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The Impacts of Religious Discrimination Towards Anxiety in Diverse Populations

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2017

Abstract

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MS, Walden University, 2015

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Dissertation Submitted in Partial Fulfillment

of the Requirements for the Degree of

Doctor of Philosophy

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Abstract

Previous research has indicated that outcomes of depression, anxiety, and suicidal ideation could stem from religious discrimination (RLGD). However, there remains an important gap in the current literature regarding RLGD impacts with non-Muslim populations. Further, the moderating effects of sex, race, and national origin (moderating variables [MVs]) have yielded mixed findings concerning anxiety (dependent variable). The intergroup anxiety theory and the integrated threat theory elaborate on perceived threats and potential anxiety of intergroup dynamics. The purpose of this quantitative study was to examine the role of religious preferences (independent variable), the MVs, and the RLGD-anxiety relationship. The sample consisted of foreign- and nonforeign-born, Christian theist, non-Christian theist, and nontheist participants from 44 countries and 6 racial groups ($N = 414$). The direct impact of RLGD through religious intergroup contact (Outgroup Contact Measure) and anxiety (Beck Anxiety Inventory) was measured via regression analyses. While controlling for the MV's, results show that (a) Muslims reported the most religious outgroup contact, whereas, Evangelical/ Fundamentalists reported the least. The (b) most severe differences and the highest and (c) anxiety symptoms were reported by agnostics, atheists, and Muslim women respectively. Findings from this research help clarify that the relationship between RLGD, sex, and anxiety, and show the variation among IV and sex moderations are more unique than initially addressed with Muslims. This is an important contribution to the existing literature and enhances social change by better serving understudied and underrepresented religious preference groups.

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Dedication

To my grandparents: Prof. Díaz and Esther. May this work honor your memories and the lessons both of you taught me.

Acknowledgments

This work could not have been completed without the dedicated support, academic scrutiny, and wisdom of my committee members.

First, my thanks and appreciation to my Chairperson, Dr. Reba Glidewell, for her mentorship and support when it was most needed. Dr. Glidewell (painstakingly) listened to my research topic presentation in a similar fashion of a sales pitch and accepted my offer with an encouraging: "Of course I'll be your Chair!"

Next, I would like to thank my committee member, Dr. Arcella J. Trimble, whom I met at my very first doctoral residency (frightening, right?). Dr. Trimble's challenges such as "How is your study significant when others haven't studied it? How will your work contribute to practice?" showed me the level of commitment that is needed to expand the field.

I wish to thank my University Research Reviewer (URR), Dr. Magy Martin who not only assisted me with this dissertation but also helped me find my professional identity with jovial feedback such as: "You are so CBT, Shar!" Dr. Martin's charisma, intellect, and far-reaching experience provided the necessary tools and examination needed to reach scholarly standards.

I am immensely grateful to the religious and secular communities and their participation that facilitated the successful completion of this dissertation.

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To all . . . thank you.

Table of Contents

iii

List of Tables

List of Figures

Chapter 1: Introduction to the Study

In this study, I sought to examine the impact of religious preference and religious discrimination towards anxiety. The importance of religious freedoms has been noted as a key element of human liberties for over half a century (U.N. Charter art. 3, 1948). Perhaps more important is the declaration that religious discrimination is considered a violation of human rights (U.N. Charter art. 3, 1948) as well as a fundamental violation of civil rights in the United States (Civil Rights Act, 1964). Discrimination, in a general sense, refers to the action of prejudicial treatment based on group membership by those of another group (Schmitt et al., 2014). In turn, these ideas could result in adverse treatment of those who are being targeted (Schmitt, Branscombe, Postmes, & García, 2014). Therefore, discrimination provides a foundation for negative and harmful consequences for those who experience it.

Researchers suggest that individuals such as Muslims (Uenal, 2016) and other, non-Muslim groups (Croucher, 2013) demonstrate higher levels of anxiety when their beliefs are a cause of discrimination (Rippy & Newman, 2006). Certain groups such as non-Christian theists (Ahmed, Kia-Keating, & Tsai, 2011), atheists, and secular groups (Gervais, Shariff, & Norenzayan, 2011) are exposed to many factors that are associated with discrimination, thus contributing to greater anxiety. Previous scholars suggested that the religious discrimination phenomenon remains understudied and needs to be addressed through empirical research (Ghumman, Ryan, Barclay, & Markel, 2013). This lack of studies about religious discrimination with populations other than Muslims results in the gap currently present in literature. As a result, psychological practitioners have limited

resources, data, and techniques specifically catering to religiously diverse clients experiencing anxiety due to discrimination based on their faith-based preferences. This study addressed this understudied topic.

In this chapter, I discuss the background of diverse religious demographics in greater detail as well as the purpose of the study. I also provide the theoretical foundations, research questions and hypotheses, nature of the study, and definitions. Lastly, I note assumptions, scope, delimitations, and limitations along with the significance of the study.

Background of the Study

Religion and Discrimination

In recent decades, approximately one-fifth of the hate crimes that have occurred in the United States stemmed from the victims' religious or irreligious preferences (Federal Bureau of Investigation, 2015). These issues of religious discrimination appear to be more prevalent with individuals who have a different ethnicity associated with a religious preference (Ahmed et al., 2011) and national origin (Croucher, 2013) than religious and racial majorities. Until recently, irreligious groups were not fully protected in a legal sense against religiously-based discrimination (Frank R. Wolf International Religious Freedom Act of 1998, 2016). Discrimination complaints based on religion have increased more in comparison to other forms of discrimination (Ghumman et al., 2013). Religious discrimination-based complaints are less common than the rest of the reported incidents such as those based on race and sex. However, of all forms of discrimination,

religious discrimination complaints have experienced the most dramatic increase, over 96% in the past decade (Ghumman et al., 2013).

Religious Discrimination Oversights

Religion and the negative implications of being either an adherent or an irreligious person are topics that have been noted as controversial in a wide variety of fields. Issues concerning religious discrimination have been documented but almost certainly overlooked or neglected. For instance, studies that attempted to approach religious discrimination did not directly acknowledge that which was based on religion (Gervais et al., 2011). Therefore, religious discrimination has been included under a general-purpose umbrella when addressing other types of prejudice (Gervais et al., 2011). Another limitation when considering religious discrimination is the understanding the intersection of religion and multicultural concerns. Often, the two concepts of religion and multiculturalism are studied in interchangeably, negating the value of religious demographic data interpretation (Levin, 2010). Thus, not addressing religious preference as its own multicultural signifier in regard to discrimination has resulted in limited empirical evidence. This lack of data has been observed in a myriad of behavioral fields such as legal psychology (Ghumman et al., 2013), clinical psychology and social work (Hodge, 2006).

Theistic Groups Issues

Discrimination in research. Issues regarding discrimination affect multiple groups including those with more prominent theistic or *bona fide* beliefs in a legal sense. I discuss this further in the definitions. For the purposes of this study, the terms *Christian*

and *theists* will be used interchangeably. *Bona fide* religious groups could include adherents of Christianity, Islam, Hinduism, Buddhism, Judaism, and other major world religions. Although many of these religions have developed through centuries, being part of a highly recognized faith-based system does not exempt adherents from discrimination. Historically, clinicians have included predispositions in research with religious clients. While developing hypothesis for moral theoretical frameworks, clinicians crafted research definitions that deemed theistic persons as less moral (Gervais et al., 2011). As such, religiosity was asserted as a contributor for diagnosis due to their lack of morality.

Discrimination in clinical practice. These problematic pseudo-assertions, such as attributing diagnostic criteria to religious groups without empirical support, later progressed into practice. In the clinical field, religious convictions were equated to clinically significant symptoms (Levin, 2010). Indeed, this issue was observed in earlier versions of the *Diagnostic and Statistical Manual III-Revised* (DSM-III-R; American Psychiatric Association, 1987) in which religiosity was considered a diagnostic trait. Upon revision, Abrahamic values, particularly those of Christian/theistic beliefs, were noted as a diagnostic criterion for mental health disorders (Levin, 2010). Although this misstep was addressed in subsequent revisions, based on this limitation, incorrect diagnosis, assessment, and treatment were provided to clients who held such religious convictions. This issue was corrected, and religious fundamentalism would only be considered as diagnostically significant if psychological distress originated from disrupted and conflicting beliefs (Levin, 2010). However, before this correction, persons

who held a more conservative religious preference could be provided with substandard psychological services.

Nontheist and Secularist

Another large group to consider is those who are unaffiliated with any of the major religions. The atheist population represents approximately half a billion individuals worldwide (Gervais et al., 2011). Furthermore, one out of five persons in the United States reports being either atheist or agnostic (Ghumman et al., 2013). Even though persons of nontheistic views do not fall under a legally defined category or are considered an influential mainstream group, experiences of discrimination are common for this population (Gervais et al., 2011). Indeed, nontheistic preferences were not officially recognized as a protected religious demographic after almost 30 years the initial religious freedom bill was first introduced (Frank R. Wolf International Religious Freedom Act of 1998, 2016). Historically, disparaging views of non-believers often provided moral justification for faith-based persecution (Gervais et al., 2011).

Although atheists and other religiously unaffiliated persons are legally protected against religious discrimination, these issues extend beyond the discrimination stemming from outgroup faith-based organizations (Ghumman et al., 2013). For example, many holidays of Christian affiliation are incorporated into the workplace environment and schedules despite many organizations being secular (Ghumman et al., 2013). Literature suggests that atheists are considered to be the least capable individuals for presidential candidates when compared to persons of any gender, sexual, or racial minorities and even convicted sex offenders (Gervais et al., 2011). Given such findings, researchers suggest

that further studies on this type of religious discrimination are needed in the behavioral science field (Gervais et al., 2011).

Anxiety and Psychological Distress

    Religion and anxiety. Discrimination against persons not religiously affiliated potentially impacts their mental health and general well-being. Anxiety has been defined as an emotion featuring worry and tension that typically results in physical arousal and possibly social avoidance (American Psychiatric Association, 2013). This definition does not necessarily imply clinically significant symptoms, but rather provides a context for understanding distress resulting from expectation of or reaction to specific stimuli. Discrimination has been shown to be a significant factor in causing distress and anxiety (Rippy & Newman, 2006). Discrimination differs significantly from other types of stressors in that the individuals perceive this stimulus as uncontrollable (Rippy & Newman, 2006). In other words, other stressors such as those from daily routine could often be managed and mitigated by the individual experiencing them. This is not the case with anxiety caused by religious discrimination.

    Diversity and anxiety. Various groups appear to be particularly impacted by the anxiety resulting from religious discrimination. These effects may be exacerbated due to differences such as sex, race, and national origin. For example, Muslims in the United States often become targets of discriminatory treatment (Croucher, 2013). As a result, anxiety may arise due to the acculturative stress some Muslim Americans might experience (Ahmed et al., 2011). Further, women who adhere to specific dress codes such as Muslim women (Jasperse, Ward, & Jose, 2012) and those in certain fundamentalist

Protestant religions have been identified as particularly vulnerable to anxiety based on discrimination due to their religious practices. A similar issue has been found when individuals express atheistic viewpoints openly (Gervais et al., 2011). Racial and ethnic discrimination have also been linked to anxiety (Cokley, Hall-Clark, & Hicks, 2011). Racial and ethnic minorities experience discrimination by being identified as part of the "other" group (Cokley et al., 2011; Rippy & Newman, 2008). This issue, in turn, results in members of the outgroup feeling threatened, thus potentially occasioning more discrimination (Gervais et al., 2011). This cyclical interaction, which may be similar to the effects of religious discrimination, is in need of current research (Gervais et al., 2011).

Problem Statement

Religious discrimination refers to harassment, retaliation, and adverse treatment based on the religious or nonreligious affiliation of the individual (Ghumman et al., 2013). Religiously-based harassment can occur in many areas, which can include creating a hostile or coercive work environment or by not allowing religious observances at work (Ghumman et al., 2013). Religious discrimination has been found to have an impact on diverse religious groups, and the effects may include depression (Rippy & Newman, 2008), isolation from individuals that do not hold similar religious views (Hopkins & Kahani-Hopkins, 2009), and loss of self-esteem (Hassan, Rousseau, & Moreau, 2013). In addition, religious discrimination can lead to increased anxiety (Gervais et al., 2011; Ghumman et al. 2013; Hassan et al., 2013; & Jasperse et al., 2012). Researchers have suggested that minority religious preferences can contribute to higher levels of anxiety;

this has been the experience of some Muslim populations in Europe (Hopkins & Kahani-Hopkins, 2009; Jasperse et al., 2012) and North America (Hassan et al., 2013; Rippy & Newman, 2008). Despite these findings, the impact of religious discrimination and anxiety were yet to be studied with other religious and irreligious groups in the United States. Religious minorities, including irreligious groups, non-Christian theists (Rippy & Newman, 2006), and nontheists (LaBouff & Ledoux, 2016) are subject to discrimination.

Scholars have suggested that further research was needed to determine if religious discrimination is linked to anxiety with non-Muslim religious groups (Ghumman et al., 2013). Review of the literature has shown that the gap in the literature is the inclusion of religious preference as a contributing factor for anxiety induced by religious discrimination. There is limited empirical research available on anxiety experienced by non-Christian and nontheist persons in the United States that is due to discrimination. Not addressing this empirical literature gap could result in a lack of treatment options for non-Muslim groups whose anxiety was linked to encountering religious discrimination.

Purpose of the Study

The purpose of this quantitative research was to compare differences between the religious preference groups and the moderating effects of sex, race, and national origin (moderating variables [MVs]) and their influence on anxiety. The implications of religious discrimination and anxiety have been extensively studied with Muslim populations but remained to be investigated with other religious groups. The aim of this study was to determine if there is a significant difference in anxiety levels (dependent variable [DV]) amongst groups based on the independent variable (IV) of religious

preference. Christian, non-Christian and non-Christian theists are the three levels of the IV of religious preference. The overall expectation was to make use of this research to bring awareness to the subclinically significant issues experienced by religious and non-religious groups and to expand the proposed theoretical framework.

Research Questions and Hypotheses

The following are the research questions and hypotheses of the study:

RQ1: Are there any differences in Christian, non-Christian, and non-Christian theists groups in their experiences of anxiety?

$H_0$1: There is no statistically significant difference between Christian, non-Christian, and non-Christian theist anxiety levels as evidenced by the Beck Anxiety Inventory® (BAI) score.

$H_1$1: There is a statistically significant difference between Christian, non-Christian, and non-Christian theist anxiety levels as evidenced by the BAI score.

RQ2: Do sex differences of male and female of each religious preference group (Christian, non-Christian, and non-Christian theist) contribute to anxiety differences amongst the groups?

$H_0$2: There is no statistically significant difference between male and female anxiety levels in each religious preference group (Christian, non-Christian, and non-Christian theist) as evidenced by the BAI score.

$H_1$2: There is a statistically significant difference between male and female anxiety levels in each religious preference group (Christian, non-Christian, and non-Christian theist) as evidenced by the BAI score.

RQ3: Do racial differences (Caucasian and non-Caucasian) exist between participants in each religious preference group (Christian, non-Christian, and non-Christian theist) in regard to anxiety levels?

$H_0$3: There is no statistically significant difference between Caucasian and non-Caucasian participants in each religious preference group in regard to anxiety levels as evidenced by the BAI score.

$H_1$3: There is a statistically significant difference between Caucasian and non-Caucasian participants in each religious preference group in regard to anxiety levels as evidenced by the BAI score.

RQ4: Do national origin differences (nonforeign born and foreign born) exist between participants in each religious preference group in regard to anxiety levels?

$H_0$4: There is no statistically significant difference between national origin status of nonforeign born and foreign born participants in each religious preference group in regard to anxiety levels as evidenced by the BAI score.

$H_1$4 There is a statistically significant difference between national origin status of nonforeign born and foreign born participants in each religious preference group in regard to anxiety levels as evidenced by the BAI score.
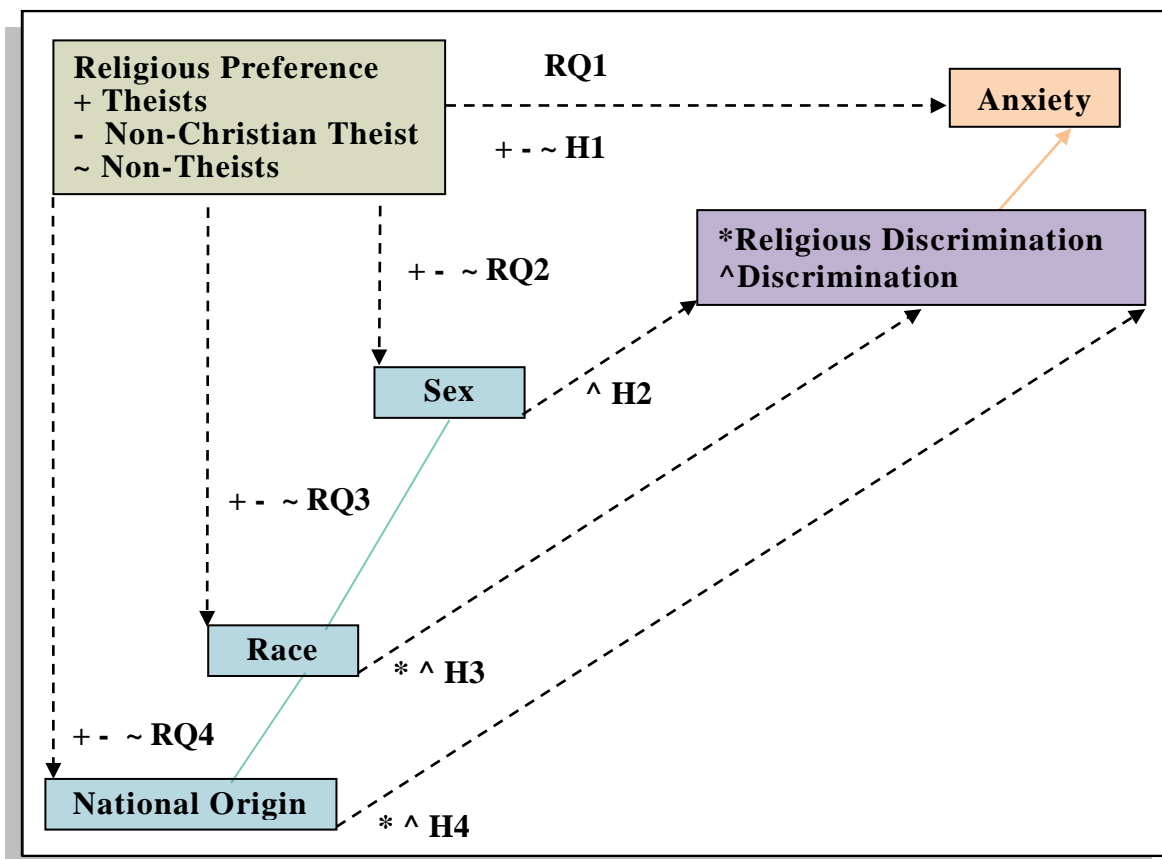
Figure 1. Hypothesized Model: the three levels of religious preference (theist, non-Christian theist, and non-theists) and multicultural factors (sex, race, and national origin), as predictors and moderators of anxiety based on overall discrimination and religious discrimination.

Theoretical Foundation

I focused this study on how culturally diverse factors could result in psychological distress for persons of both the ingroup and outgroup. The theoretical foundation related to the topic of study was the intergroup anxiety theory (IAT) as first proposed by W. G. Stephan and C. W. Stephan (1985). The model focuses on a broad range of factors that might contribute to anxiety. These factors range from awareness, personal realization, interactions with individuals of diverse groups, and, to a lesser sense, self-identity.

Stephan and Stephan proposed that when viewing differences between individuals, anxiety might follow. The authors suggested that the interactions with others, mainly those between racial groups, might foster distress (Stephan & Stephan, 1985).

The resulting anxiety factors derive from the integration with others who are not part of the appointed or self-proclaimed group category (Stephan & Stephan, 1985). With the IAT, this phenomenon was defined as intergroup anxiety (Stephan & Stephan, 1985) under the scope of the integrated threat theory (ITT; Stephan, & Stephan, 2000). The ITT conceptualizes anxiety as a result of perceived threats form the outgroup. The IAT model proposes that these negative or anxiety responses originate from the lack of information that is based on the limited contact between groups. Later, this information could result in stereotypical and discriminatory expectations (Stephan, & Stephan, 1985). According to the theorists, the lack of interaction amongst groups could lead to stereotypical and prejudicial thinking and expectations, thus resulting in psychological distress (Stephan & Stephan, 2000). Although mostly focused on diversity areas such as race and sex, this theoretical framework was used and expanded upon by the constructs of this study.

The independent and moderating variables in this study such as sex, race, and religious preference were understood through IAT/ITT and intergroup anxiety. For instance, as the theory suggests, persons from a particular religious background (ingroup) could be experiencing anxiety solely based on their interactions with others who do not hold the same beliefs (outgroup). Further, ITT provides a theoretical foundation for the assumptions in this study. Based on ITT, the outgroup is perceived as a threat, jeopardizing the ingroup's well-being and resources (Riek, Mania, & Gaertner, 2006). As

such, interactions between groups are perceived as distressful and prejudicial (Stephan, & Stephan, 2000). The IAT/ITT closely related to this study as they were built upon hypothetical assumptions that related to multicultural factors and ingroup/outgroup anxiety. Researchers have made use of this theoretical framework to understand diverse groups' dynamics (Croucher, 2013; Monterrubio, 2016; Stephan, 2014; Uenal, 2016). As such, this theory was used to expand knowledge in understudied areas or religiously-based discrimination and diverse populations. I will provide a more detailed description of the IAT/ITT theoretical framework and their alignment with the RQs and hypotheses in Chapter 2.

Nature of the Study

This study used a quantitative approach, where a probabilistic sample of Christian/theist, non-Christian theists, and non-theist individuals was obtained. The reason for this selection is that the purpose of the study was identifying differences in groups based on religious preference and anxiety. The non-experimental approach was more suitable for this intent, given that IVs in the study could not be directly manipulated and had a nonrandomized design. Thus, this study focused non-experimental design where a convenience sample was used. As depicted in Figure 1, the study's variables included religious preference as the IV, sex, race, and national origin and MVs and anxiety as DV. Consequently, the data was collected from a diverse demographic that included religious, racial minorities, and foreign-born participants. The data was collected and measured through an online demographic survey (Appendix E), the Outgroup Contact Measure® (OCM®; Appendix F), and the Beck Anxiety Inventory®

(BAI; Appendix G). This instruments' psychometrics will be discussed in greater detail in Chapter 3. The collected data was be examined through a One-way analysis of variance (ANOVA).

Given the nature of the research questions and the availability of resources for research, online-based data collection was chosen as the most useful way to address these inquiries. The research topic and, *ergo*, the research questions could be seen as sensitive. However, online research methods contribute for the participant's perceived anonymity (Ahern, 2005). As such, giving this privacy might provide participants with the security of expressing and providing a more accurate depiction of the "real" information. Another benefit of an online-based research was gaining access to more diverse groups, hence addressing these study's inquiries. These research questions required the investigation of religious preference, or the IV, by obtaining individuals with diverse religious and irreligious backgrounds of religious preferences such as Christians, non-Christian theist, and non-theist. Researchers that use such technology can gain access to more diverse and distinct groups (James & Busher, 2015).

Operational Definitions

Religious preference (RLG): This term encompasses both religious and irreligious demographics such as individuals who currently hold a Christian, non-Christian theistic, and non-theistic self-identification. Scholars suggest the concept of religious is best defined by the individually held beliefs on an individual basis (Shreve-Neiger & Edelstein, 2004). As such, no denominations or lack of religious preference were excluded.

Non-Christian theists: This term encompasses all other religious denominations that are not Christian/theist but that have the legal recognition of tax-exempt status. These individuals' beliefs are included within a religious doctrine, distinct literature, the ordination of ministers and frequent adherence to a place of worship (Internal Revenue Service, 2015) amongst others. Some examples that fit this criterion include Islam, Judaism, Buddhism, Hinduism, and other organized religions.

Nontheists: This term includes all other individuals who do not prescribe to either Christian/theist or non-Christian theists' affiliations and predominately hold irreligious beliefs or complete lack thereof. This term encompasses Atheists, Agnostics, secular humanists and unaffiliated individuals (Pew Research Center, 2015). It must be noted, however, that some overlap could be expected between this group and the former. For instance, some unaffiliated persons and secularists might have similar beliefs with those of more liberal theistic values (Pew Research Center, 2015) such as a belief in a deity or supernatural entity and a faith-based explanation of life after death.

Religious preference discrimination (RLGD): This term refers to perceived distinct treatment from persons of the outgroup based on a characteristic that sets each group apart (Stephan & Stephan, 1985). In this case, religious preference was used for this specific term and to establish distinctions between in and outgroup dynamics.

Anxiety: This term included the distress of persons from the ingroup status that was believed to have been caused by discrimination stemming from the outgroup (Stephan & Stephan, 2000).

Assumptions

The diversity of research questions and investigative phenomena in social sciences guides scholars into considering appropriate designs. As was the case with this study, when the researcher cannot assign group inclusion randomly, then non-experimental approaches are more appropriately used (Creswell, 2013). Therefore, unlike their experimental counterparts, non-experimental methods do not account for plausible control of other potential factors that impact analysis of causation. In this regard, each participant will belong to that group before the research takes place (Trochim, 2006b). This issue is particularly characteristic of studies where the independent variable cannot be assigned such as the participant's religion, sex, race, or national origin. In this case, the groups that were already in existence are evaluated through the non-manipulated IV or their categories (Frankfort-Nachmias & Nachmias, 2014).

Perhaps the most apparent assumption of this design is that the differences found between the groups stem from the IV and not other contributing factors. However, this assumption could be impacted based on other factors for which the researcher cannot control (Frankfort-Nachmias & Nachmias, 2014) and are found within the survey data collection process (Creswell, 2013). Furthermore, since the groups were developed in a natural setting (Campbell & Stanley, 1963), the researcher would have to assume that the variances come from the IV (Trochim, 2006b). These assumptions are necessary as they stem from the characteristics of a non-experimental design, where the groups, or IVs, are already set and occurring prior to comparison (Creswell, 2013).

Scope and Delimitations

In reviewing the presented literature, there are some topics that warrant a direct focus on factors that might impact anxiety. The main factor includes the stratification of the sample a survey method (Creswell, 2013). This element resided in stratification, based primarily on religious preference, later sex, and the other participant characteristics as means to provide a specific focus to this study. There is evidence that supports the claim that that these characteristics such as race (Brondolo et al., 2005), sex, and nationality (Jasperse et al., 2012), might contribute significantly to anxiety. Therefore, it was fittingly necessary to include these factors when considering anxiety and diverse populations.

Individuals from all religious denominations, Christian or otherwise, were included in this study. These denominations included, but are not limited to, persons who identify as evangelical, mainstream protestant or other Christians. Further, any individuals who identified themselves Muslims, Jewish, Buddhists or as part of any organized religion were also included. Unaffiliated or secular persons such as secular humanist, agnostic and atheist were part of the study. No regional exclusion criteria were placed. As a result, other means of recruitment included community partners of Christian and non-Christian temples, and religiously or secularly based social online forums. However, individuals who could not read questions written in the English language and were not between the ages 18-65 at the time of their participation were excluded.

Limitations

Some challenges or barriers that could have needed to be addressed when conducting this study included selecting adequate safeguards in participant-manifested anxiety. These concerns rest on the researcher's responsibility to foresee negative consequences or experiences that could have arisen based on the study's inquiries that could be sensitive in nature. Some means to mitigate the latter concern included presenting referral information for participant distress.

Other limitations related to the participant considerations. It was likely that the participants would not be in correspondence with a religious minority sample of the United States. Therefore, a representative sample of religious denominations such as Muslims, Buddhists, Jews and other participants was initially thought to not likely be a representative sample of the general population. Additionally, since nationality is was another variable addressed, some difficulties could have arisen. Possible limitations provided by language barriers between the instruments and participants could have been expected. As a result, participant withdrawal or criteria elimination did occur. All of these factors did not impact the sample size. The sample included was likely to be relatively small in comparison with other studies that have examined minority status, discrimination, and anxiety.

This lack of random assignment undoubtedly results in apparent limitations. These threats are evident on both to internal and external validity. For instance, given that the groups are non-equivalent, the researcher cannot ascertain that these groups are entirely equivalent when testing has occurred (Trochim, 2006b). In a similar fashion, the

non-equivalency of subjects within the study also results in threats to external validity.

For instance, these limitations are examined based on the possible inability to generalize

these results to other groups (Campbell & Stanley, 1963). However, some strengths and

benefits are found in this model. This model provides this study with the opportunity of

investigating naturally-occurring phenomena in specific populations.

Significance of the Study

Some of the articles included in this dissertation dealt with religious

discrimination amongst the Muslim population as their main topic (Hopkins & Kahani-

Hopkins, 2009; Jasperse et al., 2012; Rippy, & Newman, 2006, Rippy, & Newman,

2008). Additionally, some of the articles noted the importance of religion and

discrimination as a relevant part of psychological training and practice (Ghumman et al.,

2013; Hassan et al., 2013; Lawrence et al., 2013; Nadal et al., 2015). However, a much

smaller fraction of these articles included the implications of other religious minorities

such as Atheist and other diverse religious groups as part of their sample or topic

(Gervais et al., 2011). Yet, the central concept surrounding these studies was that the

anxiety and distress experienced by these individuals was a contributing factor for the

detriment of the participants. Thus, the worth, dignity, and development of diverse

communities might be jeopardized. Nevertheless, the improvement of social conditions

could be achieved through the contributions this study imparted towards theory, practice

and positive social change.

Significance to Theory

The IAT, discussed previously, notes the importance of considering diverse groups. This study viewed multiculturalism from a wide variety of models that range from self-identity and awareness, personal realization and interactions with individuals from different backgrounds as it relates to anxiety. Therefore, given the array of variables that this study was aimed to examine, this theory was expanded by providing a wider understanding and of potential interactions amongst overall multicultural status, discrimination, and anxiety. This expansion could help in explaining how discrimination relates to mental health and further psychological distress and concerns.

Significance to Practice

The American Psychological Association (2003) noted that incorporating religious preference into psychological research, practice, and social change is an essential component of multicultural diversity competency. Including layers of race, national origin, and sex promotes multicultural diversity competency (American Psychological Association, 2003). In the literature, nevertheless, aside from the Muslim population, the incorporation of these MVs were not examined or included with other religious/irreligious groups. As a result, the original contribution that this study made was informing psychological literature. This research will support professional practice by providing an understanding of these groups in the psychological research domain particularly in contributing to trait anxiety literature. This contribution aligns with the problem statement as the social change could be accomplished by developing awareness in clinical professionals. The findings could potentially help in providing groundwork by

expanding and perhaps developing current research of understudied religious groups, thus enhancing competency. This study's research efforts could relate to positive social change through the incorporation of multicultural dynamics and its genuine and significant value towards the desired empowerment outcomes of underrepresented groups.

Significance to Social Change

While incorporating this research's key elements with challenges mitigation, one can also consider the role of social change implications. The intent was to promote social change with this dissertation by developing awareness in psychology professionals and cultural competency classes necessary for ethical practice. These efforts include how newly supported ideas can contribute to the societal empowerment and dignity of groups involving the creation of programs (Walden University, 2013). As a result of this dissertation's contributions, it is the intent to provide the foundation for the development of support networks as means to mitigate potential mental health problems within disadvantaged, minority, and diverse groups. These research efforts could relate to positive social change through the incorporation of multicultural dynamics and its genuine and significant value towards the desired empowerment outcomes.

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Summary

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In this chapter, I provided a description of the importance of studying the implications of religious discrimination as it pertains to diverse populations and anxiety. Based on this presentation, I discussed the potential social change contributions that could be reached by diminishing the gap in the literature. As noted, scholars in behavioral

fields have neglected and understudied the concept of religious discrimination, and its impacts towards diverse religious and diverse groups (Ghumman et al., 2013; Nadal et al., 2015). As a result, limited research is available to address persons that hold diverse religious preferences, justifying the need for this study. Additionally, I presented a background of the problems that might foster anxiety based on the ingroup and outgroup dynamics and religious discrimination. This discipline's knowledge about religious discrimination could be advanced through the theoretical foundation of the IAT/ITT, the IV, MVs, and research questions described in this section. To accomplish this goal, I gave a rationale for selecting a non-experimental approach and the limitations that could have potentially affected this study.

In Chapter 2, I will provide a detailed description of the literature that illustrates the selection of the variables in this study and the themes that should be evaluated for social change accomplishment. I will present the key elements that pertain to religious preferences and multicultural concerns that impact discrimination. This literature review will also include synthesis of studies that have addressed religious preferences and the rest of the MVs as they relate to the research questions. Lastly, I will provide support to study these variables, the moderating interactions, and the adverse effects of religious discrimination and anxiety.

Chapter 2: Literature Review

Religious discrimination complaints have shown the most dramatic increase over the past 20 years of all other groups, including those of sex, race and sexual orientation (Ghumman et al., 2013). Some scholars suggest that religiously-based discrimination became more prevalent due to discrimination against Muslims following 9/11 and the War on Terrorism (Ahmed et al., 2011; Rippy & Newman, 2006). Religious discrimination encompasses harassment, retaliation, and adverse treatment and can occur regardless of religious preference (Ghumman et al., 2013). Persons from diverse religious and multicultural backgrounds can experience anxiety due to discrimination (Jasperse et al., 2012). Unfortunately, the impact of religious discrimination on anxiety (Hassan et al., 2013) among non-Muslims remains to be studied. The purpose of this quantitative study was to compare differences between the religious preference groups with the moderating effects of sex, race, and national origin and their influence on anxiety.

Figure 2 depicts a synopsis of the current literature on the problems of religiously-based discrimination and the factors of sex, race, and national origin on the experience of anxiety. The map is divided into three columns depicting the independent variable of religious preference, perceived discrimination, and the moderating effects of sex, race, and national origin towards anxiety. Current literature establishes the relevance of religious discrimination and its detrimental effects of anxiety amongst diverse populations. The literature suggests that groups other than Muslims could also be subject to discrimination and anxiety (Abu-Raiya, Pargament, Krause, & Ironson, 2015; Ghaffari & Çiftçi, 2010; Marsden, 2015; Presler, 2015; Vedder, Wenink, & Van Geel, 2016).

Further, literature provides evidence to suggest that sex (Nadal et al., 2015; Sirimanne, 2016), race (Cokley et al., 2011; Soto, Dawson-Andoh, & BeLue, 2011), and national origin (Croucher, 2013; Orgad & Ruthizer, 2010) could be considered as moderators towards anxiety.

This chapter includes a comprehensive synopsis of the current literature that explains the importance of addressing the problem of the understudied religious preference construct. Further, a review of the religious preference literature includes the effects of discrimination against diverse religious groups and their experiences of anxiety. In this chapter I describe the theoretical framework and how it aligns with the research questions, hypotheses, and data analysis interpretation. This section also covers studies related to the constructs of religious preferences, sex, race, and national origin and their implications towards anxiety. This chapter also includes how other researchers have approached the variable of religious preference and the problems of discrimination and anxiety. Lastly, I describe what is currently known and is conflicting within literature about this study's IV, MVs, and DVs interaction and what remains to be studied with non-Muslim groups in regards to the moderating effects of sex, race, and national origin.
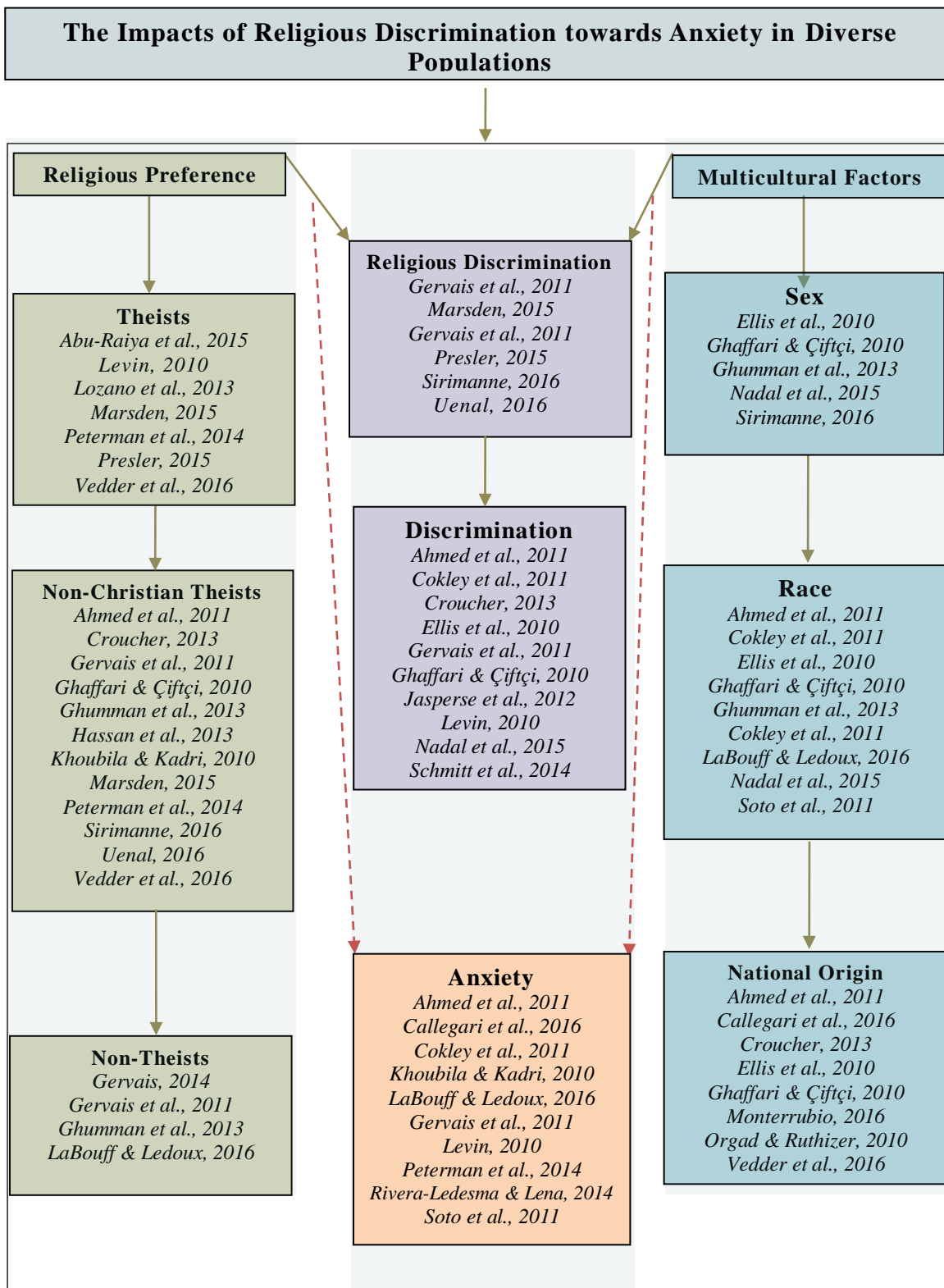
Figure 2. The literature map of multicultural factors and anxiety

Literature Search Strategy

In order to frame the problem of religious discrimination and multicultural factors related to anxiety, I conducted most searches through Walden University's library databases: PsycARTICLES, PsycINFO, and SocINDEX with Full Text. The second means of literature review was through Walden University's library search engine through Google Scholar™. The last venue for research was the University of Puerto Rico at Mayagüez (UPRM/RUM) virtual library via the Academic OneFile database. The key search terms, variations and combinations of the IV included *religion, religious discrimination, prejudice*, and *beliefs*. The second combination of terms included the MVs such as *sex, gender*, and *minority*. The following key terms used in combination were *people of color, race, ethnicity, nationality*, and *national origin*. Lastly, the terms of *anxiety* and *distress* were used to gather literature about the DV.

The scope of the literature review was limited to research that had been published within seven years of the date of the search. Furthermore, all research was limited to peer-review studies and full-text articles, excluding dissertations. Some inclusion factors were considered given the limited availability of current research that included the MVs of interest of this study with religious discrimination aimed toward non-Muslim groups. Nonquantitative approaches were retained in the research queries. Further, language integration was set to studies published in English, Spanish, and French. However, these multilingual results were retrieved with English key search terms. Complementary articles and seminal works were retrieved as a means to provide a historical scope for the

literature and its development towards the current research problems and theoretical framework.

Theoretical Foundation

Intergroup Anxiety Theory

The first theory this study was based on was the IAT of the model originated by W. G. Stephan and C. W. Stephan (1985). The authors explained that the anxiety experienced by individuals comes from the negative expectations of outgroup and ingroup interactions (Stephan & Stephan, 1985; Stephan & Stephan, 2000; Stephan, 2014). In other words, persons who consider themselves as part of a particular group might experience anxiety due to expected negative consequences of coming into contact with others from another group. When first developed, the IAT rested upon separate multiple hypotheses and assumptions later integrated (Riek et al., 2006). For example, before the IAT, matters that impacted intergroup anxiety such as the individual's cognition of the ingroup interactions were not considered (Stephan & Stephan, 1985). The IAT allowed for consideration of a multifaceted view of ingroup/outgroup dynamics.

Stephan and Stephan explained that anxiety could stem from four factors as a result of negative expectations for ingroup/outgroup interactions that assist in the application of this theory. The first assumption rested on the person's expectations that the interaction could lead to negative consequences for the self, such as embarrassment (Stephan & Stephan, 1985). The second factor was the expectation of adverse consequences that involved behavior, such as being discriminated against or physically harmed due to the absence of group belongingness (Stephan & Stephan, 1985). The third

factor was the expectation that the individual might experience negative evaluations from persons of the outgroup (Stephan, 2014) including stereotyping and biased opinions (Stephan & Stephan, 1985; Stephan & Stephan, 2000). The last expectation that could cause anxiety was disapproval from the persons of the ingroup of the interactions with the outgroup (Stephan, 2014).

Stephan and Stephan (1985) hypothesized that experiencing intergroup anxiety could increase the likelihood of isolation for persons from the outgroup. A second hypothesis was that biased opinions directed toward individuals of the outgroup would increase (Stephan & Stephan, 1985). Consequently, the researchers hypothesized that the lack of interaction would result in a cycle of negative expectations from both groups, thus limiting contact and increasing anxiety (Stephan & Stephan, 1985).

I selected this theory because it related strongly to this study's variables and their interactions. For example, IAT has been used to examine intergroup anxiety in a wide variety of multicultural factors including national origin (Croucher, 2013; Monterrubio, 2016), minority religious preferences (Uenal, 2016), race, and sex (Stephan, 2014). Another significant reason for this theory's selection was its ability to explain anxiety for both groups, regardless of minority status. As such, this theory frames the concept of discrimination and anxiety from the perspective of persons of both the ingroup and the outgroup. Since early in its development, the IAT has been applied in ways similar to this study. Consequently, this study's research questions could help in expanding the current theory in that they investigate multicultural factors' interactions with religion. This

research helped in expanding this theory in regards to minority religious preferences other than Muslims and with non-binary/gender fluid persons with the MV of sex.

Integrated Threat Theory

The ITT is the second theoretical foundation that was used in this study. While developing the IAT, Stephan and Stephan encountered a framework that could be used to delineate the ingroup and outgroup interactions. The ITT originated due to the theoretical propositions of the IAT of what might specifically produce the intergroup anxiety. As a result, the ITT became an underlying foundation in IAT development and expansion. The ITT comprised multiple assumptions upon which the theory was developed and later connected to IAT. For instance, the authors assumed that the ingroup/outgroup relationships could be affected, since members of each group would consider this interaction as inherently threatening (Stephan & Stephan, 1996). The threat, as the authors propose, would cause the individual to avoid contact and, accordingly, avoid engaging in discriminatory and prejudicial behavior (Stephan & Stephan, 2000). In turn, people could engage in these discriminatory and prejudicial behaviors due to fearing the consequences of perceived threats (Stephan, 2014). This fear stems from the four categories of threat: realistic threats, symbolic threats, negative stereotypes, and intergroup anxiety (Stephan, 2014).

This major theoretical proposition explained that realistic threats are perceived by the individual as those that limit physical safety and economic gains or status such as employment (Uenal, 2016). Symbolic threats involve those that menace values and beliefs of a group (Zhang, 2015). Furthermore, individuals might suppose that members

of the outgroup will have stereotypical expectations of any given contact, resulting in intergroup anxiety according to IAT (Croucher, 2013). The ITT has been applied previously in other studies that include sex, race (Stephan & Stephan, 1996), and national origin (Croucher, 2013) as their variables of interest for intergroup anxiety. Scholars suggest that the ITT could be used to further explain the interactions amongst social groups that could result in discrimination (Monterrubio, 2016). Consequently, this theory aligns to this dissertation's research questions and served as an appropriate means to interpret data and expand the literature on religious preference groups to include non-Muslim samples.

Literature Review Related to Key Variables

Discrimination Experience and Moderation

The discrimination experience can be understood through three separate means. First, the frequency or occurrence of discrimination can impact how this phenomenon is perceived. For example, pervasive discrimination refers to the ongoing, frequent, general experience across many social areas (Schmitt et al., 2014). On the other hand, discrimination attributions refer to a single and isolated event of discrimination (Schmitt et al., 2014). It must be noted that most research suggests that pervasive discrimination is more likely to cause psychological impact than the attribution discrimination counterpart (Schmitt et al., 2014).

The second means used to understand discrimination is personal identity. Researchers suggest that the impact of discrimination could be corresponding to the degree of the person's minority identity identification (Cokley et al., 2011). On one hand,

literature suggests that a sense of minority group identification might serve as a safeguard towards perceived discrimination (Jasperse et al., 2012). Conversely, a substantial minority identity might leave individuals prone to misinterpreting casual interactions as discriminatory in nature (Jasperse et al., 2012). Lastly, discrimination could be explored through the frame of microaggressions. Within this scope, microaggressions are considered both a deliberate and unintentional way to engage in daily discrimination beyond apparent awareness (Nadal, 2015). Consequently, personal identity could limit or worsen how discrimination is perceived, hence diminishing or contributing towards its psychological effects.

Discrimination mitigation. Many approaches have been conducted to study discrimination and ways to mitigate its occurrence and effects. For example, initial studies about discrimination defined this problem as a disliking of persons from the outgroup (Gervais et al., 2011). However, as research progressed, literature suggested overt and behavioral repercussions towards a member of the outgroup besides disliking. Discrimination could lead to the uneven distribution and access to resources such as negating basic access to shelter, proper medical care, and education (Schmitt et al., 2014). This negation of resources is consistent with the ITT proposition of the ingroup limiting the outgroup's access to resources as in reaction to the perceived threat of losing those available resources (Uenal, 2016). These issues, in turn, result in poorer physical and psychological well-being (Ahmed et al., 2011; LaBouff & Ledoux, 2016) towards religious and other diverse groups.

Studies related to discrimination describe and explain what is known about its mitigating impacts. For instance, although being part of a group might contribute to experiencing discrimination, it also serves as a venue for social and emotional support (Ellis et al., 2010). Scholars have argued that interactions, subsequently resulting in cultural awareness, reduce the likeliness of engaging in discrimination (Croucher, 2013). This exposition to the "other" group has resulted in discrimination reduction for both persons of the out and ingroups. Becoming familiar with the others groups via social interaction and favoring communication is the foundation upon which this dynamic is founded on (Croucher, 2013). This dynamic, consecutively, suggests that open communication and interactions can foster a change of biased and unfavorable thoughts that would otherwise result in discrimination (Monterrubio, 2016). Not engaging in this type of interaction could lead to a perpetuation of the discriminatory thinking (Schmitt et al., 2014). It has been shown that interactions amongst seemingly distinct groups could alleviate the bias that fosters discrimination (LaBouff & Ledoux, 2016). Provided the wide variety of factors that impact discrimination, it can be argued that, the sole measurement of the construct, is a challenging matter to address (Marsden, 2015).

Limitations and conflicting findings. Despite that the concept of discrimination's prevalence in literature, its interactions with other varied multicultural moderators remains understudied or inadequately explored (Ghumman et al., 2013; Levin, 2010; Nadal et al., 2015; Presler, 2015). Understudied variables include religious preferences as an independent variable (Ghaffari & Çiftçi, 2010; Levin, 2010; Presler, 2015), religious discrimination and the means to mitigate it (Ghumman et al., 2013) and

multicultural factors as moderators (Nadal et al., 2015). Some moderating effects towards discrimination can include religious preference, sex, race, and national origin (Ellis et al., 2010). When studying religious preference along with discrimination, other studies note the limited and methodological inadequacies. These limitations include few studies investigating moderating and regression effects towards discrimination (Ghaffari & Çiftçi, 2010; Nadal, 2015) and small sample sizes (Levin, 2010). Additionally, authors suggest that most studies focus on religious preference as a factor to mitigate anxiety symptoms and not how it might serve as an IV (Levin, 2010).

In addition to limited methodology, another issue concerning discrimination and its possible moderators is contradictory findings related to religious preference an anxiety. Literature notes that religious practices could help in reducing the distressful effects of experienced discrimination, particularly with first generation immigrants whose country of origin was predominantly religious (Ahmed et al., 2011). Furthermore, some studies provide evidence suggesting religious group adherence increases trust amongst its current and potential members (Gervais et al., 2011). Consequently, religious communities might become a mean to receive social support, group membership and reduction of psychological distress (Ahmed et al., 2011). These benefits also include the reduction in anxiety and depression symptoms and suicide ideation (Levin, 2010).

On the other hand, research also shows that religious preference adherence might not necessarily function as a variable for better psychological well-being and social support. For example, some authors suggest that religion could impact the severity of symptoms of certain disorders, such as those that are manic in nature (Levin, 2010).

Furthermore, it has been found that one in five persons experiencing OCD also demonstrates high religiosity (Khoubila & Kadri, 2010). Yet, only one of ten persons from a non-clinical population has high religiosity in the United States (Khoubila & Kadri, 2010). Consequently, religion could play a role in how psychological symptoms are manifested.

Other research suggests that religion may pose no significant benefit in symptom reduction towards certain populations. For example, findings regarding a nationally representative Colombian sample showed a non-significant contribution in religious preference practices and reduction in anxiety symptoms (Rivera-Ledesma & Lena, 2014). Only religious group membership yielded a small, negative correlation towards depression ($r = -0.16$, $p < 0.01$) (Rivera-Ledesma & Lena, 2014). Lastly, other studies note religious group membership could result in discrimination towards persons of non-theists groups (Gervais, 2014; Gervais et al., 2011). The religious preference dynamic, in conjunction with moderating multicultural factors and conflicting findings, becomes a difficult but necessary trend in need of empirical and practical comprehension (Richards & Bergin, 2014). Sole data collection might not necessarily contribute to the expansion of literature and theoretical understanding of the problem (Levin, 2010). Therefore, this study saught to make use of the IAT/ITT to address the issue and expand on both of these theories' contributions.

Christian Theists

In 2015, Abu-Raiya and colleagues conducted a study examining how limited religious adherence and convictions correlate to psychological distress. This quantitative

study included individuals from Catholic ($n = 451$) and Protestant ($n = 710$)

denominations amongst other religious preference groups. The authors defined limited

religious convictions as Religious/Spirituality (R/S) struggles (Abu-Raiya et al., 2015).

One of the struggles presented was interpersonal struggle, where an individual might

battle with institutions of the same or similar denominations (Abu-Raiya et al., 2015).

Although not explicitly measuring potential discrimination, items from the Religious and

Spiritual Struggles (RSS) Scale included those involving interpersonal struggles. For

example, participants could select the frequency that they perceived ill treatment due to

their religious beliefs being disrespected (Abu-Raiya et al., 2015). Upon examination,

interpersonal struggles had a moderate, significant, and positive correlation with

depression ($r = 0.23$, $p < .01$) and anxiety ($r = 0.22$, $p < .01$).

Some authors have examined how Christian/theists have experienced factors

related to discrimination. For instance, researchers suggest that the longstanding presence

of Christian religious views resulted in this worldview's dominance across a wide variety

of fields such as academia (Marsden, 2015). This historical dominance also extended

beyond religious matters as an apparent influencer towards the cultural norm (Marsden,

2015). However, this theistic dominance has experienced a substantial decline. One of the

most significant movements that contributed to this decline was the Renaissance (Lozano

et al., 2013). Culturally, Western ideals began to shift from a need to comply with

Christian values, slowly moving into more humanistic perspectives (Lozano et al., 2013).

Additionally, tensions between Catholic and Protestant denominations resulted in further

division and perceived threats from the outgroup (Vedder et al., 2016).

Christian theists and the psychological field. Although not explicitly targeting theists due to their beliefs, issues concerning theistic discrimination have been noted in many contexts. For example, an essential part of religious adherence includes the practice of rituals involving personal and cultural beliefs of what is considered sacred (Peterman, LaBelle, & Steinberg, 2014). However, this adherence came to some backlash during early schools of thought such as Psychoanalysis (Levin, 2010). Within this early Freudian development, it was considered that such religious adherence was a potential sign of psychological illness and a possible threat to society (Levin, 2010). Before these Freudian assumptions were dismissed, there were some biases present in the assessment process. For instance, in earlier editions of the DSM, holding a religious belief could have been considered as a characteristic of psychological illness (American Psychiatric Association, 1987). Later, distinctions were made to differentiate between religious convictions and psychological illness (American Psychiatric Association, 1994) as means to clarify the process of assessment (Peterman et al., 2014).

Christian theist discrimination. Presently, issues regarding theistic preferences might particularly impact immigrants living in a non-Christian majority country or immigrant areas. For example, local national Christians and immigrant Christians living in predominantly Muslim countries are subject to discrimination and marginalization, such as being offered substandard employment, despite some constitutional protection of religious freedom (Presler, 2015). Moreover, persons from Western countries that have either Catholic or Protestant majority might potentially engage in discriminatory acts against individuals from the outgroup (Vedder et al., 2016). Accounting for national

origin differences as factor towards discrimination could be considered a possible strength in such research.

This issues regarding Christian/theist discrimination might also be present in academic fields. For instance, more than half of academics view evangelical fundamentalism adversely but note that this opinion does not impact recruitment of new scholars who hold such beliefs (Marsden, 2015). It must be noted that some of the literature presented above takes strongly into account a conservative fundamentalist perspective of the theistic participants. In turn, not making a clear distinction on which variable, whether moderate religious preference or conservative fundamentalism, accounts towards discrimination, results in a great weakness. This issue is indeed reflected given that all theistic preferences are categorized under one scope without little hypothesis formation (Levin, 2010). As such, this distinction remains to be studied.

Non-Christian Theists

Islam and discrimination. As described and defined in Chapter 1, the non-Christian theists level of the IV includes persons who self-identify as adherents of Islam, Hinduism, Buddhism, Judaism, and other religious preferences. The vast majority of the literature focusing on religion and discrimination is primarily founded on studying Muslim individuals (Ahmed et al., 2011). This abundance in literature is greatly attributed to the need to examine the impacts of anti-Muslim discrimination amongst Muslim people (Uenal, 2016) and the public's reactions to the extremist terrorist attacks committed on September 11, 2001 (Ahmed et al., 2011). Researchers have approached this problem by examining both Muslim immigrants and Muslim local nationals and the

impacts of anti-Muslim discrimination in Western countries. For instance, Muslim immigrants report having difficulties in assimilating to the host country, mainly due to theist majority rejection (Croucher, 2013; Verkuyten & Thijs, 2010). Researchers have speculated that this type of discrimination arises due to the perceived intergroup threat as seen by theists (Uenal, 2016). Authors argue through ITT, that the Islamic worldview from Muslim immigrants might threaten safety as perceived by the local nationals, thus resulting in discrimination coming from non-Muslim Americans (Uenal, 2016). American Muslims are not exempt from religious discrimination as roughly one in four individuals report being discriminated against due to their religious preference (Hassan et al., 2013). The strength of such a research approach is that it accounts for indirect effects pertaining to religious preference such as national origin. However, a weakness inherent in this approach is the neglecting of other religious preference groups that might be experiencing similar situations such as non-Muslims.

Discrimination amongst religious minorities. The methods presented previously solely examine the Christian/theistic vs. Muslim intergroup dynamic without accounting for other groups' interactions. This is the case of persons who considered Hinduism as their religious preference. Literature suggests that Hindu immigrants might experience more freedom to engage in religious practices once in Western countries (Ghaffari & Çiftçi, 2010). Yet, there is evidence to suggest mixed findings by researchers. Some have noted that Hindu religious beliefs could be associated with symbolic threats against values and beliefs and the Western way of life (Uenal, 2016). As a result, some Hindus might opt to not engage in religious practices that might result in religiously-based

discrimination from a theist majority. It must be noted that this type of discrimination is also found with other groups besides Hindus and theists. Literature suggests that countries with a majority Hindu population perceived religious minorities, such as Muslims, as a threat to their way of life (Vedder et al., 2016). Consequently, discrimination could be faced by Muslims in the form of fewer employment and financial opportunities (Vedder et al., 2016). This dynamic of two minority religious groups engaging in discrimination, in turn, suggests the need to explore the intergroup interactions and religious discrimination with other religious groups.

Buddhism and discrimination. Another non-Christian theist group includes those of Buddhist denominations. In a similar fashion as previously described regarding Christian theists, Buddhist rituals and practices could have been deemed as characteristic of psychological illness. Some authors have argued that the ritualistic and repetitive nature of some Buddhist practices and thoughts could have been misunderstood as diagnostic criteria for Obsessive Compulsive Disorders (Khoubila & Kadri, 2010). Had religious preference not been taken into account, persons who adhere to Buddhist practices could have received incorrect assessment and misdiagnosis. Outside of the issues pertaining directly to the psychological field and Western culture, Buddhist persons might experience discrimination within their denominations. As with the case of Catholics and Protestants, Buddhists might experience discrimination within their denominational conflicting beliefs. This issue arises since different Buddhist denominations allow for women's free agency within the religion while other denominations do not (Sirimanne, 2016). For instance, Buddhism was one of the first

religions to recognize the membership and "ordination" of women in higher positions within Indian religions (Sirimanne, 2016). Although this inclusion was established in early stages of the religion's origin, discrimination against women of monastic ranks is seen as culturally permissible (Sirimanne, 2016). Therefore, it could be argued that within this religious frame, the sex of the believer became contributor towards discrimination. Issues similar to those experienced by Buddhist women provided a rationale to include sex as a potential moderator of religious discrimination and anxiety.

Limitations and conflicting findings. Some studies related to religious preference, discrimination, and anxiety remain controversial since researchers have found mixed findings. These discrepancies include what is known about the benefits of religious preference adherence and its potential effects on anxiety. For instance, some research suggests that religious adherence might serve as a buffer from stressors and anxiety even when it is not the majority belief in the host country (Ahmed et al., 2011). However, discrepant findings regarding religion as a buffer for anxiety have been found. For instance, literature suggests that religious adherence can yield both a negative and positive correlation with anxiety (Peterman et al., 2014). Conflicting views about religious preference are also reflected in a natural and social setting. For example, religious discrimination is generally considered illegal in most workplace environments (Ghumman et al., 2013). However, many individuals avoid disclosing both their religious (Marsden, 2015) and irreligious (Ghumman et al., 2013) preferences mainly due to the expectation of experiencing discrimination (Ellis et al., 2010) and potential anxiety.

Researchers suggest that it is necessary to evaluate other variables that might moderate anxiety and based on religious preference (Peterman et al., 2014).

Nontheists and Secularists

Lastly, the number atheist and agnostic persons in the United States have considerably increased, with global projections placing this irreligious demographic at 1.2 billion persons by 2050 (Pew Research Center, 2015). This new increase could present some challenges to the psychological field, regarding the catering to an unorganized population. For one, this irreligious group is not commonly considered an organized religious demographic (Gervais et al., 2011). As a result, psychologists face difficulties in identifying this group for research, assessment, and possible venues for treatment and intervention. This lack of formal organization, which is inherently available with world religions, might leave the irreligious populous invisible in a social sciences research. Research suggests that the irreligious are the most marginalized group regarding religious preferences (LaBouff & Ledoux, 2016).

Researchers in the discipline have approached non-theist and secularist discrimination via recognition of non-theists as a group for research. After identifying the group, the second approach included describing, and explaining non-theist discrimination. Early studies provided empirical support that non-theist discrimination occurs but did not yield initial insights as to how a non-religiously affiliated demographic could experience religiously-based discrimination (Gervais et al., 2011). As the literature expanded, it was noted that religious groups would deem individuals as loyal based on religious preference. Later research suggested that perceived distrust was a significant

contributor in non-theist and secularist discrimination from religious groups (Gervais, 2014). As with early research, distrust remains to be a major factor for persons of the outgroup to discriminate against non-theists (LaBouff & Ledoux, 2016). Distrust towards non-theist is seen as catalyst for this type of discrimination since religious beliefs became a buffer to dismiss those that did not share said worldview. The extent of discrimination was found to be stronger than any other diverse group such as racial, gender and sexual orientation minorities (LaBouff & Ledoux, 2016). The adverse impacts of this type of religious discrimination and possible moderators remain to be understudied in regards to anxiety.

Sex and Gender

As seen previously, discrimination and experienced levels of anxiety can be moderated by multiple variables including gender. Gender-based discrimination could include being exposed to harassment, sexist remarks or behavior, and sexual objectification (Nadal et al., 2015). As such, it is relevant to consider sex differences amongst the population sample and how it might moderate the discrimination/anxiety interactions. Authors suggest that gender differences could account for how interactions amongst intergroup dynamic contribute to anxiety and intergroup threats (Stephan, 2014). There are multiple contexts in which gender could be a variable for experienced discrimination. For instance, the adherence of gender roles, particularly by women, becomes a cultural determinant as to whether a person will experience discrimination (Ellis et al., 2010). Some authors propose that this type of gender-based discrimination arises due to person's compliance and closeness to the gender norms of a given culture

(Ellis et al., 2010). As a result, individuals who do not particularly comply with such expectations could be exposed to a significantly higher risk of being discriminated against (Ellis et al., 2010). By its very nature, gender-based discrimination could be impacted by yet other factors, thus increasing discrimination potential. For example, more conservative cultures could give more emphasis and value to gender role adherence (Ellis et al., 2010). Therefore, it could be argued that gender-based discrimination and its detrimental issues could be more prevalent in more conservative cultures.

Gender-based religious discrimination. Issues pertaining to the outcomes of gender-based discrimination could be seen in a variety of matters. Within the religious dogma of Buddhism, gender differences were not seen as important, as religious enlightenment practices held more value than gender role adherence (Sirimanne, 2016). A particularly important tenant of the Buddhist beliefs is to separate oneself from attachments as means to avoid suffering and reach spiritual enlightenment or Nirvāna (Sirimanne, 2016). Consequently, since early Buddhist belief system development, women were encouraged to have their own agency by promoting their detachment of familial roles and overall women's independence (Sirimanne, 2016).

Contrary to this religious proposition of seemingly gender equality to reach enlightenment and practice Buddhism freely, some suggest that patriarchal cultures superseded such liberties (Sirimanne, 2016). For instance, certain Buddhist denominations, such as Theravāda, might hold a more culturally conservative stance towards not favoring and entirely not allowing women in religious ranks (Sirimanne, 2016). As such, it could be noted that discrimination based on sex could also be found in

a religious environment. This type of religious discrimination based on sex could stem from both the religious ingroup (within Buddhist denominations), and outgroups (other faiths or cultures).

Regarding outgroup cultural interactions, women might be at risk for religious discrimination in certain countries. Such is the case with Muslim religious codes that might require the use of the hijāb amongst women (Jasperse et al., 2012). For example, people who adhere to traditional religious attire in Western societies could experience discrimination. It has been noted that women who wear this traditional covering are exposed to discrimination at Western workplaces (Ghumman et al., 2013). Mainly, women employees that wore such religious garments were considered less capable of being a good representative of the business to the public (Ghumman et al., 2013). As a result, gender could be considered a factor that could moderate the detrimental effects of discrimination. Yet, literature suggests that gender differences also account for how religiously-based discrimination is perceived, mitigated, and coped with. For instance, religious men appear to perceive discrimination more strongly than religious women, as religious women might use gender identity to cope with discrimination (Ghaffari & Çiftçi, 2010).

Race and Ethnicity

In addition to gender, race was considered as another moderator between religious discrimination and anxiety. Extensive literature covers the pertinence of race as it relates to perceived, subtle, and overt discrimination. Race-based discrimination can be defined as acting upon formed thoughts or beliefs along with engaging in behaviors towards

members of an outgroup solely based on physical features or ethnic background (Soto et al., 2011). In other words, it could be argued that the intergroup dynamic is perceived as threatening, thus resulting in limited contact with the outgroup. It has been proposed that racial discrimination is utilized as a means to carry and perpetuate oppression and social segregation (Ahmed et al., 2011). A similar issue is found in regards to ethnicity, wherein discrimination in this sense refers to discrimination given group membership adherence due to identifying as part of a community or holding values and beliefs from a cultural background (Ahmed et al., 2011). Research about race and ethnicity as factors affecting discrimination can be evaluated in two categories based on frequency: single discriminatory events and daily events (Soto et al., 2011).

     Race-based discrimination findings. Researchers have approached race-based discrimination by examining its impacts in different settings. For example, these studies recruited participants from various racial groups in socio-cultural (Ahmed et al., 2011), workplace (Nadal et al., 2015), and community settings (Cokley et al., 2011). These studies also noted the significance of discrimination as it pertains to diverse groups. As mentioned before, when multiple groups are compared, discrimination perception tends to be higher in African Americans (Cokley et al., 2011). Furthermore, a comparison between racially similar groups has been considered. For instance, studies with Afro-Caribbeans have yielded strikingly similar results with African Americans in perceived discrimination despite the evident ethnic origin differences (Soto et al., 2011). Both groups also report the most prevalent distress due to discrimination when compared to other racial groups (Cokley et al., 2011; Soto et al., 2011). It must be noted that race-

based discrimination contributed significantly towards diagnostic criteria for anxiety disorders with African Americans, but Caucasians were more likely to have matching criteria based on other forms of discrimination (Soto et al., 2011).

Other groups that have reported racial and ethnic discrimination include Asian Americans and non-White Latinas/os. Studies examining experienced discrimination within the last year note that persons that identify as Asian American report the second highest level of discrimination along with the poorest level of mental health (Cokley et al., 2011). Regarding non-White Latinas/os, factors that affected their perceived discrimination include gender, setting, and coping mechanisms. For instance, when compared to Latino men of all ages, Latina women report more discrimination based on race in workplace and academic settings (Nadal et al., 2015). Yet, women have reported better coping strategies than men when addressing discrimination (Ghaffari & Çiftçi, 2010). Both Latina and Latino participants reported racial discrimination despite being American-born and brought up in North America (Nadal et al., 2015).

Race and the psychological field. Multiple negative outcomes arise due to race-based discrimination within diagnosis, assessment of pertaining issues, and prognosis. The first issue is arguably the mechanisms used to diagnose and treat mental health disorders of diverse racial groups. For example, researchers suggest that persons who are generally exposed to race-based discrimination might be subject to misinformed diagnoses (Cokley et al., 2011). This faulty diagnosis could stem from the overall distrust and anger that a client demonstrates due to life-long exposure to racial discrimination which might not have any clinical basis (Cokley et al., 2011). As such, non-clinical

presenting issues could be confused with clinical diagnostic criteria when race is not taken under consideration and erroneously reflected upon assessment (Cokley et al., 2011). The second impact of discrimination is based on presenting issues that could be predominantly severe with diverse racial groups (Ghaffari & Çiftçi, 2010). For instance, persons who identify as African American or Black, report greater anxiety than other minority racial groups (Soto et al., 2011). These negative impacts of racial discrimination and anxiety also extend to Latina/o and Asian groups. For instance, Latinas/os who report racial discrimination are also more likely to experience greater anxiety and suicidal ideation followed by with Asian Americans (Cokley et al., 2011).

A third factor pertaining to race is how racial identity could impact how persons cope with discrimination and anxiety and as a variable for prognosis. For instance, Asian Americans report significant symptoms related to mental health illness such as depression and anxiety (Cokley et al., 2011). Yet, when conducting an assessment, Asian Americans remain to be one of the least prevalent groups to have their psychological well-being impacted (Cokley et al., 2011). Similar to the variable of religious preference and sex, racial identity also appears to be a buffer when addressing racial discrimination (Ahmed et al., 2011; Ghaffari & Çiftçi, 2010). Researchers suggest that Asian Americans might be able to retain a sub-clinical expression of anxiety (Cokley et al., 2011) based on a greater availability of resources (Ghaffari & Çiftçi, 2010). As a result, Asian American groups demonstrate less prevalence in anxiety as a demographic group. Other authors suggest that Latinas/os, mainly Mexican-born participants, might often use religious preferences to address racial discrimination especially in reducing anxiety and suicidal

ideation (Ahmed et al., 2011).

      Limitations and conflicting findings. Race-based discrimination and its possible psychological implications has been covered to a much lesser extent with other racial and ethnic groups (Cokley et al., 2011), such as Caucasian (Soto et al., 2011), Hispanic (Nadal et al., 2015), and Asian populations (Ghaffari & Çiftçi, 2010). It must be noted that the vast majority of studies related to racial discrimination encompasses mostly an African American demographic (Cokley et al., 2011). The lack of inclusion of other diverse racial groups could serve a possible downfall in discrimination-related literature. Another potential limitation is how there are inconsistent findings regarding perceived discrimination and its possible buffers. Similar to religious preference identity, racial identity has yielded outcomes of both seeing racial discrimination at a greater (Ghaffari & Çiftçi, 2010) and a lesser rate (Ellis et al., 2010). Furthermore, there are other conflicting findings related to sex and racial discrimination. For instance, literature notes that women belonging to racial minorities are exposed to more racial discrimination (Nadal et al., 2015) but report lesser distress than men (Ellis et al., 2010; Ghaffari & Çiftçi, 2010). Here, religious adherence appears to be a variable that impacts perception of discrimination in racial minority men (Ghaffari & Çiftçi, 2010). Therefore, this potential interaction between sex, race, and religion noted a justification to include race as a moderator between religious discrimination and anxiety.

National Origin

      The last MV of this dissertation is national origin, which is classified as nonforeign born and foreign-born participants from the standpoint of the host country.

Judicial, political, and cultural criteria have been established as a means to distinguish which individuals are allowed in any given country (Orgad & Ruthizer, 2010). These established distinctions between nonforeign born and foreign-born groups have been framed under the intergroup dynamics. Mainly, it could be argued that establishing the ingroup (nonforeign born) and the outgroup (foreign born) could occasionally involve perceived threats and intergroup anxiety. For example, research suggests that countries that have a conservative judicial and political affiliation might limit immigrants' freedoms and access to resources (Croucher, 2013; Orgad & Ruthizer, 2010). In other words, the problem of national origin discrimination is potentially based on perceived the threats against host country's ideology (Croucher, 2013), physical security (Orgad & Ruthizer, 2010), and negative stereotypes of the immigrant outgroup (Ahmed et al., 2011).

Symbolic threats and ideology. These perceived threats due to intergroup dynamics could be considered individually, as each one impacts discrimination, and might all contribute to intergroup anxiety. Literature provides support for symbolic threats regarding ideology and beliefs. When addressing intergroup dynamics and national origin, both nonforeign born and foreign-born individuals (in and outgroups) note significant threats. Members of the ingroup, or host country, could perceive the presence of foreign-born persons as threatening (Vedder et al., 2016). In some cases, this threat is especially significant if individuals from the host country were already a minority whose way of life might be inherently exposed (Vedder et al., 2016). Persons from the outgroup could also consider the host country's ideology as potentially

threatening. For instance, on one hand, some foreign-born individuals might feel a cultural obligation to maintain their heritage (Ahmed et al., 2011). On the other hand, the acculturation process might hinder complying with this cultural obligation (Ahmed et al., 2011).

As a result, foreign-born persons might consider that the acculturation process is intrinsically threatening to their cultural ideology, religion, and beliefs. Furthermore, if the cultural background is conservative, the duty of maintaining national origin traditions commonly impacts women immigrants more strongly than men (Ellis et al., 2010). In other words, both sexes could be given potential responsibilities of resisting acculturation, but women will more often be considered the maintainers of cultural ideology in the new country (Ellis et al., 2010).

Security threats: Abrahamic religions. Likewise, the perception of security threats limits contact between all groups and could potentially result in discrimination. After Islamic extremist terrorist attacks in 2001, many countries, including the Unites States, have provided much attention to matters of national security and immigration restrictions (Orgad & Ruthizer, 2010). These restrictions have often been focused on predominantly Muslim countries (Croucher, 2013), thus intertwining national security with potential religious discrimination. Western countries have reported more disdain on accepting Muslim immigrants on the basis of security threats (Croucher, 2013). Issues pertaining to the host country's acceptance of immigrants also arise with foreign-born Christians and foreign-born Jews, but this firm reservation is predominantly present with foreign-born Muslims (Orgad & Ruthizer, 2010). Since religious preference could be

deeply rooted in an immigrants' national identity (Callegari, Diurni, Bianchi, Aletti, & Vender, 2016), it is relevant to consider how national origin (Ahmed et al., 2011; Monterrubio, 2016) and religious discrimination could impact psychological well-being.

National origin discrimination outcomes. The intergroup dynamic of national origin can result in significant issues such as distress and anxiety. The resulting discrimination stemming from perceived threats has been documented as an important influencer towards inadequate acculturation (Ahmed et al., 2011). Examples of discrimination include forms of harassment, such as verbal abuse regarding how immigrants, especially from religious minorities, should return to their country of origin (Croucher, 2013). Usually, this type of harassment is accompanied with mentions that the foreign-born will never achieve assimilation or acculturation since their religious preferences are different than those from the host country (Croucher, 2013). In turn, persons having difficulty adjusting to the host country's culture based on perceived discrimination report greater distress (Ahmed et al., 2011).

It has been proposed stereotypical expectations are a significant cause of anxiety (Monterrubio, 2016), hence limiting fundamental interactions for intergroup threat perceptions. In addition to the potential separation anxiety (Callegari et al., 2016), foreign-born individuals report poorer physical and psychological health than nonforeign born persons (Ellis et al., 2010). Despite the fact that foreign-born persons could be subject to discrimination based on nationality and religious preferences, religious adherence provides other benefits to psychological wellbeing. Some individuals might make use of religion as means to cope with a variety of issues related to immigration.

These concerns could include coping with leaving family members behind, psychological symptoms related to anxiety (Callegari et al., 2016) and immigration demands via group membership (Ghaffari & Çiftçi, 2010).

Summary and Conclusions

This literature review rendered main themes that relate to religious preference, discrimination, multicultural factors, and anxiety. The first recurrent theme was that religious discrimination might also be prevalent amongst non-Muslims such as Christians/theists (Marsden, 2015), Jews (Orgad & Ruthizer, 2010), Buddhists (Sirimanne, 2016), atheists (LaBouff, & Ledoux, 2016) and other religious and irreligious preferences. Another emerging theme was that the potential of discrimination was founded on expected threats of security (Croucher, 2013), their way of life (Vedder et al., 2016) and negative stereotypes' (Monterrubio, 2016) from both the ingroup and outgroup. As a result, interactions amongst diverse groups could be limited. Furthermore, multicultural factors like sex (Ghumman et al., 2013), race (Nadal et al., 2015), and national origin (Ahmed et al., 2011) showed a similar theme as potential sources of discrimination and anxiety. Despite that religious preference and other diverse factors could contribute to perceived discrimination and anxiety, each variable was also a source of coping with adverse psychological effects. For example, race (Ahmed et al., 2011), sex, and national origin (Ghaffari & Çiftçi, 2010) identity or community membership serve as a coping mechanism against anxiety.

These varied dynamic interactions between diverse communities suggest potentially mixed findings. This is evidenced by the conflicting findings that indicate

certain groups might solely experience the discrimination, and not the coping effects, of religious preference, which might lead towards anxiety. Differences in sex (Ghaffari & Çiftçi, 2010), race (Rivera-Ledesma & Lena, 2014), and national origin (Uenal, 2016) could moderate how religious preference discrimination is experienced. Researchers note the need to examine how religious discrimination might be similar to other forms discrimination both in how it is experienced and how a coping mechanism could be employed (Ghumman et al., 2013). Thus, the present dissertation sought to fill the gaps by studying other non-Muslim populations and extending the knowledge of religious preference as a factor for discrimination.

Chapter 3 will include a rationale for this dissertation's methodology selection and process. This section will include a presentation of the alignment of the research questions with the design as needed for the advancement of knowledge in the discipline. Further, I will identify the target population and the means for sampling, recruitment, and participation. Additionally, the OCM® and BAI reliability and validity data will be presented along with their pertinence in examining anxiety and appropriateness to this study. Likewise, Chapter 3 will include the data analysis plan, further divided into cleaning and screening procedures, statistical tests and key parameter estimates. Lastly, the following chapter will note and describe validity threats in addition to ethical procedures that will be emplaced mitigate adverse effects due to participation.

Chapter 3: Research Method

My intent in this quantitative study was to compare the differences between religious preference groups' anxiety (DV) in order to determine if there was a significant difference in anxiety experienced amongst groups based on the IV of religious preference and the MVs of multicultural and societal considerations. The major sections of this chapter include a description and rationale of this study's design along with a methodology for study replication. I describe the target population and sampling strategy used to gain access to the desired group. Subsequently, I explain the procedures for recruitment, participation, and data collection used to attain the necessary sample size. Next, I present the operationalization of constructs and the instrument description required for the analysis. Lastly, I discuss internal, external, and construct validity as well as this study's ethical considerations. Since the intent was to examine impacts and effects and not correlations as a means to expand current literature, this research design was deemed the most appropriate method for answering the research questions.

Research Design and Rationale

The variables in this research design were the following: the IV of religious preference, the DV of anxiety and the MVs of sex, race, and national origin. This study examined the impact of the IV and the effects of the MVs on anxiety framed under religious discrimination. RQ1 was set to examine the possible impact of religious preference and perceived religious discrimination on anxiety without the MV's effects. RQ2 was aimed towards addressing the effects of sex and anxiety of all religious preference groups. RQ3 and RQ4 examined the moderation of race and national origin on

anxiety of all religious preference groups respectively. No time and resource constraints were expected based on the design choice and recruitment method.

The research design selected to answer these RQs was a nonexperimental approach given the research questions' composition, the nature of the variables, and the necessary characteristics of the participants. First, the RQs were aimed towards a quantitative approach based on the inquiries' focus on examining potential differences between groups provided by the IV and DV. These groups cannot be assigned to experimental groups in this study, as participants denoted their religious preferences. This lack of manipulation of the IV is consistent with a nonexperimental design (Campbell & Stanley, 1963; Creswell, 2013). Additionally, these groups were not selected or assigned from or by any random groups. This selection and assignment characteristic also signify the design as nonrandomized. The nonexperimental design choice was consistent with research designs needed to advance knowledge in the discipline as other studies have yet to examine the moderator effects of multicultural variables in religious preference and anxiety.

Methodology

Population

The target population in this study was individuals who held either Christian, non-Christian theistic, or non-theistic views with particular focus on minority and diverse groups as defined by the MVs. It must be noted that participants were not expected to come from vulnerable populations. Therefore, sex and racial minorities along with foreign-born participants were the main emphasis of the study regarding the impact of

discrimination as discussed in Chapter 2. No regional or international limiters of current place of residence were set. As such, the aggregated responses were expected to come from approximately 128 (+/- 2%) nonclinical, English-speaking adult participants. I note a justification for the effect size, alpha (α) level, and power level chosen, as well as the source for calculating this sample size in the following section.

Sampling and Sampling Procedures

In comparison to other sampling strategies, such as recruitment through regular mail, I deemed online recruitment the best approach for a variety of reasons. First, the research questions presented called for access to a highly diverse group of both religious and irreligious persons. Additionally, variables such as race and national origin also required vast accessibility to diverse groups in order to address the research questions of this study. According to researchers, utilizing online means for recruitment provides a comparatively easier approach to accessing more diverse groups when compared to conventional methods (Ahern, 2005; James & Busher, 2015). Furthermore, other variables, such as national origin, were potential predictor variables in this study. Online means of research offered access to a greater area (Ahern, 2005), whereas traditional means might have limited recruitment venues to local regions. As such, this study used the online recruitment sampling strategy.

The statistical software of G*Power$^{©}$ version 3.1.9.2 for Mac OS X (Buchner, Faul, & Erdfelder, 2017.) was used to conduct a power analysis to estimate the statistically appropriate sample size. The findings of the Jasperse et al. (2012) study showed that approximately 22% ($R^2 = .22$) of the variability in self-reported

psychological symptoms ratings was measured in a hierarchical regression model, which

included measures of depression, anxiety, and psychosomatic symptoms. As such, the

current estimate used a moderate effect size (Sherperis, 2010a). The G*Power© version

3.1.9.2 software utilizes Cohen's f^2 as an effect size measure for a fixed effects, omnibus,

one-way ANOVA. Consequently, as seen in Table 1, the Cohen's f^2 medium effect size

was set to the value of .30. The power selected for this analysis was based on the

traditional minimum level of .80 (Burkholder, 2009) and a social sciences' traditional

significance α level of .05 (Trochim, 2006a). The number of predictors in the ANOVA

model was set to the four variables of RLG, SEX, RCE and NTL. The family setting of

"*F*-Tests" was chosen to tests the significance of the model with an *F*-Ratio for *R* with an

a priori analysis type. As a result, the minimum amount of participants needed for the

study was 128. Figure 3 illustrates the minimum sample size based on the effect size,

predictors, and significance value.

Table 1

Power Analysis Estimated Parameters and Results

| Analysis Inputs:	Statistic		
Test Family =	F-tests		
Statistical Test =	ANOVA: Fixed effects, omnibus, one-way		
Type of Power Analysis =	A priori: Compute required sample size		
Effect size f^2		=	0.30
Significance Level/α err probability		=	0.05
Power (1-β err probability)		=	0.80
Number of predictors		=	4
Analysis Output:	Noncentrality parameter λ	=	11.52
	Critical F	=	2.67
	Numerator df	=	3
	Denominator df	=	124
	Total sample size	=	128
	Actual power	=	0.81
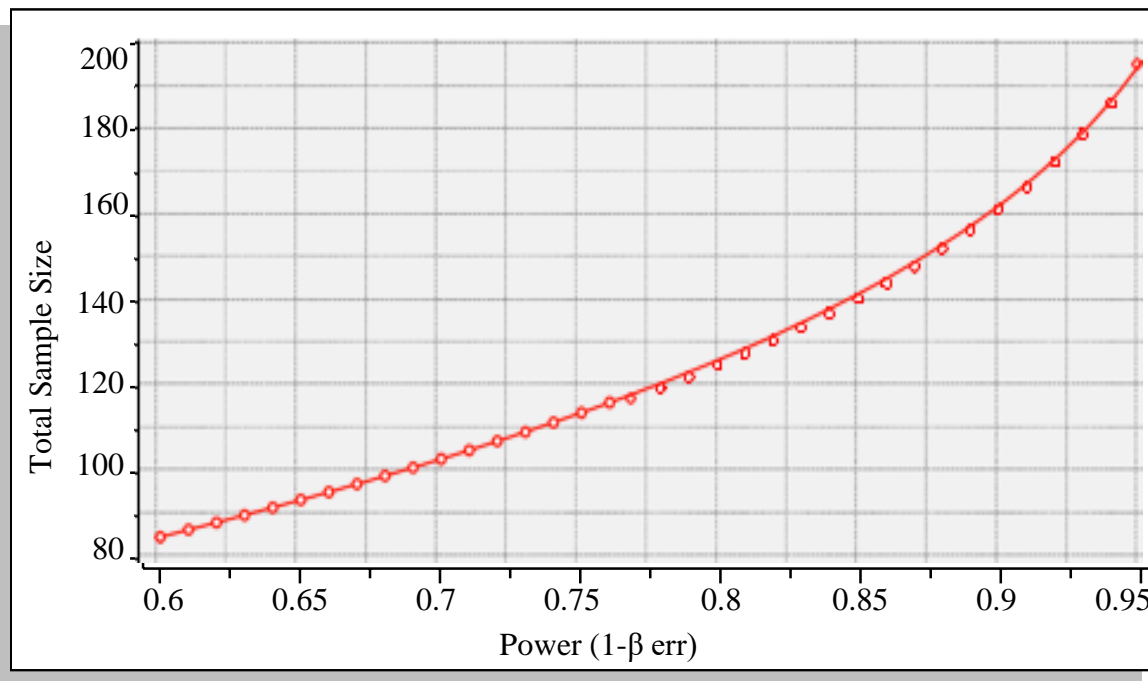
Figure 3. *F* tests: ANOVA: Fixed effects, omnibus, one-way
Note. Number of predictors = 4, α err prob = 0.05, Effect size f^2 = 0.3

Procedures for Recruitment, Participation, and Data Collection

To increase the likelihood that the study group was going to represent diverse religious and secular groups, I initially proposed that the sample be recruited via Qualtrics® participant pool and Walden University's participant pool. Additionally, I would conduct recruitment via public domain online/e-mail announcements (Appendix B) and flyers (Appendix C) to Christian churches/temples, non-Christian houses of worship, and religious and online secular-based social forums. I intended to use the paid custom project service through Qualtrics® participant pool to recruit currently available active members of the site who were willing to answer questions about their religious preference. This paid service allows researchers to set criteria and characteristics required of the participants, such as age, language restrictions, and demographic traits. I intended to conduct a second means of recruitment via Walden University's participant pool. After receiving the Institutional Review Board's (IRB) approval, participants I would have provided a link to access Qualtrics® and the informed consent. As such, there was no need to use either the Qualtrics® or Walden University participant pool recruitment strategies.

I conducted the third method of recruitment by contacting national and international secular and atheist organizations and social forums and temple/church leaders (Appendix D). I also provided these participants with a link to access Qualtrics® and the informed consent via flyer and forum announcements. In the case of direct recruitment, group and church leaders were informed in writing (Appendix A) of the nature of the study and the intent to gain access to their members. These leaders will be

referred to as Community partners. Once the community partners agreed to the proposal, they submit a letter/e-mail agreeing to proceed to post the social forum announcement (Appendix B) and flyer (Appendix C).

Before any of the participants began the survey process, they were provided informed consent via an automatic screen prompt. The informed consent stated the voluntary nature of their participation and their right to withdraw at any time. Participants had to acknowledge that they were adults and agreed to participate by selecting the appropriate option in the informed consent.

Since topics such as race and national origin are sensitive, toll-free, confidential nationwide hotline resources were made available in the informed consent form. Legal risks regarding a foreign-born participant's violation of immigration laws were acknowledged as sensitive. However, this risk was mitigated via not inquiring about the legality of the person's residence or immigration status. Other common research risks such as relationship, economic/professional, physical, and other risks were not expected including potential conflicts of interest. Furthermore, pertinent contact information of the research parties/committee members and research participant advocate were readily available should any issues were to arise during the participation process. Participants who do not agree with the statements in the informed consent did not gain access to the study.

The participants who were recruited into the study completed a self-report demographic questionnaire through the survey site (Appendix E). The host website contains a Transport Layer Security encryption, firewall, and federal law compliant

privacy policies (Qualtrics LLC, 2017). The demographic information section of the

questionnaire included factors of interests, such as religious preference, sex, race, and

national origin. Next, the participants responded to the items of the OCM® (Appendix F).

The other section of the questionnaire included the BAI score (Appendix G). Participants

could exit the study at any time by leaving the survey site. There were no follow-up

procedures in this study.

Instrumentation and Operationalization of Constructs

       Outgroup contact measure. Schmid and colleagues created this scale in 2009.

The scale was focused on the establishment of a measure that could note the ingroup and

outgroup relationships between religious and irreligious persons (Schmid et al., 2009a).

This scale was created based on the lack of instruments that looked into such intergroup

dynamics while addressing the exposure, or lack thereof, with the outgroup (Schmid et

al., 2009b). The variables assessed are based on a self-report of ingroup identification,

identity strength, in a non-clinical setting (Schmid et al., 2009b) and their perceived

threats from the outgroup (Schmid et al., 2009a). Here, the scores are measured upon four

items where the responder noted how often they interacted with their religious ingroup,

thus representing a more favoring view of the outgroup (Schmid et al., 2009a). The

scores are interpreted via a seven-point scale (Schmid et al., 2009b). Participants might

select a range of scores where "0" signifies that they have had no interaction with the

religious-outgroup to a score of "6", (Schmid et al., 2009a) meaning more interactions

(Schmid et al., 2009a). The sum of the scores for the four items will range from "0"–

"24", the larger score representing more inter-religious interactions (Schmid et al., 2009b).

Individuals may make use of this scale without written permission if the purpose of such use is educational or for research (Schmid et al., 2009b). Given these scales' characteristics of evaluating the ingroup and outgroup dynamics for religious interaction, the OCM® was used to address the IV of religious preference. Further, the OCM® is set in comparing the differences between religious and irreligious group adherence, which aligns with the theoretical frameworks of this study. As means to be able to use this scale in a digital format, individuals must adequately present the copyright owner of the instrument for research use. Once this credit is given, this scale might be used to examine religious preference and intergroup interactions.

Beck's Anxiety Inventory. A. T. Beck, N. Epstein, G. Brown, and R. A. Steer developed this inventory in 1988. The instrument was aimed in creating a discriminatory measure between symptomatic areas of anxiety and depression (Beck, Epstein, Brown, & Steer, 1988a). Furthermore, this inventory was developed with the intent of creating a clinical instrument that superseded other measures that examined anxiety (Beck et al., 1988a). The variables that the instrument measure include a self-report in a clinical setting (Beck et al., 1988a) and anxiety symptoms (Osman et al., 1997). The scores are calculated based on 21 items where the examinee responds to the severity of symptoms as experienced within the last four weeks (Beck, Epstein, Brown, & Steer, 1988b). The meaning of the score is based on a four-point scale (Osman et al., 1997). Here, the examinee will provide input, where a score of "0" represents that the items were not

bothersome (Osman et al., 1997) or a maximum of "3", which notes severe discomfort (Beck et al., 1988b). Later, the scores for all 21 items are added, ranging from "0"–"63", the larger score noting greater anxiety severity (Beck et al., 1988b). The scores are interpreted at an average *T* score of 50, *SD* =10 (Beck, 2017). Participants are able to respond to all items in less than 10 minutes (Pearson Education, Inc., 2017a).

Presently this instrument is available without written permission, solely for research purposes (Beck et al., 1988a). The qualification level of this instrument is categorized as "B" (Pearson Education, Inc., 2017b). As such, the researcher must possess a Master's degree or higher in the field of study of the intended research (Pearson Education, Inc., 2017b). The Chairperson provided remote supervision, not in person supervision, for adequate handling of the instrument.

As seen earlier, this instrument's appropriateness to the study was based on the BAI's availability and pertinence to addressing the DV present in all research questions. The BAI's use in examining current anxiety levels, connected to this study's intent to examine group differences regarding the DV. This instrument is readily available to researchers in digital format and for open use and permissible for research purposes only. Thus, it could be applied in an online setting given certain intellectual property precautions including crediting the developer and copyright ownership. Further, virtual processes allow for a mitigation of human error during data collection stage when compared to traditional paper copy measurements (Ahern, 2005). Consequently, a simpler and more accurate data collection process could assist the margins of error in this

study given no administrator bias. Therefore, recorder bias could also be limited by using these means of instrument exposition.

Reliability and Validity of the Instruments

   Beck Anxiety Inventory. The BAI's developers made use of a mixed psychiatric sample (Beck et al., 1988b) in comparison with other instruments, to test scale reliability and validity. An iterated factor analysis was used in this study (Osman et al., 1997). The researchers found a high internal consistency of Cronbach's $\alpha = .92$ and a moderate correlation with the Hamilton Anxiety Rating Scale, $r(153) = .51$ (Beck et al., 1988b). More importantly, the study provided support for the BAI's discriminatory ability with a non-anxious population. The BAI showed a low correlation with Hamilton Depression Rating Scale, $r(153) = .25$, $p < .05$ (Beck et al., 1988b). Another study was conducted to compare and contrasts these results. In this instance, the results were similar, showing a Cronbach's $\alpha = .92$ and $r(160) = .56$, $p < .05$ (Beck et al., 1988a) and low correlation with the Hopelessness Scale $r(160) = .15$ $p < .05$, which is set to measure depression. Other researchers examined a non-psychiatric population and compared the BAI with other instruments. Their study supported the previous reliability and validity findings. These similarities were noted with the BAI's strong correlation with other anxiety measures, such as Brief Symptom Inventory-Anxiety (BSI-A): $r(350) = .69$, $p < .01$ and State-Trait Anxiety Inventory (STAI) $r(350) = .58$, $p < .01$ (Osman et al., 1997). As such, this last study also supported the utilization of the BAI with non-clinical participants, such as with those in this present study.

Outgroup Contact Measure. As means to develop the OCM®, Schmid and associates (2009a) gathered a sample of non-clinical students at two Irish universities. This evaluation was conducted via Factor analysis with a cutoff criterion of eigenvalues > 1 (Schmid et al., 2009a). The developers compared their scale with multiple models to assess discriminatory treatment and negative opinions towards the outgroup as means to test reliability and validity. The researchers found that religious outgroup contact predicted perceived ingroup threat (β = -.24, p = .001) and ingroup bias (β = -.19, p = .003) (Schmid et al., 2009a). Here, Schmid and colleagues (2009a) noted that religious outgroup contact contributes to 81.12% of the variance for Protestants and Catholics. The findings demonstrated an excellent Cronbach's α of .92 (Schmid et al., 2009b).

Data Analysis Plan

Statistical analysis included common quantitative and data processing programs such as the Statistical Package for the Social Sciences Standard GradPack (SPSS™). This program was also used for data cleaning and screening procedures. These two processes consisted of tending to outliers, testing multicollinearity, homoscedasticity, and normal, linear relationship of variables (Field, 2013).

Research Questions and Hypothesis

The following includes a restatement of the research questions and hypotheses noted and illustrated in Chapter 1:

RQ1: Are there any differences in Christian, non-Christian and non-Christian theists groups and anxiety?

$H_0$1**:** There is no statistically significant difference between Christian, non-Christian and non-Christian theists anxiety level as evidenced by the Beck Anxiety Inventory® score.

$H_1$1: There is a statistically significant difference between Christian, non-Christian and non-Christian theists anxiety level as evidenced by the Beck Anxiety Inventory® score.

RQ2: Do sex differences of male and female of each group contribute to anxiety differences amongst religious preference groups?

$H_0$2: There is no statistically significant difference between the male group and the female groups' anxiety level as evidenced by the Beck Anxiety Inventory® score.

$H_1$2: There is a statistically significant difference between the male group and the female groups' anxiety level as evidenced by the Beck Anxiety Inventory® score.

RQ3: Do racial differences of Caucasian and non-Caucasian participants contribute to anxiety differences amongst religious preference groups?

$H_0$3: There is no statistically significant difference between Caucasian and non-Caucasian participants, groups' anxiety level as evidenced by the Beck Anxiety Inventory® score.

$H_1$3: There is a statistically significant difference between Caucasian and non-Caucasian participants, groups' anxiety level as evidenced by the Beck Anxiety Inventory® score.

RQ4: Do national origin differences of nonforeign born and foreign born

participants contribute to anxiety differences amongst religious preference

groups?

Null hypothesis 4 ($H_0$4: There is no statistically significant difference between

national origin status of nonforeign born and foreign born participants groups'

anxiety level as evidenced by the Beck Anxiety Inventory® score.

$H_1$4: There is a statistically significant difference between national origin

status of nonforeign born and foreign born participants groups' anxiety level

as evidenced by the Beck Anxiety Inventory® score.

A one-way analysis of variance (ANOVA) was used to assess the unique impact

(controlling for the variables of SEX, RCE, and NTL in the model) of the variable of

RLG (Christian, non-Christian theists, and non-theists) and the psychological variable

(BAI). The steps involved in the analysis of the data included: limiting and discarding

responses that do not adhere to the population inclusion/exclusion criteria. To address

assumptions criteria, normality assessment, distributional assumptions, sphericity, and

homogeneity of variance testing were be conducted. Further, descriptive statistics, such

as mean, standard deviation, and variance, were presented for the participants and the

model. Other statistics included utilizing a weighted/unweighted means analysis

comparison at the outset of the study to address any confounding issues and the main

effects and the equivalency. Each hypothesis considers anxiety as the dependent variable.

All RQ's hypotheses required the IV of religion preference (with three levels). RQ2

considered sex (three levels), RQ3 race (six levels) and RQ4 national origin (two levels), as their respective IVs.

The results were interpreted based on the parameters discussed in Table 1. Here, no confounding variables were included. However, categorical MVs were listed, as they might have an interaction with the IV and DV. The MVs (sex, race, and national origin) are mutually exclusive. These interactions were interpreted based on key parameter estimates of 95% confidence interval (CI). SPSS™'s *PROCESS* was used to conduct a multiple regression analysis to test the potential moderating effects of sex, race, national origin and the religious preference-anxiety relationship. The predictor variables of religious preference, sex, race, and national origin were included in the regression model. The regression model could explain if there is a significant proportion of the variability in anxiety (R^2). Later, I established a control for the main effects (B) of religious preference, sex, race, and national origin and the interaction with anxiety as to determine moderator effects on the religious preference-anxiety relationship.

The regression model was used to interpret the correlation coefficient (R) of all variables, the main effects (B), and the standard error of the main effect (SE_B) and to test the null hypothesis and possible interactions of the MVs. The standard error (t), variance explained, and overall variance under the F test were included for the model to evaluate main effects and interaction/moderating effects. The significance value (p) was used to determine the degree of variability of the IV and MVs towards the DV.

Treats to Validity

External Validity

The idea of external validity refers to the extent that a study's results can be generalized to other populations (Campbell & Stanley, 1963). Some threats are eliminated *de facto* as this study was focused on a non-experimental, non-treatment, no intervention, post-test only, static-group comparison design. The external validity threats that were avoided included: interactions of testing, reactive effects of experimental arrangements, and multiple-treatment interference (Campbell & Stanley, 1963). Furthermore, this design's inherit aim was to gather representative samples as a means to generalize results (Creswell, 2013). Consequently, no threats were expected.

Internal Validity

The concept of internal validity involves the extent to which a set study's results can be used to infer or to answer research questions (Field, 2013) while considering a reasonable amount of error (Campbell & Stanley, 1963). In other words, based on the contingency measures used to minimize errors, the results should satisfactorily provide answers to the variables' inquiries. In this sense, some of the expected threats to validity in this study included selection interaction and statistical regression. For the selection interaction threat, the study's internal validity might have been impacted based on selecting participants solely from having a desired characteristic (Creswell, 2012). A possible action to reduce this issue is to make use of random selection as means to reduce bias (Creswell, 2012). The statistical regression threat refers to selecting the score of participants who have demonstrated extreme results (Campbell & Stanley, 1963). This

issue was mitigated and even eliminated during the data cleanup process due to their appearance of outliers. This data cleanup technique is recommended as means to reduce statistical regression threats (Creswell, 2012).

Construct Validity

This research could have been impacted by construct validity, referring to the degree to which an instrument measures its intended variable (Field, 2013). The importance of this type of validity relies on its ability to relate to a study's theoretical framework (Frankfort-Nachmias & Nachmias, 2014). As presented in Chapter 1 and Chapter 2, the theoretical frameworks of IAT/ITT rest on the assumption that persons that perceive the ingroup/outgroup dynamic could experience more anxiety. The construct of anxiety, as measured by the BAI, was used to link the IV and MVs back to the theoretical framework of IAT/ITT. Frankfort-Nachmias and Nachmias (2014) suggest that this construct alignment could be reached through regression analysis of this study's variables. This dissertation sought to examine if the BAI could indeed be used as means to determine anxiety in diverse populations and the OCM® for religious outgroup contact. At the time were this study was conducted, other than the MVs, no confounding variables were expected to impact this study.

Ethical Procedures

In order to gain access to participants, an agreement letter was presented to group and temple leaders/community partners informing them of the intent of gaining access to their members. This letter, disclosed in Appendix A, denoted the nature of this study and included the informed consent. Once addressed, the leaders then submitted a letter/e-mail

authorizing access to the setting. Participants that were recruited in religious and irreligious social forums were only provided with an informed consent form. Participants that were expected to be recruited and Qualtrics® would have also only received the consent form as well. The treatment of the participants was based on the APA's *Ethical Principles of Psychologists and Code of Conduct* as amended (2017a) and IRB standards. IRB forms needed for approval included the institution's IRB application, proof of education on the protection of human subjects, flyer, consent form, and a letter of research invitation participation. The participant pool application was not included since such recruitment was not ultimately needed for the study.

One of the ethical concerns related to recruitment process could have been the position of authority that the group and temple leaders inherently have towards their members. Part of the community member's responsibilities in this study was share social forum announcements and flyers with its members on my behalf. In other words, the group leader's position might have been seen as coercive, limiting the recruit's willingness to participate voluntary. As a result, a leader-member conflict of interest could have arisen. The potential recruits might have had confused this participation as part of their duties as a congregation and not solely as a recruit. These issues were addressed by clearly noting the intent of the study and their roles as participants. Recruits were informed that their participation was entirely voluntary, thus not related to their responsibilities as church attendees.

During the data collection process, ethical concerns pertaining to participant refusal or early withdrawal from the study were presented during the informed consent

step. Here, participants were notified of the voluntary nature of their participation that involves no penalty if withdrawal occurs. No adverse effects were expected during participation. If however, such a situation should have arisen, participants were provided with the researcher's contact information and referral information to tend to emotional or psychological distress.

Participants were not asked to provide any information that could be used for identification purposes. This present study did not require the use of any personal identification to answer research inquiries. Both the data that was voluntarily provided by participants and data treatment will remain anonymous, as no identifying information was requested. The storage procedures for the data include storage in a private, password and Transport Layer Security encryption protected "cloud/drive" server. Only committee members will have access to this data, whom are automatically bound to confidentiality under the University's Code of Conduct via federal law (Federal Family Educational Rights and Privacy Act of 1974, 2011). The "cloud/drive" data banks will be permanently destroyed five years after research is completed.

Summary

This chapter served to present the design and methodology of the method of inquiry of a non-experimental approach. Within this section, I presented this study's IV of religious preference, moderating variables of sex, race, and national origin in conjunction with the research questions. In this regard, I provided a rationale to justify and connect this design's selection and the research inquiries. Here, a non-experimental approach was presented as the needed design to advance knowledge in the discipline as

the moderating effects of the MVs remain to be addressed with the understudied

construct of religious preference and impacts towards anxiety. Furthermore, I provided an

explanation of possible design issues, such as those impacting random assignment

provided resource constraints.

Additionally, this study's methodology was presented, which included the

description of the desired adult population from diverse religious and irreligious

backgrounds. Furthermore, a power analysis was introduced as means to provide a

justification for the desired population size for 128 participants. I presented the recruiting

procedures for online and community partners along with ethical considerations. Lastly, I

gave a description of the OCM®'s and BAI's reliability and validity values along with

their relevance to the operationalized constructs and then expected threats to validity. In

the following chapter, the data collection frames will be presented including descriptive

statistics and the assumptions to interpret the study's results.

Chapter 4: Results

The purpose of this quantitative research was to compare differences between the religious preference groups and the moderating effects of sex, race, national origin (MVs) and their influence on anxiety. To investigate this issue, I developed a statistical moderation regression model based on $N = 414$ adults. The intent was to examine the IV of religious preference and religious discrimination (X) and the overall model in RQ1 and OCM® score. Next, through RQ2 I examined the MV of sex (MV1) and its impact towards anxiety in religious preference groups. With the second MV (MV2) of race, explained in RQ3, I examined the significant relationship this MV might have towards religious discrimination and anxiety. Lastly, I also hypothesized national origin (MV3) to moderate the effects of religious discrimination effects towards anxiety in nonforeign-born and foreign-born participants. I set all predictor variables to hypothesize a direct contribution or a moderating effect on the model. Failure to reject this significant impact then results in accepting the null hypothesis for all for RQs. In other words, the null hypotheses that are kept suggest that the predictor variable had no impact towards anxiety. The DV was anxiety (Y) as examined by the BAI® score.

This chapter includes a data collection description that encompasses the study's recruitment and response rates. Furthermore, I discuss descriptive and demographic characteristics of the sample and its representation with the general population as well as any discrepancies from the plan presented in Chapter 3. I organized the study's results based on each RQ and hypothesis with the statistical analysis findings. These results include a description of assumption compliance, probability values, confidence intervals,

and effect sizes. Additionally, this section includes *post-hoc* analyses that arose during this process. Lastly, I present a summary of the answers for each of the RQs and their connection to the conclusions of the study.

Data Collection

Time Frame and Recruitment

As means to comply with federal and local laws and institutional policies, the IRB's permission to conduct this research was requested on May 14, 2017. This application included the Letter for Flyer Distribution and Announcement Request (Appendix A), social forum announcement (Appendix B), and the recruitment flyer (Appendix C). Likewise, the sociodemographic survey (Appendix E), the OCM® (Appendix F), and the BAI® (Appendix G) were included. This process also entailed the successful completion of Human Research Protections training under the National Institutes of Health's Office of Extramural Research. Permission was granted on July 6, 2017, with the IRB approval number of 07-06-17-0439064 and an expiration date of July 5, 2018. The data was collected from a total of $N = 414$. Once the data collection process was complete, I inputted the raw data into SPSS™.

I submitted a letter for flyer distribution and announcement request (Appendix A) to Community Partners (CP) from which potential participants could be drawn, invited, and recruited to the study. I initiated this contact via e-mail. CP initial contact began on July 14, 2017. Once the CPs evaluated the proposed methods of research, the organization's representative submitted an e-mail approving dissemination of the flyer and announcements. The link to the study (Appendices E, F, & G) was activated and

posted to the Qualtrics® survey site with IRB's approval. Further, the survey was made available via public domain online/e-mail announcements and flyer placement. The online/e-mail announcements and CP were given the flyer (Appendix C). Further, flyers were placed in community locations as listed in Appendix D. Data collection began on July 14, 2017, and was completed on July 30, 2017.

Response Rates

As noted in Chapter 3, initial data analysis included the use of SPSS™ for outlier identification, normality testing, multicollinearity, and homoscedasticity. The data clean-up and screening procedures, as well as all data analyses, were conducted with SPSS™ version 21.0 and *PROCESS* version 2.16.3 (Hayes, 2017) for Windows 10 OS. The total responses collected in this study were 503. As means to comply with this analysis' assumptions, discussed later in this chapter, I addressed any missing values that could hinder data analysis by running a frequencies analysis for each variable. The responses that had a significant number of missing values could be addressed via value replacement (Morrow, n.d.). As such, the series' mean method was used to replace each response's missing values for each variable. Later, I conducted a search for values that could make the analysis prone to Type 1 and Type 2 errors such as outliers (Morrow, n.d.). I addressed this outlier issue via box plot creation. Afterwards, multicollinearity and homoscedasticity by were addressed by conducting Z tests, including skewness and kurtosis and normal probability plot of regression and histograms. The value cutoff used for sample sizes greater than 300 is 3.29 or more to address normality (Kim, 2013). Normality was addressed via Kolmogorov-Smirnov and Shapiro-Wilk tests. The desired

sample size previously calculated in Chapter 3 was 128. However, after data clean-up procedures for outliers and 31 persons refusing to participate, 424 were kept, and after the elimination of 10 responses to establish group equivalency, the result was $N = 414$ or an 82.30% response rate.

Discrepancies in Data Collection

During this stage, there were some discrepancies in data collection from the plan presented in Chapter 3. I requested permission from the IRB to draw participants from the online/e-mail announcements and CPs. These sources sufficed, and there was no need to request an amendment to add the proposed participant pools from Chapter 3. For instance, neither Walden University's participant pool nor Qualtrics® participant pool were used. Consequently, only participants with access to the CP, the public domain online/e-mail social forum announcements, and flyers in community locations (Appendix D) had access to the survey link (Appendices E, F & G).

Baseline Descriptive and Demographic Characteristics

Of the $N = 414$ responses from an international sample from 44 different countries that did meet the study inclusion criteria, I examined descriptive statistics for the IV of religious preference and the MVs of sex, race, and national origin. All variables at hand were nominal. The IV of religion was divided into three levels. The first level was Christian theists (CT), $n = 130$ (Evangelical/Fundamentalist Protestant, mainstream Protestant, Catholic, and other Christian). The second level was non-Christian theists (NCT), $n = 142$ (Jewish, Muslim, Buddhist, and Hindu). The last level of the IV was non-

theists (NT), which included unaffiliated/secularist, agnostic, and atheist groups, *n* = 142.

Table 2 and Figure 4 show the descriptive statistics of this demographic variable.

Table 2
Religious Preference of Participants

		n	%
CT	Evangelical/Fundamentalist	25	6.0
	Mainstream Protestant	38	9.2
	Catholic	25	6.0
	Other Christian	42	10.1
NCT	Jewish	30	7.2
	Muslim	23	5.6
	Buddhist	37	8.9
	Hindu	52	12.6
NT	Unaffiliated/secularist	12	2.9
	Agnostic	39	9.4
	Atheist	91	22.0
	Total	414	100.0

Note. CT = Christian/theist; NCT = non-Christian theist; NT = non-theist. Other Christian's group includes Jehovah's Witness, Mormon, etc.
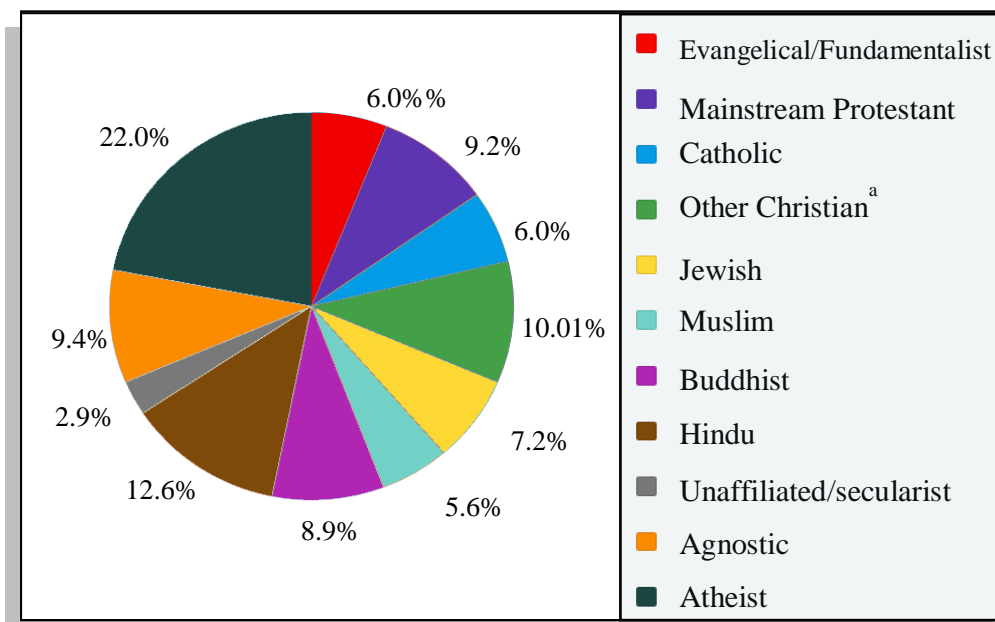

Figure 4. Religious preference of participants.
Note. [a] Includes: Jehovah's Witness, Mormon, etc.

As shown in Table 3, the MV1 of sex was divided in three levels listed as "male" ($n = 227$) "female" ($n = 184$) and "non-binary/gender fluid" ($n = 3$). The second MV, or race, was divided into six levels that included White, Black or African American, Hispanic or Latina/o (all races), Asian (all ethnicities), Middle Eastern (all races), and Two or more races (all other races). These items are depicted in Figure 5. The majority of participants identified themselves as White ($n = 278$), followed by Hispanic or Latina/o ($n = 48$).

Table 3
Sex Statistics

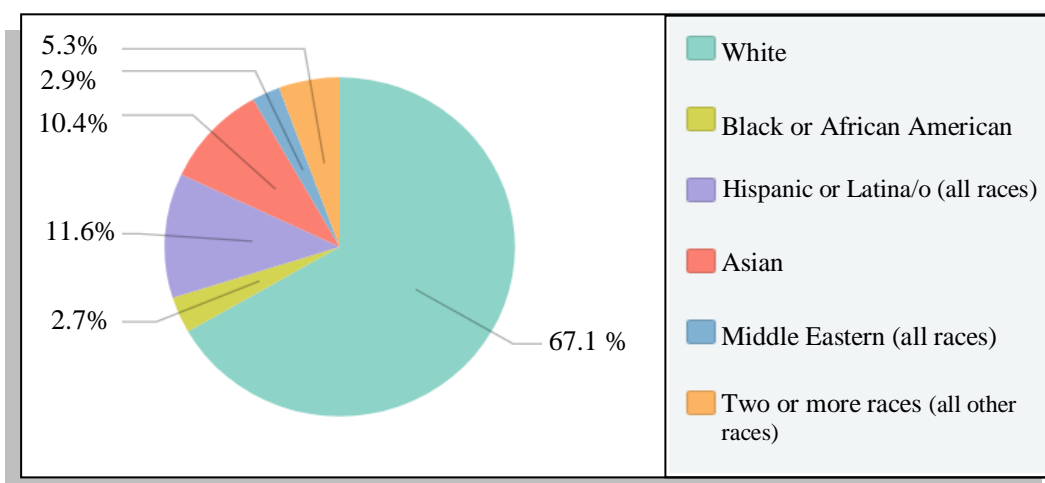|	*n*	%
Male	227	54.8
Female	184	44.4
Non-binary/gender fluid	3	.7
Total	414	100.0

Figure 5. Race of participants.

Lastly, the MV3 of national origin (Table 4) was divided into two levels of nonforeign-born ($n = 337$), and foreign-born participants ($n = 77$), as based on the host

country. It must be noted that persons from Puerto Rico and Guam are American citizens

by birth in the same manner as those born in the incorporated 50 states. However,

demographic data from U.S. territories is generally gathered with local differences in

mind as means to cater to Islander cultural differences from the U.S. mainland (U.S.

Census Bureau, 2016a). Correspondingly, this study made use of this precedence to

analyze the MV3.

Table 4
National Origin Statistics

	n	%
Nonforeign born	337	81.4
Foreign born	77	18.6
Total	414	100.0

Most participants had a national origin background from European countries (*n* =

52), followed by Asian, African, and Middle East countries (*n* = 41), and Latin American

countries and territories (*n* = 35). A detailed disclosure of the sample's national origins is

illustrated in Table 5.

Table 5

National Origin of Participants

Region	Country	n	n (%)	Region	Country	n	n (%)
Asia	Bangladesh	1	.2	Europe	Austria	2	.5
	India	17	4.1		Belgium	1	.2
	Indonesia	1	.2		Bosnia and Herzegovina	1	.2
	Kyrgyzstan	1	.2		Czech Republic	1	.2
	Philippines	1	.2		France	1	.2
	Republic of Korea	1	.2		Germany	11	2.7
	Singapore	2	.5		Iceland	1	.2
	Sri Lanka	1	.2		Italy	3	.7
	Thailand	2	.5		Netherlands	1	.2
	Total	27	6.3		Norway	1	.2
Middle East	Lebanon	2	.5		Poland	1	.2
	Pakistan	5	1.2		Romania	1	.2
	Saudi Arabia	1	.2		Slovakia	1	.2
	Turkey	2	.5		Slovenia	1	.2
	Total	10	2.4		Spain	2	.5
Africa	Algeria	1	.2		Ukraine	3	.7
	Egypt	2	.5		UK	20	8
	South Africa	1	.2		Total	52	12.1
	Total	4	.9	The Americas	Argentina	1	.2
The Pacific	Australia	7	1.7		Belize	1	.2
	Guam	1	.2		Brazil	2	.5
	Marshall Islands	1	.2		Canada	15	3.6
	New Zealand	4	1.0		Mexico	2	.5
	Total	13	3.1		Puerto Rico	29	7.0
					USA	258	62.3
					Total	308	74.3
Total		54	10.4			360	89.6
N						414	100

Note. Participants from the U.S. territories of Guam and Puerto Rico were included as a separate group from the mainland participants.

Study Results

Preliminary Data Analysis

Prior to the analysis, some assumptions, such as tending to outliers and appropriate sample size needed for a regression analysis (Morrow, 2016), were addressed during the data clean-up procedures listed previously. Next, an adequate sample size for type of analysis is a minimum of 108, where the predictor variables of the model are added to 104 (Morrow, 2016). Furthermore, based on the analysis conducted during data clean-up procedures, the results note the necessary assumption compliance of a non-perfect multicollinearity (Morrow, 2016). A P–P plot (probability–probability) helped to illustrate how this assumption was met along with the assumption of having non-perfect homoscedasticity (Field, 2013). Additionally, a Q–Q (quantile-quantile) plot showed a linear relationship of the model's variables, thus satisfactorily complying with that assumption (Field, 2013). However, the Levene's F Test for Equality of Variance (Table 6) showed that the assumption of homogeneity of variance was not met for RLG: F (24, 388) = 3.510, p = .010, NTL: F (1, 412) = 4.879, p = .028 and BAI: F (10, 403) = 1.902, p = .043. Therefore, the hypothesis assuming that the variance amongst groups was equal had to be kept. Consequently, the subsequent data analysis was interpreted with caution given the potentiality of Type I error.

Table 6
Test of Homogeneity of Variances

Measure	Levene Statistic	*df1*	*df2*	*p*
RLG	3.510	24	388	<. 0001
NTL	4.879	1	412	.028
BAI	1.902	10	403	.043

Note. Analysis conducted at the p < 0.05. Equal variances assumed.

Statistical Analysis Findings

The associated probability values were set for the traditional $p < .05$ as means to reject the null hypothesis for statistically significant findings (Téllez, García, & Corral-Verdugo, 2015). According to Téllez and colleagues (2015), the small, medium, and large correlations could be examined through the effect sizes of 0.10, 0.30, and 0.50 respectively. The regression was evaluated under a small, medium, and large Cohen's f^2, corresponding to 0.02, 0.15, 0.35 values (Cohen, 1992; Sherperis, 2010b). The RQs, hypotheses, and model of this study were examined as follows:

An ANOVA (Table 7) was conducted to determine if there were moderator effects that contribute to anxiety towards religious preference groups. The variables of SEX, RCE, and NTL were included in the model. The general BAI scores for this study's participants ($N = 414$) corresponded to $m = 8.42$, $SD = 1.66$, which is consistent with a mild level of anxiety. The first range of a "minimal" level of anxiety, correspondent to 0-7 score, included $n = 201$, with an $m = 2.99$. The second tier of participants, $n = 152$, reported results in the "mild" range of anxiety level, 8-15 ($n = 152$, $m = 10.46$). Within the "moderate" range or 16-25, $n = 49$ participants had an $m = 19.1$. Lastly, $n = 12$ participants had results consistent with an "extreme" level of anxiety ($m = 28.5$) ranging from 26-63.

Table 7
One-Way ANOVA BAI

Variable	Source	SS	df	Mean	F	p
RLG	Between Groups	940.79	10	94.08	1.988	.033*
	Within Groups	19074.38	403	47.33		
	Total	20015.17	413			
SEX	Between Groups	789.65	2	394.82	8.441	<. 0001*
	Within Groups	19225.52	411	46.77		
	Total	20015.17	413			
RCE	Between Groups	215.92	5	43.18	.890	.488
	Within Groups	19799.25	408	48.52		
	Total	20015.17	413			
NTL	Between Groups	.048	1	.048	.001	.975
	Within Groups	20015.13	412	48.58		
	Total	20015.17	413			
BAI	Between Groups	962.34	25	38.49	.784	.763
	Within Groups	19052.83	388	49.10		
	Total	20015.17	413			

Note. SS = Sum of Squares; *df* = Degrees of freedom.
*$p < 0.05$.

Furthermore, Christian/theist (CT), non-Christian theist (NCT), and non-theist

(NT) participants rated their responses based on their perception of the severity that each

symptom had over the span of the last 30 days. When comparing both scales within the

inventory, somatic/subjective versus panic-related symptoms, the sample reported less

severe responses to regarding somatic symptoms. However, only persons with theistic

beliefs, both CT ($n = 8$) and NCT ($n = 18$), reported severe anxiety somatic symptoms.

On the other hand, persons that identified as irreligious, the NTs, reported the majority of

severe panic-related/cognitive anxiety symptoms ($n = 51$). The most severely rated

symptom for CT was indigestion ($n = 5$), for NCT was "feeling hot" symptom ($n = 5$),

and for NT was the inability to relax ($n = 19$). In general, CT reported the least amount of

severe responses for both somatic and panic-related/cognitive anxiety symptoms ($n = 11$),

followed by NCT ($n = 18$) and NT ($n = 51$). Table 8 includes a detailed summary of both

somatic and panic-related symptoms for all RLG groups.

Table 8
BAI Severe Symptoms Frequency

			Religious Preference		
Somatic Scale Item			CT	NCT	NT
1	Numbness or tingling		3		
2	Feeling Hot			10	
6	Dizzy or lightheaded			8	
18	Indigestion		5		
		Scale Total	8	18	
Panic-Related/Cognitive Scale Item					
4	Unable to relax				19
5	Fear of worst happening				10
7	Heart pounding/racing				4
9	Terrified or afraid				3
10	Nervous				10
14	Fear of losing control		3		
17	Scared				5
		Scale Total	3		51
		Severe Responses Total	11	18	51

Note. CT = Christian/theist; NCT = non-Christian theist; NT = non-theist.
Somatic Scale Items: 3, 8, 12, 13, 19, 20, 21, and Panic-related/cognitive scale
items: 11, 16 were omitted given non-severe responses.

The anxiety regression model, as presented in Table 9, demonstrates a significant

proportion of the variability in anxiety [$R^2 = .22$, $F (4, 409) = 5.33$, $p < .0001$]. The

moderating effects of sex, race, and national origin in the RLG-anxiety relationship, were

included in the analysis in the *PROCESS* add-on. After controlling for main effects of

race ($B = .41$, $p = .07$), and RLGD ($B = -.028$, $p = .62$, the interaction of sex ($B = .2.44$, p

<. 0001) with anxiety was significant and is moderator on the religious preference-anxiety relationship. The means, standard deviations, and correlations are noted in Table 10. Moderator effects could not be measured for NTL given limited variable levels.

Table 9
Results for the Regression Model Towards Anxiety

	β	SE_β	t	p	95% CI for β Lower Est.	Upper Est.
RLG	-.48	.34	-1.42	.16	-1.45	.19
SEX	2.44	.68	3.60	<. 0001*	1.11	3.78
RCE	.41	.22	1.83	.07	-.03	.84
RLGD	-.028	.059	-.48	.62	-.14	.08

Note. CI = Confidence Interval; Model Summary: $R^2 = .22$, $F (4, 409) = 5.33$, $p < .0001$.

Table 10
Means, Standard Deviations, and Correlations

Measure	Mean	SD	Correlation Coefficients SEX	RCE	NTL	RLGD	BAI
RLG			-.24**	.051	.043	.053	-.064
SEX				.059	.117*	-.005	.195**
RCE					.232**	-.002	.094
NTL						.007	-.002
RLGD (OCM)	13.02	5.71					-.033
BAI	8.42	6.96					

*$p < 0.05$. **$p < 0.01$.

As means to mitigate Type I error (Tukey, 1949) and determine which levels of the variables yielded particular significant results (Table 11) a Tukey's HSD (honest significant difference) *post hoc* analysis was conducted.

Table 11
Tukey Post Hoc Mean Comparison Results for BAI

	Variable (I)	Variable (J)	Mean	SE	p	95% CI for β Lower Est.	Upper Est.
RLG	Atheist	Agnostic	-4.86*	1.31	.011	-9.12	-.601
SEX	Male	Female	-2.77*	.67	<. 0001*	-4.37	-1.18

Note. CI = Confidence Interval.
*$p < 0.05$

Another regression model was conducted with the variable of RLG as the IV (X) and RLGD (OCM) as the DV (Y). Table 12 demonstrates a significant impact between religious RLG and OCM® or religious outgroup contact [F (10, 414) = 2.95, $p < .001$]. Further, *post hoc* analysis, depicted in Table 13, showed a statistically significant mean difference between CT and NCT.

Table 12
One-Way ANOVA OCM

Variable	Source	*SS*	*df*	*Mean Squared*	*F*	*p*
RLGD (OCM)	Between Groups	918.98	10	91.89	2.95	.001
	Within Groups	12554.48	403	31.15		
	Total	13473.46	413			

Note. SS = Sum of Squares; *df* = Degrees of freedom.
*$p < 0.05$

Table 13
Tukey Post Hoc Mean Comparison Results for OCM

	Variable (I)	Variable (J)	Mean Difference (I-J)	*SE*	*p*	95% CI for β Lower Est.	Upper Est.
RLG	CT	NCT	-1.808*	.688	.024	-3.42	-.189

Note. CI = Confidence Interval
*$p < 0.05$

Figure 6 illustrates that participants that identified as Muslim ($n = 23$) had significant ($p < .05$) OCM® score ($m = 16.47$, $SD = 5.84$), thus more religious outgroup contact. Hindus ($n = 52$) reported the second highest score ($m = 15.15$, $SD = 5.25$), where Evangelical/Fundamentalist participants ($n = 25$) reported the least religious outgroup contact ($m = 10.46$, $SD = 5.43$).
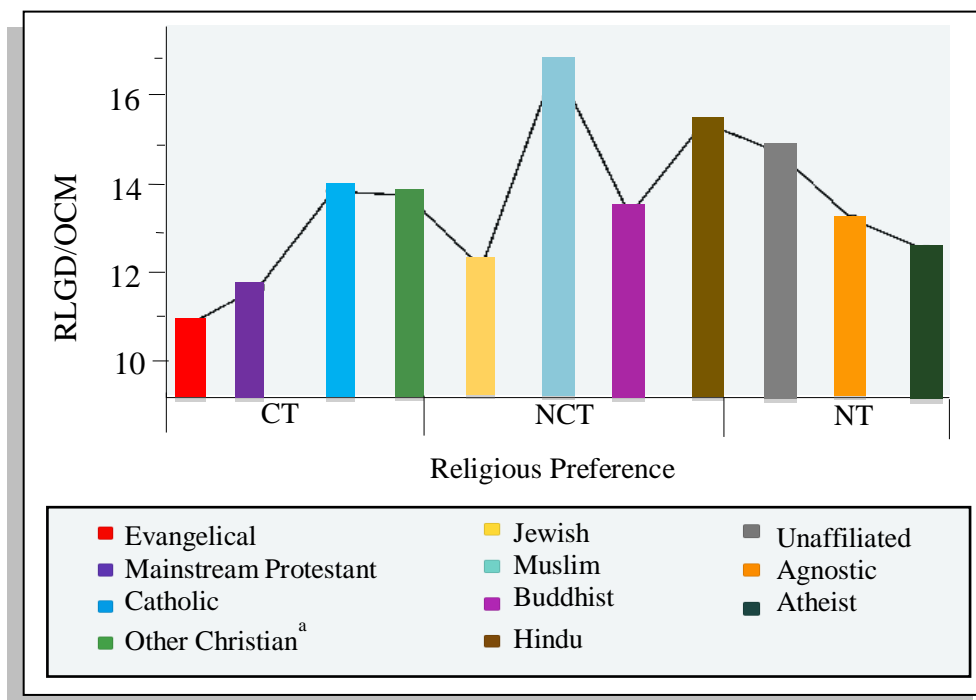
Figure 6. Religious preference versus religious outgroup contact
Note. CT = Christian/theist; NCT = non-Christian theist; NT = non-theist.
[a] Includes: Jehovah's Witness, Mormon, etc.

Research Questions Results

Data analysis was conducted using a one-way analysis of variance (ANOVA). Regression analyses measured the direct impact of religious discrimination based on religious intergroup contact and anxiety.

Research Question 1

The first analysis was used to examine the impacts of religious preferences of Christian/theists, non-Christian theists, and non-theists without the MVs of sex, race, and national origin. The H_0 and H_1 for this analysis were as follows:

RQ1: Are there any differences in Christian, non-Christian and non-Christian theists groups and anxiety?

$H_0$1: There is no statistically significant difference between Christian, non-Christian and non-Christian theists anxiety level as evidenced by the Beck Anxiety Inventory® score.

$H_1$1: There is a statistically significant difference between Christian, non-Christian and non-Christian theists anxiety level as evidenced by the Beck Anxiety Inventory® score?

Religious preference showed a significant, impact [$F (10, 414) = 1.98, p < .033$] and a large, positive relationship with anxiety [$r (414) = .064, p < .05$]. Further, Tukey's test showed that atheists and agnostics differed significantly at $p < .05$. As such, the null hypothesis was rejected. Figure 7 illustrates the evidence to support that there is a statistically significant difference in the anxiety levels amongst religious groups.
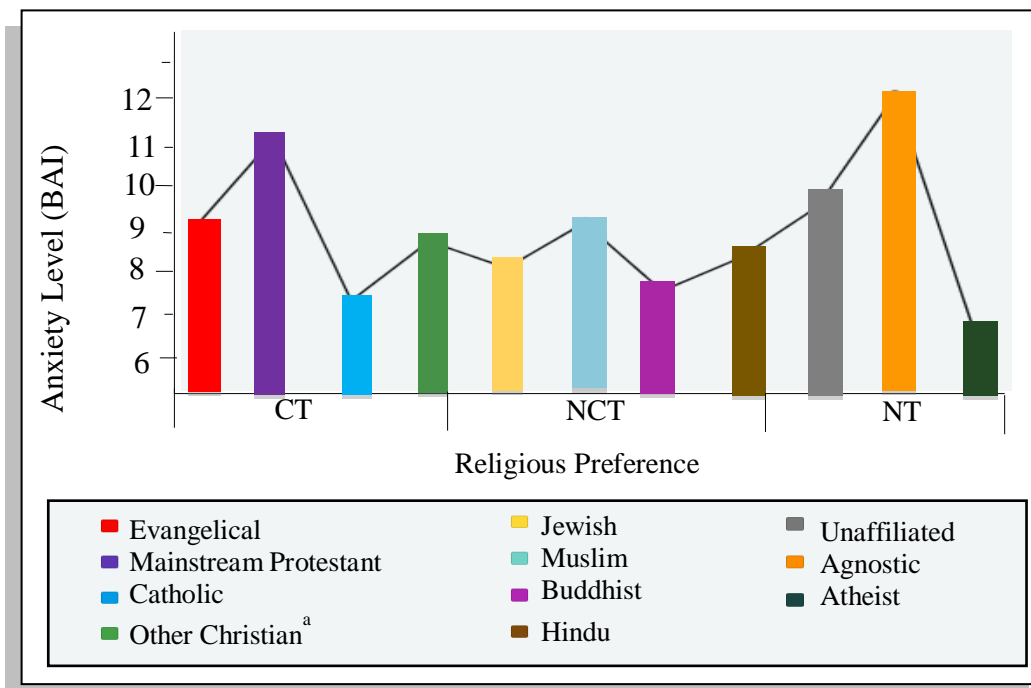
Figure 7. Religious preference versus anxiety.
Note. CT = Christian/theist; NCT = non-Christian theist; NT = non-theist.
[a] Includes: Jehovah's Witness, Mormon, etc.

Those participants that identified as agnostics ($n = 39$) had a significant ($p < .05$)

BAI score ($m = 11.58$, $SD = 8.23$), higher than other religious groups. Mainstream

Protestants ($n = 38$) reported the second highest level of anxiety ($m = 10.68$, $SD = 8.89$),

where atheists ($n = 91$) reported the least experienced anxiety ($m = 6.72$, $SD = 5.69$).

Research Question 2

Regression analyses measured the indirect impact of sex and anxiety. The second

analysis was used to examine the moderating impacts of sex towards CTs, NCTs, and

NTs and their reported level anxiety. The H_0 and H_1 for this analysis were as follows:

RQ2: Do sex differences of male and female of each group contribute to anxiety

differences amongst religious preference groups?

$H_0 2$: There is no statistically significant difference between the male group

and the female groups' anxiety level as evidenced by the Beck Anxiety

Inventory® score.

$H_1 2$: There is a statistically significant difference between the male group and

the female groups' anxiety level as evidenced by the Beck Anxiety Inventory®

score.

Sex showed a significant, impact [$F(2, 414) = 8.44$, $p <. 0001$] and a medium,

positive relationship with anxiety [$r(414) = .195$, $p <. 0001$]. Further, Tukey's test

showed that male and female groups differed significantly at $p < .05$. As such, the null

hypothesis was rejected. There is a statistically significant difference in the anxiety levels
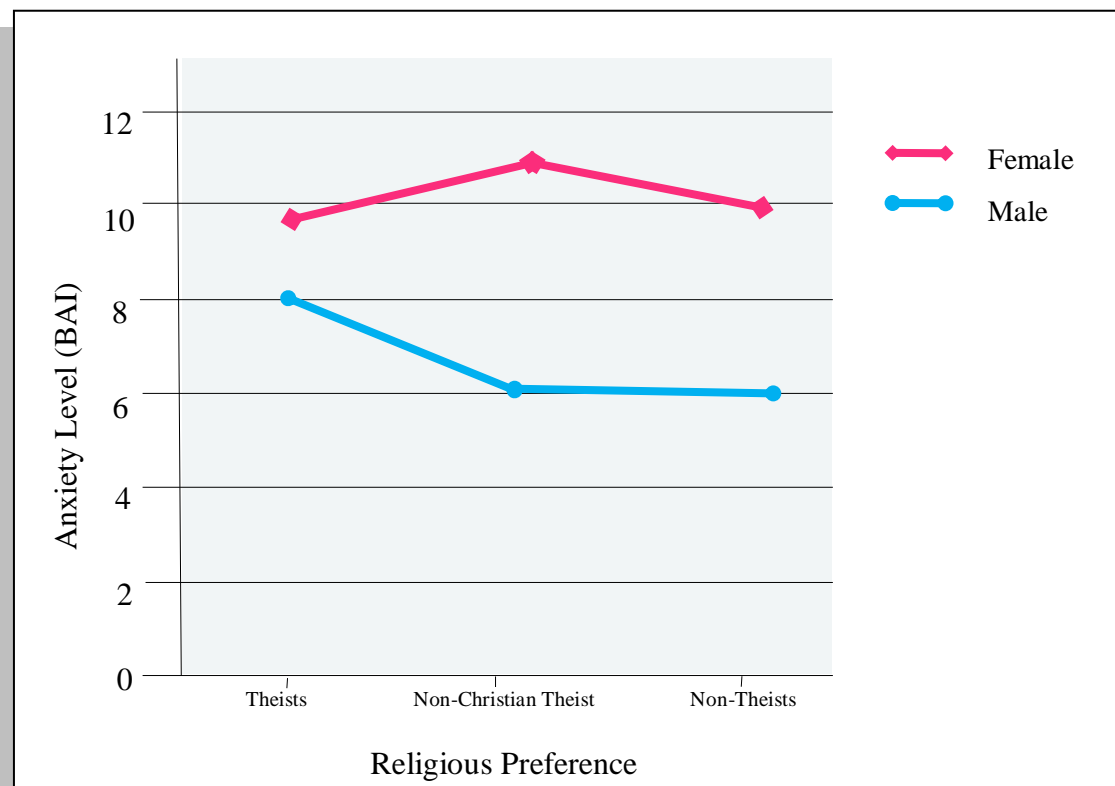
between males and females.

Figure 8. Interaction between religious preference and anxiety as moderated by sex. *Note.* Significant at the $p < .0001$

Research Question 3

Regression analyses measured the indirect impact of race and anxiety. The third analysis was used to examine the moderating impacts of race towards CTs, NCTs, and NTs and their reported level anxiety. The H_0 and H_1 for this analysis were as follows:

RQ3: Do racial differences of Caucasian and non-Caucasian participants contribute to anxiety differences amongst religious preference groups?

$H_0 3$: There is no statistically significant difference between Caucasian and non-Caucasian participants, groups' anxiety level as evidenced by the Beck Anxiety Inventory® score.

$H_1$3: There is a statistically significant difference between Caucasian and non-Caucasian participants, groups' anxiety level as evidenced by the Beck Anxiety Inventory® score.

Race showed a non-significant, impact [F (5, 414) = .89, $p < .488$] towards anxiety. As such, the null hypothesis was retained since there was no statistically significant difference in the anxiety levels amongst different racial groups.

Research Question 4

Regression analyses measured the indirect impact of national origin and anxiety. The fourth analysis was used to examine the moderating impacts of national origin towards Christian/theists, non-Christian theists, and non-theists and their reported level anxiety. The H_0 and H_1 for this analysis were as follows:

RQ4: Do national origin differences of nonforeign born and foreign-born participants contribute to anxiety differences amongst religious preference groups?

$H_0$4: There is no statistically significant difference between national origin status of nonforeign born and foreign-born participants groups' anxiety level as evidenced by the Beck Anxiety Inventory® score.

$H_1$4: There is a statistically significant difference between national origin status of nonforeign born and foreign born participants groups' anxiety level as evidenced by the Beck Anxiety Inventory® score.

National origin showed a non-significant, impact [F (1, 414) = .001, $p < .975$] towards anxiety. A medium, positive, significant relationship [r (414) = .232, $p < .0001$]

was found with race. As such, the null hypothesis was retained given the lack of statistically significant result supporting differences in the anxiety levels provided national origin status.

Summary

Based on the results of this study, there is evidence to support that religious preference might be related to anxiety. Question 1 was set in examining any differences amongst all religious preference groups and anxiety. This question was established as means to compare each level of the IV (Christian theist, non-Christian theists, and non-theists) without accounting for moderating effects. Those participants in non-theists level showed differences amongst the rest of the groups. Consequently, the null hypothesis was rejected. The subsequent research questions examine the moderating effects of the rest of the variables towards anxiety in religious preference groups.

Concerning the second research question, the goal was to investigate the moderating effects of sex, where the null hypothesis was rejected for male, female and non-binary/gender fluid groups. The third research question examined the moderating effects based on race, where the null hypothesis was not rejected. Lastly, question four was focused in discerning the effects of national origin in religious preference groups and anxiety. In this case, the null was not rejected. When accounting for the variables of sex, race, and national origin, there is evidence to suggest that sex is related to anxiety towards diverse religious preference groups. The variables present in question two showed that differences amongst male and female groups could account towards anxiety based on religious preference. In Chapter 5, a summary of the interpretation of these

research questions' findings will be discussed. Further, the recommendations based on the study's limitations and strengths along with the implications of this research study will be presented. Lastly, Chapter 5 will also include the positive social change implications for the individual, methodological, theoretical, empirical, and practice scopes.

Chapter 5: Discussion, Conclusions, and Recommendations

Introduction

The purpose of this quantitative study was to compare differences between religious preference groups and their influence on anxiety while accounting for the moderating effects of sex, race, and national origin in light of religious discrimination. In this study I sought to examine sociodemographic variables to determine their possible impacts on anxiety with other religious and irreligious persons besides the Muslim demographic. This rationale was based on the conflicting literature findings on how religious preference and the MVs both mitigated and exacerbated how anxiety was experienced. There were four RQs guiding this research:

RQ1: Are there any differences in Christian, non-Christian, and non-Christian theists groups in their experiences of anxiety?

RQ2: Do sex differences of male and female of each religious preference group (Christian, non-Christian, and non-Christian theist) contribute to anxiety differences amongst the groups?

RQ3: Do racial differences (Caucasian and non-Caucasian) exist between participants in each religious preference group (Christian, non-Christian, and non-Christian theist) in regard to anxiety levels?

RQ4: Do national origin differences (nonforeign born and foreign born) exist between participants in each religious preference group in regard to anxiety levels?

There were statistically significant results noting a mean difference between irreligious groups and the anxiety symptoms amongst agnostics and atheists. These results also showed a statistically significant difference between NCT and CT. Here, Muslims (from NCT group) reported the largest religious outgroup contact and Evangelical/Fundamentalists (from CT group) reported the lowest contact. Lastly, sex differences accounted for a moderating effect towards religious preference and anxiety when controlling for RLGD and race. Here, females across all religious groups, CT, NCT, and NT, had statistically significant mean differences in anxiety when compared to males and nonbinary gender fluid participants. Results also noted a statistical mean difference, where agnostic females reported the highest level of anxiety across all religious preference groups. Prior studies have found that both limited (Gervais, 2014; Uenal, 2016) and mixed findings (Callegari et al., 2016; Ghaffari & Çiftçi, 2010) regarding religious preferences, sex, race, and national origin as factors towards anxiety. Based on this study's purpose, these findings provided pertinent evidence regarding multicultural factors and anxiety.

The present chapter includes a description and review of the research questions along with an interpretation of the findings. I discuss and explain the interpretations as they relate to the literature review and the theoretical framework presented in Chapters 1 and 2. Additionally, in this chapter I address the limitations of this study and provide recommendations for action and future research. Lastly, this chapter presents implications for social change corresponding to individual methodological, theoretical, empirical, and practice impacts.

Interpretation of Findings

Religious Preference and Anxiety

Literature review and research findings. The first analysis resulted in evidence that there are statistically significant mean differences amongst religious preference groups. The agnostic group had statistically significant more anxiety than the atheist group. This present result both confirms and expands previous research conducted by Croucher (2013) and Uenal (2016) where NCTs could be subject to discrimination, since a theist majority could limit their assimilation and resource gains given the perceived threats of this outgroup, potentially increasing anxiety levels over time. This present study's results corroborate that religious preference can indeed give credence to recently experienced levels of anxiety with the NCT demographic as noted by Ahmed and colleagues (2011).

Another corroboration of the agnostic anxiety finding is based on the potential buffering effects religious adherence has had towards the mitigation of anxiety. Scholars have previously noted that the practices associated with belonging to a religious group assist in mitigating anxiety effects (Ahmed et al., 2011). Arguably, agnostics do not necessarily have religious group belonging that other religious preferences might inherently foster (Gervais et al., 2011). As a result, the benefits of anxiety symptom reduction coming from religious group membership and perceived community support (Levin, 2010) are not existent. Consequently, the lack of group membership might provide a rationale for this study's particular finding of increased anxiety amongst agnostics.

Theoretical framework and research findings. As discussed earlier, the heightened levels of anxiety that agnostics experienced might derive from the individuals' lack of religious group membership. In turn, the religious group membership of other persons could also explain the agnostics' heightened anxiety levels. The higher levels of anxiety that agnostics presented in this study could be understood by the IAT's outgroup expectations. Within this scope, agnostics could be experiencing anxiety given the negative expectations of disapproval (Stephan, 2014) that could be stemming from the outgroup of other religious preferences. The negative expectations, or stereotypes of the irreligious, could be explained by the IAT as a source of anxiety for agnostics. This theoretical interpretation is further based on previous literature since NTs could experience discrimination from the religious outgroup based on their irreligious "otherness" (Gervais, 2014). The IAT/ITT frameworks have been previously employed with mainly the Muslim religious preference demographic (Uenal, 2016), thus neglecting the frameworks' usage and application towards data interpretation with other religious preference groups. Thus, this particular interpretation could have helped in expanding both the IAT and ITT.

Additionally, the finding of the higher levels of anxiety amongst agnostics extends knowledge in the psychological discipline as previous research focused primarily on the NCT religious preference of Muslim populations (Ahmed et al., 2011). Moreover, this finding also addresses the lack of studies considering religious discrimination outside the NCT demographic, such as with the NT demographic (Ghumman et al., 2013). This expansion was accomplished by noting that persons within the NT group and the agnostic

demographic might be experiencing higher anxiety when compared to other religious preference groups.

Religious Outgroup Contact

  Literature review and research findings. The findings pertaining to religious outgroup contact also supported this study's religious discrimination hypotheses. The OCM® provided statistically significant findings where religious preference impacted the reported intergroup contact with persons from other religious preferences. These findings provided evidence that Muslims were the individuals with the most outgroup contact. Previous empirical literature provided support that this demographic has experienced religiously-based discrimination due to perceived threats that this group might pose towards the religious outgroup (Ahmed et al., 2011; Ghaffari & Çiftçi, 2010; Hassan et al., 2013; Jasperse et al., 2012; Uenal, 2016). However, this study expands previous research since it suggests a disposition from Muslims to engage in outgroup contact with other religious groups. This interpretation is corroborated by LaBouff and Ledoux (2016), who propose that interacting with persons from the outgroup could result in discrimination mitigation. Consequently, this study's findings regarding Muslim participants could be the result of an effort by this population to reduce religious discrimination.

  Theoretical framework and research findings. These findings corroborate the theoretical foundation of the ITT/IAT. Based on this framework, the theorists noted that not having contact with the outgroup could result in expectations towards the ingroup (Stephan & Stephan, 1985). Similarly, based on Uenal (2016), threats perceived by the

Muslim outgroup via the ITT framework results in discrimination and lack of contact

with Muslims. The implications of the OCM® results with Muslim participants are

twofold. First, this Muslim religious demographic is aware of the ongoing discrimination

stemming from non-Muslims. Secondly, Muslims might be becoming more inclined to

mix with persons from other religious preferences via community contact as a means to

mitigate perceived threats and discrimination. This interpretation also corroborates

suggestions from Croucher (2013) that exposure through outgroup contact might lead to

cultural awareness and discrimination reduction.

On the other hand, the OCM® results points to Evangelical/Fundamentalist CT as

the least likely to engage in religious outgroup contact. As previously mentioned, past

research shows that persons might perceive the ITT symbolic threat, where engaging in

outgroup contact can ultimately threaten the ingroup values (Zhang, 2015). Therefore,

based on the framework, this finding could imply an inclination from the

Evangelical/Fundamentalist participants to not engage with persons from the religious

outgroup as to not put their ingroup beliefs in jeopardy. This rationale is consistent with

propositions suggested by Vedder and colleagues (2016), where members of a group

might consider that such exposure could incur a threat to their values and the ingroup

way of life. For that reason, this CT demographic might perceive religious outgroup

exposure as detrimental to their beliefs, which is consistent with the symbolic threats of

the ITT (Stephan, 2014).

Sex Moderating Effects

Literature review and research findings. The second data analysis

demonstrated that sex is a moderator of the relationship between religious preference and

anxiety. Religious preference and sex were entered in the first step of the regression

analysis, where sex explained a significant increase in variance in anxiety. Thus, sex was

a significant moderator of the relationship between religious preference and anxiety. As

noted in Chapter 2, there were mixed findings concerning whether sex could be either a

coping (Ghaffari & Çiftçi, 2010) or a contributing variable towards anxiety. This finding

corroborates previous research in which sex was noted as a potential variability factor

towards anxiety as stemming from gender-based discrimination (Ellis et al., 2010;

Ghumman et al., 2013). Therefore, sex did not present itself as a potential coping

mechanism towards anxiety but rather a moderating factor for distress as suggested by

Nadal and associates (2015).

The finding of the moderating effects of sex towards anxiety becomes a key

element to the expansion of previous literature. This study provided an opportunity to

address the potential moderating effects of sex in diverse religious preference groups

(Ghumman et al., 2013). Overall, females across all religious groups –CT, NCT, and NT–

reported higher anxiety levels. However, NCT females reported the highest anxiety score

out of all religious groups and sexes. This finding could validate that of Jasperse and co-

authors (2012) where NCT females could often be exposed to religious-based

discrimination, and later, subsequent anxiety. This study managed to incorporate all three

religious preference groups through which CT, NCT, and NT sex-based anxiety

comparisons could be drawn to incorporate these groups and address the literature gap (LaBouff & Ledoux, 2016). Moreover, the CT and NCT female findings and CT male findings also expanded the literature. Contrary to the NCT females, CT males reported higher levels of anxiety across the religious preference groups. This finding could endorse propositions from Ghaffari and Çiftçi, (2010) in which the authors propose that males who are religious could report higher levels of anxiety. It could be argued that these findings suggest that CT males might be able to utilize religion as a buffer towards anxiety and might be undergoing more religious discrimination than CT females. Consequently, this finding provides evidence to imply that sex can moderate anxiety levels amongst diverse religious groups. Figure 9, summarizes the study's significant key findings pertaining to religious preference, religious out-group discrimination, and sex.
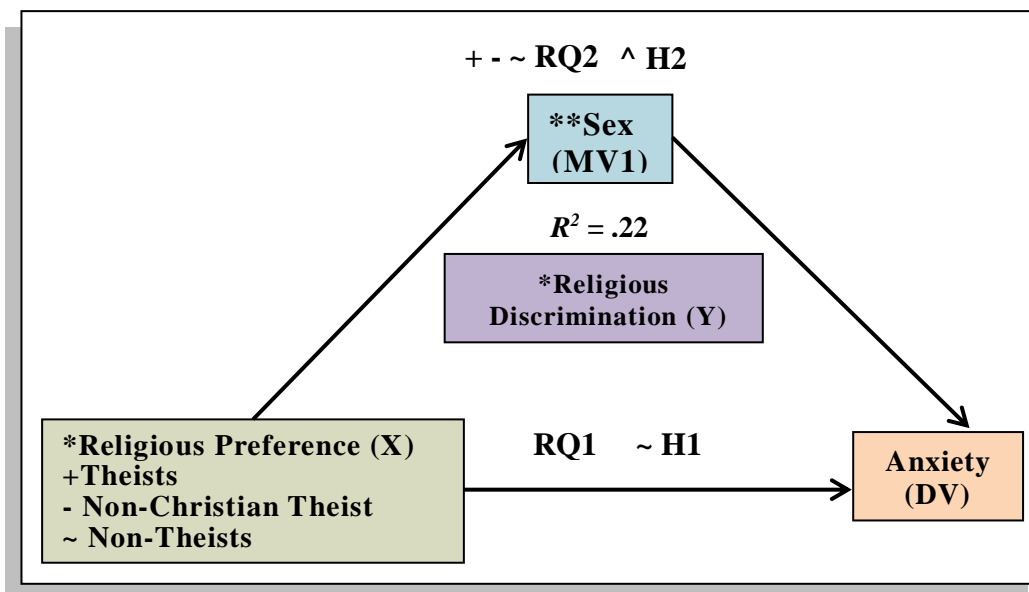
Figure 9. Moderation Model. $R^2 = .22$, $F(4, 409) = 5.33$, $p < .0001$.
Note. The three levels of religious preference (theist, non-Christian theist, and non-theists) as predictors and as moderated by the multicultural factor of sex towards anxiety based on overall discrimination and religious discrimination.
*$p < 0.05$. **$p < .0001$

Race and National Origin Moderating Effects. Lastly, in the third and fourth research questions, I sought to examine the possible moderating effects of race and national origin, respectively. Both analyses yielded non-significant results for race and national origin. The lack of null hypothesis rejection could be associated with one of the previous literature mixed findings contentions. Previous research noted that racial identity could be used as a possible source in mitigating discrimination and accordingly, experienced anxiety (Ahmed et al., 2011; Ellis et al., 2010). Similarly, national origin identity was also proposed in some literature as a similar buffer for diverse groups (Callegari et al., 2016). In this case, foreign-born persons could make use of their home culture's religious practices as means to cope with discriminatory behaviors from the host country.

Thereupon, foreign-born individuals might be able to use religion as a coping mechanism against anxiety, despite that the paradoxical sources of anxiety might come religious and national origin discrimination. These two non-significant findings of race and national origin and anxiety of the present study could suggest that other factors outside of the scope of this research. For instance, religiosity and age could have played a role in these non-significant results provided that both might impact the degree than an individual adheres to religious practices.

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Limitations of the Study

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Internal Validity

Chapters 1 and 3 included some probable shortcomings that would have arisen from the execution of the study. It is relevant for researchers to scrutinize any potential

errors affecting internal validity. Some sample-related issues were tended to via data clean up procedures. One of the limitations of this study was the participants' bias regarding the measurement of the DV of anxiety. The test of homogeneity of variances showed that the ability to answer some research questions could have been impacted. Mainly, these issues concerned the statistical regression threats with the variable of BAI. For example, during the informed consent step of the recruitment process, participants were made aware of the study's intent to measure anxiety symptoms and level. This awareness could account for the overall mild level of anxiety reported by the sample. Although some participants reported results consistent with severe anxiety, a high number of respondents scored minimal levels of anxiety. Furthermore, the maximum scores obtained were in the upper third quartile of the BAI, never reaching a maximum score. As a result, it could be argued that participant bias regarding the expected outcome of the study (Pannucci & Wilkins, 2010) might have led to low, non-statistically significant results for some respondents. This examination awareness could be an inherent limitation found in self-report measures.

External Validity

Another limitation of this study is the potential impacts regarding generalizability of its results. This present study included individuals from diverse religious, sex, race, and national origin backgrounds. There were, however, issues concerning the extent of external validity and sex towards the general US population. Although it was a slight difference, the majority of the participants identified as male. This sample characteristic might impair generalizability towards females since they represent most of the population

of the US (U.S. Census Bureau, 2016b). Additionally, generalizing this study's findings towards females might also be limited since females are twice as likely to be diagnosed with anxiety related-disorders as males (American Psychiatric Association, 2013). Similarly, another external validity concern is the racial makeup of this sample. Only 2.7% reported being Black or African American, despite 13.3% of the population identifying as such (U.S. Census Bureau, 2016b).

Despite these previously mentioned limitations materializing during the study, other challenges did not occur and were in fact eliminated. For example, this study's foreign-born participants, of 44 countries, encompassed 18.6% of the sample; comparative to the 13.3% of foreign-born persons in the US (U.S. Census Bureau, 2016b). Likewise, regarding religious preference, this population sample of diverse religious groups was proportional to the larger population. Along these lines, non-equivalency of CT, NCT, and NT in this study was reached, thus threats to external validity in this regard were reduced. Furthermore, this study also included a large sample of participants ($n > 300$) (Kim, 2013), thus addressing previously noted methodological deficiencies of with small sample sizes (Levin, 2010) and limitations with previous research that investigated minority status, discrimination, and anxiety.

Recommendations for Action

Methodological Guidance

While this study's strengths and limitations provided insights to expand future applications, two recommendations might be fundamental to limiting future methodological shortcomings concerning internal validity. Participant bias could have

been a detrimental factor during the data analysis process, resulting in some of the non-statistically significant results. A possible venue to reduce this likeliness of this issue is to consider deception. During the informed consent process, this deception method could involve withholding certain pieces of information (McCambridge et al., 2013) such as the study's intent. This type of approach is commonly used in the field as a means to restrict the data being put in jeopardy (McCambridge et al., 2013). However, it must be noted that the deception technique must be exerted with much prudence, and within legal and ethical boundaries. Alternatively, future researchers could make use of other instruments that do not appear to have face validity. Instruments with such property could alert participants of the construct that is being examined (Xie, 2011). Conversely, making use of instruments that do not hold this face value characteristic could reduce the participant's inclination to "fake good" in regards to anxiety.

Recommendations for Future Research

Researchers that feel compelled to expand upon this study's efforts could address the mixed literature findings reviewed in Chapter 2 and the external validity limitations reviewed in the present Chapter. The literature review provided mixed support about whether ingroup identity could result in a means to cope (Ghaffari & Çiftçi, 2010) or exacerbate (Nadal et al., 2015) how discrimination was perceived. Therefore, including group membership scales could provide evidence of other factors that might have moderated non-significant results. Likewise, this study provided support that Evangelical/Fundamentalist CT were the least likely to engage in religious outgroup contact, which corresponded with the literature's concept of intergroup threats (Zhang,

2015). As such, subsequent research could include scales that examine religiosity as a potential moderator of anxiety. This recommendation is proposed as non-religious persons experienced the highest anxiety in this study, whereas Christian/theist reported the least anxiety. A religiosity measure could serve as a determining factor to examine if religious practices assist in one's anxiety reduction, or rather if being part of a majority belief system contributes to undergoing less religious discrimination. Lastly, this study had a non-representative sample of the Black and African American population. However, a vast amount of literature supports that this population experiences race-based discrimination that could later impact how distress is experienced (Cokley et al., 2011). Other researchers are encouraged to replicate this study to include a larger number of Black and African American participants.

<div align="center">**Implications**</div>

Implications for Social Change

      Individual impacts. The implications for social change include the scholar's impact on minimizing factors that might harm such social progress (Ward, 1907). One of the foremost goals of this research was to expand literature about discrimination and anxiety as means to contribute to scholarship, inform practice, and stimulate social change. The key findings of this study provided a robust understanding of how religious preference, at the individual and group level, might serve as a factor for how anxiety is experienced. Despite religion being commonly associated with the broader and greater scope of culture, differences within the individual's religious or irreligious beliefs played a role in the symptomatic expression of somatic and panic-related factors of anxiety.

As noted in Chapter 4, the BAI's results show that unaffiliated/secularists, agnostics, and atheists (NCT) experienced the highest frequency of severe panic-related/cognitive anxiety symptoms. The demographic part of a minority irreligious preference in a predominately theistic society suffers the highest levels of discrimination (Croucher, 2013; Ghumman et al., 2013; Uenal, 2016) and subsequent anxiety. However, Jews, Muslims, Buddhists, Hindus (NCTs), and mainstream Protestants, Catholics, other Christians (CTs) did not report any severe symptoms related to anxiety.

Further, the closer a religious preference is to a majority belief, non-theist to Christian/theist, the less likely were to report panic-related anxiety symptoms. Literature has suggested that being part of a majority preference could provide an advantage into dominating lesser-adhered beliefs (Hassan et al., 2013; Verkuyten & Thijs, 2010). Here, research has noted that this subduing is conducted as means to safeguard the threat of having one's beliefs corrupted (Vedder et al., 2016) which is consistent with the main premise of the Integrated Threat Theory (Stephan, 2014). Proponents of social change note that structurally-based empowerment is needed at the individual level as means to achieve positive social change for the underprivileged group (Roy & Pullen-Sansfaçon, 2016). Consequently, practitioners that adequately identify these religious preference nuances, not only support better practice but the empowerment of the client's uniqueness.

Methodological, theoretical, and empirical impacts. The potential impact on positive social change, at a research level, stems from this study's three literature contributions towards: previous methodological inadequacies, theoretical expansion, and empirical findings. First, these research efforts included the elimination of previous

research methodological limitations that were impacted given a small (Levin, 2010) and less diverse sample (Ghumman et al., 2013; Nadal et al., 2015). Secondly, the study provided support that perceived intergroup dynamics of identity and ingroup threats could have impacted how discrimination was seen and further, how diverse persons experienced anxiety. However, such conclusions could not have been appropriately drawn without the IAT/ITT theoretical foundations and the subsequent expansion that this study's religious, irreligious, sex, racial, and national origin participants provided to the framework. Lastly, there was evidence to support that the multicultural factors of both religious and irreligious persons as well as gender minorities could be experiencing the detrimental effects of anxiety differently. To this researcher's knowledge, such comparisons were primarily focused on the NCT Muslim population. Indeed, scholars have suggested that research concerning other diverse groups was needed to contribute to the literature on understudied groups regarding discrimination and anxiety (Abu-Raiya et al., 2015; Marsden, 2015; Presler, 2015). Thus, all three research elements could catalyze social change via literature expansion.

Practice implications. One of the primary principles in the field of psychology is upholding just and fair practices towards clients (American Psychological Association, 2017a). These fair practices are founded on the practitioner's adherence to adequate training, analysis of proper treatment and policy, and harm reduction with religiously diverse populations. Correspondingly, to enhance awareness, practitioners are recommended to partake in cultural competency courses that account for religious preference as a source of ingroup identity. This recommendation rests upon both the

individual's and the group characteristic that mold the anxiety symptoms. A second recommendation is the analysis of treatment programs and policies as appropriate for religiously diverse groups. Determining the adequacy of a specific treatment towards a particular population is an instrumental guideline for clinical practice (American Psychological Association, 2017b). Furthermore, practitioners are also advised to examine how clinical and other forms of policies can cater or be applied towards the creation of programs focused on religious and irreligious persons. The evaluation of such programs is considered an essential factor for multicultural competency (American Psychological Association, 2003) and social change. Lastly, although intergroup contact is suggested as another recommendation to reduce discrimination between groups (Monterrubio, 2016), potential harm could arise due to subsequent negative perceptions of both the disadvantaged and advantaged groups (Tausch, Saguy, & Bryson, 2015). As such, when such exposure and support groups develop, a practitioner's responsibility could be that of harm reduction, necessary for ethical treatment of clients (American Psychological Association, 2017a).

Conclusions

In this current study, a sample of ($N = 414$) Christian/theist (CT), non-Christian theist (NCT), and non-theist (NT) persons from 44 countries assisted in the examination of religious preferences and the MVs in the relationship between religious discrimination and anxiety along with theoretical expansion. The purpose of this quantitative study was to examine the role of religious preferences in the religious discrimination-anxiety relationship. Additionally, the indirect effects of sex, race, and national origin were

measured as to examine their contributing moderating effects towards somatic and panic-related/cognitive symptoms of anxiety as evidenced by the BAI®. Furthermore, the religious outgroup contact was also measured to address the intergroup dynamic between diverse religious groups.

It was hypothesized that the multicultural variables of race and national origin would demonstrate substantial moderation in the religious preference-anxiety dynamic. Extensive literature notes the importance of considering the impacts that racial and national origin backgrounds have in research, practice, and ultimately, how each factor is incorporated throughout a clinician's roles with the community being served. However, the lack of significant findings regarding race and national origin are still partially consistent with some of the literature. This consistency is based on previous studies that noted this lack of moderating effect or that suggested that more research was needed to discard mixed findings. The significance of maintaining awareness of these elements in research and practice demonstrates the scholars' and practitioners' commitment to the field and underrepresented groups. As such, this study allowed for the corroboration and pinpointing of which literature might be more consistent with highly diverse racial and national origin religious and irreligious persons.

This study provided insights on the impact that religious preference discrimination might have towards diverse populations and its harming effects on anxiety. Here, persons from opposing religious views, genders, racial makeup, and national origins expanded the field's understanding of how anxiety impacts extend beyond symptomatic expression, but rather, how researchers and practitioners

comprehend their nuances. The nuances within the NT irreligious group (atheists vs. agnostics) might be overlooked as even the categorization of both groups is often difficult due to the limited empirical research available on this irreligious group as a population of interest. Yet in this study, such nuances were considered and were demonstratively significant in how both groups reported the most severe symptoms of anxiety.

Likewise, religious preference background similarities between groups that hold a theistic belief such as CT and NCT groups should not be confounded with analogous knowledge form the other. Indeed, surprisingly similar religious preference groups and sexes (Christian men vs. Jewish men) could vary significantly as to how each member perceives religious discrimination and later experiences anxiety. This study's findings support that each theistic and non-theistic client worldview is much more unique given their background and present circumstances with religious preferences. Persons from a majority religious preference group such as Christian/theists might not perceive or experience religious discrimination and subsequent anxiety as members of a non-Christian theist belief. This conclusion was validated with the results that demonstrate how Muslim women reported the most anxiety despite that Muslims reported the most religious-outgroup contact of all religious preference groups examined.

Furthermore, the research findings attest that the direct effects and interactions of multicultural factors are in need of inclusion and expansion of future research, given that religious preference and sex are relevant to anxiety. This study also showed an unexpected finding that Muslims, arguably a people who experience disquieting rates of religious discrimination, reported the most willingness to engage in more outgroup

religious contact. The lack of previous research that addressed the direct effects of religious discrimination amongst diverse, non-Muslim populations and this study's intent of addressing this gap shows that the inclusion of religious discrimination in the psychological field should be urgently embraced.

The rapidly changing culture, religious adherence, and religious discrimination anxiety impacts that clients could be experiencing, provide ethical incentives and scientific motivation to include such findings into practice. Quality psychological practices depend on the ability to provide services that are equally valued and vindicated by research (American Psychological Association, 2017a). The increasing demand and interest of pertinence of religious preferences into everyday clinical practice demonstrate the need for conducting and incorporating this type of research. As such, it is hoped that the limitations and strengths of this research effort serve as a source of advocacy, contribution to the scholarly development and social change, and as a stimulant for upcoming research that is much needed for the understanding of human behavior.

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Appendix A: Letter for Flyer Distribution and Announcement Request

Sharlaine M. Ortiz
sharlaine.ortiz-diaz@waldenu.edu

Date

Dear community partner:

I, Sharlaine Ortiz (main researcher), request permission to collect research data from your organization's members.

Recruitment will be conducted via dissemination of flyers and online announcements in your site. Here, participants will be provided with an informed consent, should they choose to participate.

Later, participants should have access to an online source, such as a laptop or mobile device, as means to carry out their participation.

As a community partner, your role would be to distribute research invitations (in the form of flyers, announcements, emails) on the researcher's behalf.

Your members will have access to crisis intervention information should this type of situation arise due to participation. My Committee Chairperson, Dr. Reba Glidewell, is in charge of supervising my research efforts in your site remotely.

Should you have any questions, please feel free to contact me at: sharlaine.ortiz-diaz@waldenu.edu or Dr. Reba Glidewell at reba.glidewell@mail.waldenu.edu.

Sincerely,

Sharlaine Ortiz, MS
Ph.D. in Clinical Psychology Candidate

Appendix B: Social Forum Announcement

"Hello: I am a doctoral student searching for adult participants (18-65 y/o) for my 15-minute long dissertation study about socio-demographics, religion, and distress. Please reference the informed consent and survey here (Qualtrics® Link). You may also share this post! Thank you for your participation consideration!"

Appendix C: Recruitment Flyer

HEY THERE!

Do have <u>15 minutes</u>?

Would you like to contribute to academic research?

Religious Preference and Diversity

REQUIREMENTS:
If you are between the ages of 18-65 and can read questions in English, then you can participate in this research study.

PURPOSE:
To evaluate psychological factors of diverse populations. A diverse group is needed and you can contribute into reaching this goal!
Participants will be asked questions about socio-demographics, religion, and psychological factors.

This research has no financial compensation.

FOR MORE INFORMATION:
Visit (Qualtrics® Link) to access the study and its detailed description or contact the researcher at sharlaine.ortiz-diaz@waldenu.edu.

SHARE THIS FLYER!

Walden University Institutional Review Board (IRB)
Approval Number: 07-06-17-0439064
Expiration: 07/08/2018

Appendix D: Flyer Locations

1. Army Engineer Support Center

    - 4820 University Square, Huntsville, AL 35816.

    - lili.miller@usace.army.mil

2. Dr. Waika Acosta, MD: General Medicine Office

    - Calle Malaga #72 Urb. Salamanca, San Germán, PR 00683

    - (787) 892-4951

3. Parroquia San Miguel Arcángel de Cabo Rojo [Parish of St. Michael the Archangel of Cabo Rojo]

    - Calle Muñoz Rivera #54, Cabo Rojo, PR 00623

Note: 19 secular and religious organizations/online social forums participated anonymously.

Appendix E: Sociodemographic Questionnaire

Reminder: All information provided will remain anonymous. If you have any questions, contact the researcher.

Instructions: Below are a series of questions on religion, socio-demographics and anxiety. Click the answer that **currently best describes you**. Please answer each question. Thank you.

1. When it comes to religion, I **currently** identify as:
   - ○ Evangelical/Fundamentalist protestant
   - ○ Mainstream Protestant
   - ○ Catholic
   - ○ Other Christian (Jehovah's Witness, Mormon, etc.)
   - ○ Jewish
   - ○ Muslim
   - ○ Buddhist
   - ○ Hindu
   - ○ Unaffiliated/secularist
   - ○ Agnostic
   - ○ Atheist

2. I **currently present** myself as:
   - ○ Male
   - ○ Female
   - ○ Non-binary/gender fluid

3. My race and/or ethnicity is:
   - ○ White
   - ○ Black or African American
   - ○ Hispanic or Latina/o (all races)
   - ○ Asian (all ethnicities)
   - ○ Middle Eastern (all races)
   - ○ Two or more races (all other races)

4. I was born in the country I live in:
   - ○ Yes
   - ○ No

5. I was born in:
   [dropdown ▲▼]

6. I currently reside in:
   [dropdown ▲▼]

Appendix F: Outgroup Contact Measure

Schmid, K., Hewstone, M., Tausch, N., Cairns, E., & Hughes, J. (2009). Antecedents and consequences of social identity complexity: Intergroup contact, distinctiveness threat, and outgroup attitudes. *Personality and Social Psychology Bulletin, 35*(8), 1085-1098. doi:10.1177/0146167209337037

Not at all						A lot
None						All
Never						Very often
0	1	2	3	4	5	6

To what extent do you mix with, e.g., chat with, members of the other religious community in the area where you live?

How often do you visit your friends who are from the other religious community in their home?

Note: Items omitted due to copyright. All copyrights belong to their respective owners.

Appendix G: Beck Anxiety Inventory

Please carefully read each item in the list. Indicate how much you have been bothered by that symptom during **the past month, including today**, by selecting the number in the corresponding space in the column next to each symptom.

	Not at all			Severely-it bother me a lot
	0	1	2	3
██████████	○	○	○	○
Feeling Hot	○	○	○	○
██████████	○	○	○	○
Unable to relax	○	○	○	○
██████████	○	○	○	○
Dizzy or lightheaded	○	○	○	○
██████████	○	○	○	○
Unsteady	○	○	○	○
██████████	○	○	○	○
Nervous	○	○	○	○
██████████	○	○	○	○
██████████	○	○	○	○
██████████	○	○	○	○
Fear of losing control	○	○	○	○
██████████	○	○	○	○
Fear of dying	○	○	○	○
██████████	○	○	○	○
Indigestion	○	○	○	○
██████████	○	○	○	○
██████████	○	○	○	○
██████████				

Note: Items omitted due to copyright. All copyrights belong to their respective owners.