined to be the minimum number required for this research. Once the data were collected, they were screened using SPSS. There was a total of 170 respondents between June 2019 and September 2019, and incomplete assessments were filtered out of the analysis. All participants reviewed the informed consent, and 105 out of 170 surveys were fully completed. The remaining surveys ($N = 65$) were not scored nor were they included in any of the statistical analyses because they were incomplete. Only completed surveys were included for data analysis. The number of completed assessments yielded a sample size of 105 with a 76% response. Once data collection was complete, the data were screened and processed using SPSS.

Descriptive Statistics

The total sample size was 105 participants who completed all assessment instruments. I assessed demographic characteristics on three categorical variables: gender

(male, female, other), race (Black, White, and other), and religious denomination (Christian; Catholic; Mormon; Atheist; or nonreligious, spiritual, and other). The final sample consisted of 105 adults aged 18 and older, with 37% of the sample between the ages of 25-34. Sixty-two percent of the sample population identified as female and 26% as male. Participants reported having known about their sexual orientation for a mean of 17 years of age and a mode of 12 years of age, which is important to note because the average age does not reflect the most common age of awareness. The sample was not ethnically diverse, as 82% reported being White. A majority of participants, 53%, were from the Pacific Northwest region of the United States, and the remaining participants were from other regions of the country equally dispersed. All participants self-identified as gay, lesbian, or bisexual. The sample was not proportional to the larger population in regard to race, location, and gender; however, the sample was proportional to the larger population in terms of age, which was the main demographic for the gap in the literature. Table 3 includes descriptive data regarding participant demographics.

Table 3

Frequency Distribution of Demographic Characteristics of the Sample

Characteristic	Frequency	Percent
Gender		
Male	27	26
Female	65	62
Age		
18-24	15	14
25-34	39	37
35-44	24	23
45-54	15	14
55-64	9	9
65+	3	3

Results

Research Question 1

The first RQ concerned the relationship between religious stress and substance use disorders using multiple regression analysis to address the predictor relationship. I conducted a simultaneous multiple linear regression to examine the relationship between religious stress, substance use disorders, and age of awareness. The predictor variables were religious stress and age or awareness. The dependent variable was a substance use disorder. The null hypothesis was that there was no relationship between the variables. The associated probability values for this research was set to $p < 0.05$.

I analyzed the scores from the RSSIQ, RSSIQ-TC, and the SMAST. The null and alternative hypotheses for the analysis were that there was no relationship between religious stress and substance use disorders and that there was a relationship between religious stress and substance use disorders. The results of the correlational analysis and the multiple regression suggested that was no correlation. Thus, the null hypothesis for the first RQ was accepted. The means and standard deviations are presented in Table 4. The regression model for the multiple regression is reported in Table 6.

Table 4
RQ1 Descriptive Statistics

	Religious Stress	Substance Abuse
Mean	19.6	.39
Standard Deviation	6.2	.49

Table 5
RQ1 Correlational Analysis

	Religious Stress	Substance Abuse
Pearson Correlation	1	.099
Sig (2-tailed)		.316
N	105	105

The individuals were surveyed about their religious stress (M = 19.6, SD = 6.2) and their substance use (M = .39, SD = .490), as shown in Table 4. A Pearson's r data analysis revealed no correlation between the variables, r = .099, as shown in Table 5.

Table 6
Multiple Regression Model

Model	R	R squared	Adjusted R squared	Std. Error of Estimate
1	.126	.016	-.003	.491

The R^2 value of 016 indicates that religious stress and age of awareness of sexual orientation accounted for 2% of the variance in substance use disorders for sexual minorities. Additionally, the significance value for the ANOVA was .439, indicating that the test was not significant as it did not meet the criteria of .05 or less.

Research Question 2

The second RQ examined the relationship between religious stress and age of awareness. The scores from the RSSIQ and the demographic questionnaire were utilized. The null and alternative hypotheses for the analysis were, respectfully, there was no relationship between religious stress and age of awareness, and there was a relationship between religious stress and age of awareness. The results of the correlational analysis

suggested that was no correlation. Thus, the null hypothesis for the second RQ was accepted, and the means and standard deviations are presented in Table 7.

Table 7
RQ2 Descriptive Statistics

	Religious Stress	Age
Mean	19.6	17.15
Standard Deviation	6.2	7.251

Table 8
RQ2 Correlational Analysis

	Religious Stress	Age
Pearson Correlation	1	-.116
Sig (2-tailed)		.237
N	105	105

The individuals surveyed about their religious stress (M = 19.6, SD = 6.2) and their age of awareness of their sexual orientation (M = 17.15, SD = 7.251), as shown in Table 4. A Pearson's r data analysis revealed the correlation between the variables was r = -.116 as shown in Table 8, which is not statistically significant.

Research Question 3

The third RQ examined the relationship between substance use disorders and the age of awareness. The scores from the RSSIQ for the age of awareness and the SMAST were utilized. The null and alternative hypotheses for the analysis were, respectfully, there was no relationship between substance use disorders and the age of awareness, and there was a relationship between substance use disorders and the age of awareness. The results of the correlational analysis suggested that was no correlation. Thus, the null

hypothesis for the first RQ was accepted and the means and standard deviations are presented in Table 9.

Table 9
RQ3 Descriptive Statistics

	Age	Substance Abuse
Mean	17.15	.39
Standard Deviation	7.251	.490

Table 10
RQ3 Correlational Analysis

	Age	Substance Abuse
Pearson Correlation	1	-.090
Sig (2-tailed)		.362
N	105	105

105 individuals were surveyed about their age of awareness of their sexual orientation (M = 17.15, SD = 7.251) and their substance use (M = .39, SD = .490) as shown in Table 6. A Pearson's r data analysis revealed the correlation between the variables was r = -.090 as shown in Table 10.

Research Question 4

The fourth RQ examined the relationship between religious stress and race; between religious stress and gender, and between the religious stress and religious denomination in childhood. The scores from the RSSIQ-TC, SMAST, and demographic questionnaires were utilized. The null and alternative hypotheses for the analysis were, respectfully, there was no relationship between religious stress and race; between religious stress and gender, and between the religious stress and religious denomination

in childhood and there was a relationship between religious stress and race; between religious stress and gender; and between the religious stress and religious denomination in childhood. The results of the correlational analysis suggested that was no correlation. Thus, the null hypothesis for the fourth RQ was accepted and the means and standard deviations are presented in Tables 11, 13, and 15.

Table 11
RQ4a Descriptive Statistics

	Religious Stress	Gender
Mean	19.6	1.87
Standard Deviation	6.2	.606

Table 12
RQ4a Correlational Analysis

	Religious Stress	Gender
Pearson Correlation	1	-.086
Sig (2-tailed)		.385
N	105	105

The individuals surveyed about their religious stress (M = 19.6, SD = 6.2) and their gender (M = 1.87, SD = .606) as shown in Table 8. A Pearson's r data analysis revealed the correlation between the variables was r = -.086 as shown in Table 11.

Table 13
RQ4b Descriptive Statistics

	Religious Stress	Race
Mean	19.6	1.49
Standard Deviation	6.2	1.202

Table 14
RQ4b Correlational Analysis

	Religious Stress	Race

Pearson Correlation	1	-.023
Sig (2-tailed)		.819
N	105	105

The individuals surveyed about their religious stress (M = 19.6, SD = 6.2) and their race (M = 1.49, SD = 1.202 as shown in Table 10. A Pearson's r data analysis revealed the correlation between the variables was r = -.023 as shown in Table 14.

Table 15
RQ4c Descriptive Statistics

	Religious Stress	Religious Denomination
Mean	19.6	3.08
Standard Deviation	6.2	1.452

Table 16
RQ4c Correlational Analysis

	Religious Stress	Religious Denomination
Pearson Correlation	1	-.024
Sig (2-tailed)		.806
N	105	105

The individuals surveyed about their religious stress as represented by total conflict (M = 19.6, SD = 6.2) and their religious denomination (M = 3.08, SD = 1.452) as shown in Table 12. A Pearson's r data analysis revealed the correlation between the variables was r = -.024 as shown in Table 16.

Summary

Per Chapter 3, a correlational analysis was conducted for each of the proposed RQs, and multiple regression was conducted for the first research question in addition to

the correlational analysis. For the first RQ, the results showed that the correlational analysis failed to reject the null hypothesis. The analysis showed for the second RQ that the results failed to reject the null hypothesis. For the third RQ, the results showed that the correlational analysis failed to reject the null hypothesis. The analysis showed for the fourth RQ that the results failed to reject the null hypothesis.

In Chapter 5, I will present a summary of the study and discussion of the possible explanations for the results and identification of limitations to this study that might have contributed to these results. A discussion of the purpose of this study and an explanation of how it was conducted will be included. Conclusions will be made from the findings and the subsequent impact on social change. Lastly, the recommendations for further research and future action will be evaluated as well as any implications to social change this study could provide.

Chapter 5: Discussion, Conclusions, and Recommendations

The purpose of this nonexperimental quantitative study was to examine the relationship between religious stress in childhood and substance use disorders in adulthood among sexual minorities. I conducted the study to determine whether there was a significant difference between the independent variable in the study, which was religious stress, and the dependent variables, which included measures of substance use disorders, age of awareness, and demographics. The study was conducted to fill in gaps in the literature regarding potential differences experienced by sexual minorities. Previous researchers excluded individuals who did not identify as gay, lesbian, or bi/pansexual and did not include individuals who were over the age of 24 (Page et al., 2013).

There were four RQs in this study. The first question asked if there was a relationship between religious stress and substance use disorders. The second RQ sought to answer if there was a relationship between religious stress and age of awareness. The third question asked if there was a relationship between substance use disorders and the age of awareness. The fourth RQ sought to answer if there was a relationship between religious stress and race, between religious stress and gender, and between religious stress and religious denomination in childhood.

Several key articles provided the basis for the RQs. Individuals who identify as sexual minorities are more susceptible to mental health disorders from religion, according to researchers (Beagan & Hattie, 2015; Hamblin & Gross, 2014; Longo et al., 2013; Page et al., 2013). Few researchers have studied the effect of religious stress and mental health

in sexual minority youth (Hamblin & Gross, 2014) or the stress from religion on the age of awareness (Page et al. 2013), and none studied the combination of these three variables (religious stress, mental health, and age of awareness), according to my review of the literature. The protective factors of religion are not available to sexual minorities as they are for heterosexuals, which might account for higher rates of substance use disorders among this population (Hatzenbuehler, 2017; Hughes et al., 2016).

I conducted this study to address a gap in the research by addressing religious stress, substance use disorder, and age of awareness. In the final chapter, I provide an interpretation of the findings as they relate to the literature review. The chapter also features a discussion of the theoretical framework's relationship to the results. Chapter 5 includes discussion of the limitations of this study and recommendations for future research. Last, I discuss the study's implications for positive social change and offer a conclusion.

Interpretation of the Findings

The Findings of Religious Stress, Substance Use Disorder, and Age of Awareness

The first RQ pertained to a relationship between religious stress, substance use disorders, and age of awareness. The correlational analysis failed to reject the null hypothesis as did the multiple regression; therefore, the relationship between the variables was statistically nonsignificant with both the correlational analysis and the multiple regression analysis at this time. The lack of a significant finding in this study sample means that religious stress in childhood does not predict substance use disorders in adulthood because the variables are not correlated or the measures did not accurately

reflect the lived experience of the participants. A review of the literature demonstrated that there was a relationship between mental health and religious stress (Hamblin & Gross, 2014; Page et al., 2013); however, those results could not be duplicated with the parameters of this study, most likely due to the lack of validity with the RSSIQ and the lack of scoring instructions.

In this study, I attempted to replicate previous research and to correlate the age of awareness with religious stress to see an effect on substance use disorders. Previous research suggests that sexual minorities are susceptible to minority stress as members of a marginalized group (Riggle et al., 2017) and minority stress is a more specific form of stress similar to how religious stress is a specific form of stress because of the conflict that a sexual minority might feel from religion (Page et al., 2013). Previous researchers have focused on mental health factors and substance use disorders as a specific mental health factor. Substance use disorders were defined in the DSM-5 by four overall groupings: impaired control, social impairment, risky use, and pharmacological criteria (APA, 2019). The age of awareness was the covariate for religious stress as a predictor of substance use disorders. The age of when an individual has an understanding that their sexual orientation is not heterosexual is the age of awareness. An important concept for the RQs was that the development of sexual identity was likely to occur in childhood; however, an individual may not be aware of their own sexual identity. What causes an individual to be aware of their sexual identity could be related to environmental factors such as religious stress. Substance use disorders generally develop in adolescence, which is also the same time as the age of awareness of sexual orientation (Page et al., 2013).

The Findings of Religious Stress and Substance Use Disorders

The second RQ sought to determine the statistical significance of a relationship between religious stress and substance use disorders. The analysis confirmed the null hypothesis, showing a statistically insignificant relationship between the variables, possibly due to the insufficient scoring and lack of validity of the RSSIQ. Another possibility of why the study sample was not statistically significant was because religious stress does not predict substance use disorders because while religious stress is difficult for individuals, it may not lead specifically to substance use disorders or merely that the relationship was not reflected in the sample. A review of the literature demonstrated that there was a relationship between religious stress and substance use disorders. Hatzenbuehler (2017) included substance use disorders within his criterion for mental and behavioral health consequences for sexual minorities. The research suggested that the degree to which an individual honestly expresses their sexual orientation is the same as the degree that the individual experiences an internal peace (Riggle et al., 2017). Individuals who have substance use disorders are often not experiencing internal peace and usually just the opposite, internal conflict, similar to how individuals experience religious stress.

The Findings of the Age of Awareness and Substance Use Disorder

The third RQ pertained to a relationship between awareness and substance use disorder. The analysis confirmed the null hypothesis, showing no significant relationship between the variables, meaning that for this survey, age of awareness does not predict substance use disorders because this sample may not have experienced significant

substance use disorders. A review of the literature demonstrated that there was a relationship between the age of awareness of sexual orientation and mental health (Page et al. 2013); however, those results could not be duplicated with the parameters of this study. Age of awareness of sexual orientation is the degree to which an individual honestly expresses their sexual orientation is the same as the degree that the individual experiences an internal peace (Riggle et al., 2017), and it is difficult to be at peace when struggling with a substance use disorder. The intent of this RQ was to determine whether if there had been a relationship in the first RQ to see if religious stress was significant or if the age of awareness was significant in determining the correlation to substance use disorders.

The Findings of Religious Stress and Demographics

The fourth RQ pertained to a relationship between religious stress and demographics. The analysis confirmed the null hypothesis and showed no significant relationship between the variables, meaning that there was not a significant relationship between religious stress and demographics because this sample did not experience significant religious stress. The gap in the literature (Page et al. 2013) included participants over the age of 24 years old, which was filled through this study as individuals participated in this study of individuals over the age of 18 as the final sample consisted of 105 adults aged 18 and older, with about 37% of the sample between the ages of 25-34. The demographics were not ethnically diverse, as 82% reported as white. A more ethnically diverse sample might have produced different results.

Theoretical Orientation and the Findings

This study's results indicated that no statistically significant relationship between religious stress and the other variables were able to be determined through this method of gathering information as previous research suggested (Page et al., 2013). The only significant finding from the current study was that the average age of awareness of sexual orientation was approximately 17 years of age. The average age of awareness of sexual orientation of approximately 17 years of age could be interpreted by Attachment Theory as children continuing to need the support of their parents until this time in their life. Attachment theory and religious stress might not be correlated with age of awareness but rather sexual maturation and independence.

Religious stress may be correlated with the variable, but due to the unreliable and or invalid nature of the RSSIQ, this study was unable to determine the statistical correlation. The lack of correlation of religious stress to the variables could also be attributed to the scoring of the RSSIQ as the method of scoring was not provided by the author and was left to be determined from the article summarizing their data analysis and results sections.

Limitations of the Study

In Chapter 1 for the proposal, the limitations considered were the sampling technique, potential weaknesses of the utilized scales, response bias, and recall bias. During the data collection process, participants of the study were able to provide real-time feedback since this survey was posted to Facebook, participants commented on the post about their difficulty with the length and monotony of the survey, which contributed

to several participants not completing the survey midway through. This is a limitation to the study because participants may not have read the questions correctly, due to the similarity to previous questions.

The sampling technique was a participant self-selected study; therefore, only those individuals who saw the post and wanted to participate in the study were participants; therefore, the data does not reflect the sexual minority population as a whole because of self-selection bias. There was no compensation offered to participants for their participation, which did not encourage individuals who might have participated in doing so and be properly compensated for their time. The potential weakness of the utilized scales was evident with the performance of the RSSIQ and the difficulty with scoring the responses as previously discussed in the previous section and the RSSIQ was previously used in only one prior research study. This was one of the most significant limitations to the study because the data may not have been properly scored and if it had there might have been a stronger correlation evident between religious stress and the other variables. Response bias was attempted to be controlled for through the anonymity of the study; however, some participants might have responded to seem more socially appropriate, either with the sexual minority community, their religious community, or the larger social community; the self-reporting could have been unintentionally inaccurate. Recall bias is expected to some degree because of the nature of the study; for example, one question on the study was to recall the age of awareness of their sexual orientation. The participant might not have been able to recall the exact age and rather guessed at an approximate age. Social desirability bias could also represent the possibility of unintentionally

inaccurate reporting as the participant may want to have the researcher view the participant favorably. The limitation from generalizability, including age and gender, from the original study (Page et al., 2013) was the impetus for this current study and the limitations from this current study for generalizability were that the majority of participants were female and middle age. The limitations to validity and reliability that arose from the execution of the study were specifically attributed to the RSSIQ scoring as the method of scoring was not provided by the author and was left to be determined from the article summarizing their data analysis and results sections. The possibility of confounding variables, such as unrealized religious stress or the possibility that an individual could develop another mental health disorder like depression or anxiety, or could experience strained family relationships rather than substance use disorders. The confounding variables could explain how in previous research there was a correlation between the variables, which was not present in this study. Researcher bias always exists and my bias was a statistically significant relationship exists between the variables, but this study did not have evidence to support the bias.

Recommendations

The recommendations for further research that are grounded in the strengths and limitations of the current study as well as the literature reviewed in Chapter 2 are as follows; appropriate scoring for the RSSIQ, amend the RSSIQ to shorten the survey, use or develop another measure to determine religious stress, increase participants to perform a binary logistic regression rather than a correlational analysis, use the minority stress

theory rather than attachment theory as a guide, and deploy in person at a community center as the authors of the RSSIQ did for their research study (Page et al, 2013).

As previously addressed, the scoring for the RSSIQ was potentially the greatest limitation to this study and attempted to contact all authors of the measure have not been answered for years. The feedback that the author of this study received through Facebook was the length and monotony of the survey; therefore, modifying the survey to provide a simplified version of the survey would aid in participation. Using or developing another measure to determine religious stress could help mitigate the issue with the scoring, length, and monotony of the survey. Using another type of data analysis rather than the correlational analysis may provide a better indication of the relationship between the variables beyond the scope of this current study. The minority stress theory (Meyer, 2003) could guide the research by focusing on the direct impact of homophobia and discrimination on the variable of religious stress. Additionally, going to an LGBT community center to deploy the survey could be helpful to gather willing participants to complete the full survey as well as to have a more representative sample of the population. Collecting data from a larger, more diverse sample would be necessary in all research going forward. Finally, using a qualitative approach rather than quantitative approach to learn more about the lived experience of the participants.

Implications

The potential impact for positive social change has been complicated because there were no statistically significant correlations between the variables; however, individuals who participated in this study know that researchers are interested in the

mental health and well-being of individuals who identify a gay, lesbian, and bisexual, which contributes to positive social change by validating their experience as worthy of research, feeling understood, and cultivating a sense of belonging both within the community and with the larger society. This will aid in the development of the individual and the LGBT+ community as a whole to assist in healing because individuals will know that their voices matter. Individuals who participated in the study might have a better understanding of how religious stress and substance abuse has impacted their development and life, once this study is published. Positive social change on the individual level is important for the individual and those who interact with the individual.

Although this study did not show a statistically significant correlation between the variables, therefore implying that the factors may not be relevant to the reason for the individual to be seeking assistance. Regardless, the recommendations for practice are to have an understanding of the individual's religious and cultural childhood factors as well as the individual's possible internal conflict between their sexual orientation and their religion for case conceptualization, which would contribute to the exiting literature and provide a basis of understanding for mental health professionals to aid in their practice with sexual minorities who might have experienced religious stress.

Conclusion

In this study, a sample of sexual minorities self-selected to participate in an online survey. The purpose was to test if there was a statistical correlation between the religious stress in childhood and substance use disorders in adulthood among sexual minorities. The authors of a national government study estimated that the overall cost of drugs and

alcohol for U.S. society is around $440 billion annually (Center for Behavioral Health Statistics and Quality, 2017). Previous research studies suggested sexual minorities are at a higher rate of developing substance use disorders (Hatzenbuehler, 2017; Hughes et al., 2016; Livingston et al., 2015). There is no known or identifiable singular cause of substance use disorders; however, this study suggested that religious stress in childhood could contribute to the development of substance use disorders. Moreover, while this study did not find a statistically significant correlation between these variables, other studies have found a correlation between mental health and religious stress (Beagan & Hattie, 2015; Longo et al., 2013; Page et al., 2013). Sexual minority individuals need support and understanding of their unique lived diversity experience within a heteronormative society to have the quality of life and thrive.

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Appendix A: Social Media Recruitment Letter

Hello,

The following is a survey on religious stress in childhood and substance use disorders among sexual minorities and will take about 15 – 30 minutes. All individuals who identify as a sexual minority, are at least 18 years old, and are currently living in the United States are encouraged to participate in the survey. Your participation will help to add to the current research on the relationship between sexual orientation and religion. All data gathered is anonymous. This survey is being conducted as a part of my capstone course for school. A summary of the results will be published to the Facebook pages which the survey will be posted to after the final dissertation is approved.

Thank you,

Jenn

Appendix B: Permission to Use the Religious, Spiritual, and Sexual Identities Questionnaire

On Sat, Nov 14, 2015 at 5:01 AM, Kristin Lindahl <e-mail address redacted> wrote:

Hi Jennifer --

As far as I am concerned, you are welcome to use the questionnaire. Good luck!

Kristin Lindahl, Ph.D.

On Tue, Nov 10, 2015 at 9:29 AM, Jennifer Schindler <e-mail address redacted> wrote:

Good day,

I am writing to you because I read the article, "The Role of Religion and Stress in Sexual Identity and Mental Health Among Lesbian, Gay, and Bisexual Youth". I am preparing to do my dissertation for my Ph.D. program in clinical psychology and a part of this process is a research study. The research study that I am interested in involves religious stress in childhood for the LGBT community individuals and the mental health outcomes in adulthood, such as depression and/or anxiety. I am still in the planning stage of this process; however, my current plan is to have a link to an online study posted and to have individuals complete this study. I am reaching out to you to see if I could use the measure in your article, The Religious, Spiritual, and Sexual Identities Questionnaire (RSSIQ). Would this be something that you are willing to allow me to do? Do you have any feedback about the content of the study? Do you have any other questions, comments, or concerns?

Thank you for your time and consideration,

Jenn Schindler

Walden University – Clinical Psychology