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# The Moderating Role of Spiritual/Religious Struggle on the Relationship Between Negative Life Events and Spiritual/Religious Coping for Evangelical Christians

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# Walden University

College of Psychology and Community Services

This is to certify that the doctoral dissertation by

Lynae Nelson

has been found to be complete and satisfactory in all respects,  
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the review committee have been made.

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Walden University

2024

Abstract

The Moderating Role of Spiritual/Religious Struggle on the Relationship Between  
Negative Life Events and Spiritual/Religious Coping for Evangelical Christians

by

Lynae Nelson

MEd, University of Oregon, 2010

BA, Northwest Christian College, 2008

Dissertation Submitted in Partial Fulfillment

of the Requirements for the Degree of

Doctor of Philosophy

Psychology

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## Abstract

Patterns of spiritual/religious coping (S/R coping) and spiritual/religious struggle (S/R struggle) have an impact on wellbeing after experiencing a negative life event (NLE). These impacts can have significant implications for the person after experiencing a NLE, particularly for evangelical Christians. However, little is known about how S/R struggle interacts with S/R coping after experiencing NLE. This study was guided by spiritual/religious coping theory and the general orienting system, theoretical orientation and conceptual framework, respectively. Research questions explored the moderating role of S/R struggle on the relationship of NLE both by number and mean stress level of NLE and S/R coping for evangelical Christians. A sample of 150 participants with inclusion criteria of being adult evangelical Christians who experienced an NLE within the last 12 months were recruited online through Amazon's Mechanical Turk. Moderation multiple regression analysis was used to analyze data collected via the Brief Spiritual/Religious Coping Scale, Spiritual/Religious Stress Scale, and amended Schedule of Recent Events. Results support the adoption of alternative hypotheses, demonstrating S/R struggle moderates the relationship between number and sum stress level of NLE and S/R coping for the study's population. Results allow for positive social change by improved intervention and support for people after experiencing NLE. Implications for the research include confirmatory studies and additional studies to broadening the study's population increase generalizability.

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## Chapter 1: Introduction to the Study

In this study, I examined the moderating relationship of spiritual/ religious struggle (S/R struggle) on the relationship between number and mean stress level of negative life events (NLE) and spiritual/religious coping (S/R coping) via the use of empirically validated measures to better understand this relationship. This was important to study because of the correlation between S/R coping and positive outcomes and S/R struggle and negative outcomes on mental health and wellbeing after NLE. An emerging understanding of moderating relationship of S/R struggle on S/R coping by number and sum mean stress level of NLE contributed to better information for helpers in professional, religious, and social settings to provide support after experiencing a NLE.

Chapter 1 provides an overview of important aspects of the study described in further detail in Chapters 2 through 5. The intention of this introduction is to orient the reader to the study and make connections between study elements, so the reader understands the study as a whole. To achieve this, Chapter 1 specifically provides a brief introduction of the study's background, problem statement, purpose of the study, research questions and hypotheses, theoretical orientation and conceptual framework, nature of the study, definitions, assumptions, scope and delimitations, limitations, significance, and summary.

### **Background**

NLE, such as the death of a loved one, experiencing a trauma, a significant loss, medical issues, relational strain, among others, are to be expected at some point in life. These NLE can cause temporary, or in some cases, enduring negative impacts (American

Psychiatric Association, 2013; Kick, & McNitt, 2016; Ray, et al., 2015). Research demonstrated that one's pattern of S/R coping and S/R struggle mitigated or exacerbated the impact of an NLE (Abu-Raiya, et al., 2015; Vitorino, et al., 2017). S/R coping was the application of positive or negative S/R beliefs and behaviors to cope with an NLE and S/R struggle was the result of worldview and belief system challenge due to a NLE (Abu-Raiya, et al., 2016).

Evangelical Christians often use their faith/religion to understand NLE (Phillips & Ano, 2015). A recent meta-analysis of S/R coping found Christians had the strongest measure of positive religious coping amongst religions studied with the S/R construct (Abu-Raiya & Pargament, 2015). The highest levels of positive S/R coping amongst Christian populations studied are found in Christians with fundamentalist/evangelical beliefs (Lewis-Hall et al., 2020). Evangelical Christians further demonstrated lower levels of S/R struggle which promotes more resilience factors than other S/R orientations when facing an NLE (Johnson & Kristeller, 2013).

S/R coping and S/R struggle were known to be important factors in responding to an NLE with the ability to influence impacts of NLE. However, little research focused on how number and mean stress level of NLE's impact S/R coping and S/R struggle together (Harris et al., 2015). Recent literature focused on the role S/R coping in the impacts experienced after an NLE. Studies demonstrated physical health increases with positive S/R coping and poor health with negative S/R coping after a negative health related event (Hulett et al., 2018). A similar pattern was found with the treatment of substance use disorders (Medlock et al., 2018), after experiencing a trauma (Ocho et al., 2018), natural

disaster (Milstein, 2019), and after a partner's indiscretion (van Tongeren et al., 2018). S/R struggle had a known impact on positive and negative outcomes after an NLE, and increased S/R struggle was strongly correlated with maladjustment and poor outcomes after experiencing an NLE (Eric & Adriel, 2016). The inverse relationship between S/R struggle and positive outcomes was also reported in literature with decreased levels of S/R struggle associated with increased adaptive responses and better outcomes after experiencing an NLE (Appel et al., 2020).

There were different understandings of S/R coping and S/R struggle in research literature; some understanding S/R coping and S/R struggle as separate constructs and others believing them to be aspects of a singular experience (K. Pargament, personal communication, October 15, 2020). This was further complicated by the use of S/R struggle and S/R coping interchangeably in research literature, leading to question about the nature of the relationship between S/R coping and S/R struggle (K. Pargament, personal communication, October 15, 2020). Leading researchers Abu-Raiya and colleagues (2016) proposed a model for understanding S/R coping and S/R struggle as separate constructs independent of each other which operate as a part of a system of interaction between fundamental belief systems and NLE and impacts of the challenge that arises when a NLE challenges fundamental belief systems. This perspective created an initial exploration of a mediating or moderating relationship between S/R struggle on NLE and on S/R coping (Hill et al., 2017; Trevino et al., 2019).

Despite the noted connections between S/R coping and S/R struggle, research has not considered both constructs for measuring S/R coping and S/R struggle within a single

study at the time of this study's proposal and emerging literature is now being published with both constructs considered. Efforts are being made to expand research to consider type and number of NLE with respect to S/R coping or S/R struggle using empirically validated measures for each construct individually (Abu-Riaya et al., 2016). Therefore, to better understand S/R coping and S/R struggle, there was a need to consider the moderating relationship of S/R struggle on the relationship between number and mean stress level of NLE and S/R coping. This was supported by the understanding that S/R struggle could originate in the wake of NLE, despite the presence of S/R coping (Stauner et al., 2016). Understanding this relationship would meet the need to increase clarity on the relationship between S/R struggle and S/R coping after experiencing an NLE. This was important to clarify more about the relationship between constructs to increase knowledge on the dynamic relationship between constructs; both helping to clarify their relationship and as such, allow for better understanding and intervention by professionals, clergy, and natural support systems after experiencing an NLE.

### **Problem Statement**

The specific research problem addressed in this study was considering the impact of S/R struggle on the relationship between number and mean stress level of NLE and S/R coping for evangelical Christians. To better understand these constructs, please consider the following examples of S/R coping and S/R struggle for evangelical Christians. S/R coping was evidenced in the belief that God loves me, there is a purpose in my pain, and I am supported by others in my faith community in the wake of an NLE (Abu-Raiya, & Pargament, 2015). Whereas S/R struggle supported beliefs that God is



punishing me, my pain is meaningless, or God and/or members of my faith community have abandoned me (Abu-Raiya, & Pargament, 2015).

This study filled a need in the research literature by considering the moderating role of S/R struggle on the relationship between number and mean stress level of NLE and S/R coping from an understudied perspective. The following explanation of each element of the problem statement in context of recent literature was used to expand on a justification for the problem statement.

### **Justification of Constructs**

While S/R coping is the most widely studied area of spirituality within psychological disciplines and new studies on S/R struggle are being published regularly; recent literature repeatedly indicated the nature of S/R coping and S/R struggle in relationship to each other after NLE was complex and not yet fully understood. In personal communication with Dr. Pargament, I was informed that there continues to be confusion about these constructs and their relationship (K. Pargament, personal communication, October 15, 2020). Dr. Pargament indicated the nature of S/R coping and S/R struggle was the least understood relationship within this field of study (K. Pargament, personal communication, October 15, 2020). Despite this noted gap in research, few studies in recent literature were found that included empirically validated measures for both S/R coping and S/R struggle in a single study. As such, the understanding present in literature was developed by a rigorous understanding of multiple studies, rather than exploring this concept within a single study. Using the most used measures of the Brief Religious Coping Scale (Brief RCOPE) and Religious Spiritual

Stress Scale (RSS) with the strongest empirical evidence allowed for credibility within current research literature. This led to the adoption of S/R coping and S/R struggle in a single study after the experience of NLE.

### **Justification of Methodology**

Within the last 5 years, research increasingly used moderation and mediation models to understand the relationship of S/R coping and S/R struggle with NLE and resulting impacts (Abu-Raiya et al., 2016; Evans et al., 2018; McCormick et al., 2017; Ochu et al., 2018; Pomerleau et al., 2019; Shannonhouse et al., 2019; Trevino et al., 2019; Szczesniak et al., 2020; Vazquez et al., 2021). The primary focus of this literature was on moderation and mediation of S/R coping or S/R struggle on the relationship between NLE and subsequent mental health and wellbeing (Abu-Raiya et al., 2016; Shannonhouse et al., 2019). I built this study on the emerging framework for understanding S/R struggle and as a moderator in the relationship between S/R coping and NLE and introduce a new layer of understanding to the conversation by not focusing on impacts of NLE, but the moderating role of S/R struggle on NLE and S/R coping. As such, it shifted the focus to better understanding how S/R struggle impacts S/R coping after an NLE. Understanding this helped to clarify the influence of dynamic interconnected constructs after NLE.

Independent studies showed number and stress level of NLE impact S/R coping and S/R struggle (Evans et al., 2018). As such, it was important to include S/R struggle, number and mean stress level of NLE, and S/R coping together in a single study. By doing so, a more accurate understanding of the moderating role of S/R struggle on the

relationship between number and mean stress level of NLE experienced within the last 12 months and S/R coping was achieved. This combination of variables and their associated measures helped to clarify the dynamic relationship between variables, making a meaningful contribution to the research community and promoting social change.

### **Justification of Population**

Current literature on S/R coping and S/R struggle demonstrated new study constructs, question type, and design were often introduced with the most studied population, Christians in the western world (Harris et al., 2015; Knab et al., 2019). This population focus was intended to help understand new concepts in respect to the established body of literature. From there, research had a pattern of expanding to more specific populations and to increasingly broad populations with a global perspective to test for generalization of concepts (Abu-Raiya & Pargament, 2015; Saarelainen, 2017; Smith Lee et al., 2020). Framing this study with the most studied population, evangelical Christians, gave a foundation for understanding this new concept and allows future research to build off for increased generalization of findings.

### **Purpose of the Study**

The purpose of this quantitative study was to examine the moderating role of S/R struggle on the relationship of number and sum mean stress level of NLE's experienced in the last 12 months and S/R coping. The predictor variables (PV) were number of NLEs and sum mean stress level of NLE, the outcome variable (OV) was S/R coping, and the moderating variable (MV) was S/R struggle.

### **Research Questions and Hypotheses**

Two research questions, each with a null hypothesis and alternative hypothesis, were answered to fulfil the study's purpose to examine the moderating role of S/R struggle on the relationship of number and mean stress level of NLE's experienced in the past 12 months by evangelical Christians and S/R coping. These research questions and associated hypothesis are presented below.

RQ1: To what extent does S/R struggle moderate the relationship between number of NLE and S/R coping for evangelical Christians?

*H<sub>a1</sub>*: S/R struggle will significantly moderate the relationship between number of NLE and S/R coping for evangelical Christians.

*H<sub>01</sub>*: S/R struggle will not significantly moderate the relationship between number of NLE and S/R coping for evangelical Christians.

RQ2: To what extent does S/R struggle moderate the relationship between sum mean stress level of NLE and S/R coping for evangelical Christians?

*H<sub>a1</sub>*: S/R struggle will significantly moderate the relationship between sum mean stress level of NLE and S/R coping for evangelical Christians.

*H<sub>01</sub>*: S/R struggle will not significantly moderate the relationship between sum mean stress level of NLE and S/R coping for evangelical Christians.

As presented in the above research questions and hypotheses; the PVs were number of NLE and sum mean stress level of NLE, the OV was S/R coping, and the MV was S/R struggle. Number and mean stress level of NLE were measured by the SRE which was used in both research questions. The SRE is a self-report measure utilized to

identify the NLE experience by number and mean stress level of NLE. the MV of S/R struggle was measured by the RSS. The RSS was used to answer both research questions. The OV of S/R coping was measured by the Brief RCOPE. The Brief RCOPE was used to answer both research questions. The RSS was used to collect quantitative data that will operate as a moderator between the SRE and Brief RCOPE.

### **Theoretical Orientation and Conceptual Framework for the Study**

#### **Theoretical Orientation**

Religious coping theory (Pargament, 1997) was the foundational understanding for most of the research involving S/R coping and S/R struggle (Eric & Adriel, 2016). Religious coping theory originated from Jannoff-Bulman's (1989) shattered assumption theory (Schuler & Boals, 2016). In his religious coping theory, Pargament (1997) postulated S/R coping as the product of a person's general orienting system (GOS) and that S/R coping and S/R struggle were parts of this dynamic meaning-making system (Trevino et al., 2019). Religious coping theory was a model for understanding S/R struggle and S/R coping as related concepts that are interactive parts of a broader meaning-making system; therefore, separate but related. Religious coping theory is often used to understand the impact of S/R coping and S/R struggle on NLE outcomes (Trevino et al., 2019). As such, religious coping theory provided a framework for understanding S/R coping and S/R struggle, particularly in reference to NLE.

#### **Conceptual Framework**

The GOS (Folkman, 1984) is a complex system of meaning making that provided a way to understand new experiences within an established framework; or schemas

(Schultz et al., 2014). One's pattern of S/R coping was established in their GOS and religious coping theory was created in reference to this conceptual framework (Schultz et al., 2014). A lack of adoption of new experiences into the GOS resulted in distress and was proposed to understand why S/R struggle developed for some after NLE (Trevino, et al., 2019). GOS therefore relates to the theoretical orientation I adopted for this study and provides a conceptual basis for understanding the way constructs interact, influencing research questions and associated hypotheses.

### **Taken Together**

Taken together, religious coping theory and GOS well established a relationship between S/R struggle, NLE, and S/R coping. Religious coping theory integrates S/R coping and S/R struggle as part of a larger system of understanding and has been used to understand how NLE outcomes are impacted by S/R coping and S/R struggle. The GOS addresses how this relationship between S/R struggle and S/R coping works as S/R struggle challenging patterns of S/R coping and gives a basis for understanding that NLE can also impact S/R coping and S/R struggle. This understanding made studying the moderating role of S/R struggle on the relationship between NLE and S/R coping a reasonable question to research.

The GOS and religious coping theory together also led to the development of the Brief RCOPE and RSS (Exline, et al., 2014; Pargament, 1997). As such, they influenced not only the focus of my study, but the constructs used to test the research questions. This reinforced the alignment between theoretical orientation, conceptual framework, and present research study.

### **Nature of the Study**

To answer the research questions for this quantitative study, I used a cross-sectional moderation analysis. Moderation analysis has been a frequently used methodology to better understand the relationships between three or more variables (Jose, 2019). For this study, the three variables were S/R struggle, number and sum mean stress level of NLE, and S/R coping with a target population of evangelical Christians. The PVs were number and sum mean stress level of NLE, the MV was S/R struggle, and the OV was S/R coping.

Research participants were adults ages 18 and older located in the United States of America. The number of participants needed was determined using a power analysis procedure with G\*Power. Research participants were recruited online with the use of Amazon Mechanical Turk (MTurk; Amazon Mechanical Turk, n.d.). Participants were recruited until the minimum required sample size to achieve study validity, therefore using quota sampling. Data collection included demographic information, and three measures: SRE, Brief RCOPE, and RSS. Data was collected through Survey Monkey. Statistical analysis was conducted with the most recent version IBM SPSS for moderation analysis.

### **Definitions**

This definitions section provides the operational definitions used and the research sources supporting them. Operational definitions were shared with study participants to help participants with reference points for inclusion/exclusion criteria and understanding self-report measures included to answer research questions.

*Evangelical Christian*: Someone who identifies as a Christian and holds fundamentalist beliefs of the Bible as truth, salvation through Jesus Christ (Phillips & Ano, 2015).

*Negative life event (NLE)*: Unpleasant experiences that have the potential to have deleterious impact and challenge the GOS (Evans et al., 2018).

*Religious*: Corporate or common expressions of shared faith through religious practices (Evans et al., 2018).

*Spiritual*: Experience of connecting with and the search for connection with the divine/sacred (Evans et al., 2018).

*Spiritual/Religious coping*: S/R coping is a pattern of relating to, interacting with, and expressing the spiritual and religious resulting in a pattern of internal and external coping behaviors (Ano & Pargament, 2015).

*Spiritual/Religious struggle*: S/R struggle is the experience of internal conflict with spiritual and/or religious beliefs and practices resulting in disruption to one's held belief system (Ano & Pargament, 2013).

### **Assumptions**

This study had a few necessary assumptions. The following provides an overview of the assumptions I made and efforts I took to both acknowledge assumptions and limit their impact. Efforts were made to limit the prevalence and impact of assumptions to the degree possible and increase confidence in the basis for included assumptions.

Research on S/R coping and S/R struggle holds one essential assumption, that S/R coping and S/R struggle impacts are real. Because these constructs were measured by



self-report they cannot be evaluated beyond the level of correlation to causation and subject to bias and human limitations of comprehension and truthfulness (Abu-Raiya & Pargament, 2015). The wealth of research across populations and settings provided great confidence in the correlational patterns; however, this does remain assumptive. Because this assumption relates to the PV and MV it was essential to maintain this assumption for the purpose of this study. The research community has managed research with this assumption, often noting the limitation of the measures included in their study for integrity's sake (Abu-Raiya & Pargament, 2015). As such, it is a reasonable and necessary assumption for this present study.

A second necessary assumption I made was that participants were mentally, emotionally, and otherwise capable of understanding included measures, evaluating them honestly, and providing accurate answers per their experience (see Groves et al., 2009). To mitigate the impact of these assumptions to the degree possible, a third-party program was used for recruitment and responses kept anonymous. As such, this limited motivation for dishonesty and/or bias based on association with personal identification (Groves et al., 2009). The use of internet-based recruitment and data collection helped to limit bias as well, according to Groves et al. (2009).

However, this format required the assumption that participants could understand the more challenging measures. By providing operational definitions to participants, inclusion, and exclusion criteria, efforts were made to ensure that as much confidence as possible can be placed on this necessary assumption (see Groves et al., 2009).

A third assumption I made was believing the information gathered was an accurate reflection of the actual experience of the target population. Consistency in results from previous research with included constructs and methodology helped to minimize the impact of this assumption. However, even with the increased confidence, this remained an assumption and needed to be explicitly disclosed as such.

### **Scope and Delimitations**

This study was offered as an early step in understanding how S/R struggle moderates S/R coping after NLE for evangelical Christians. As such, narrow parameters were set for the study. The specific research problem to consider the moderating effect of S/R struggle on the relationship of type and sum mean stress of NLE experienced within the past 12 months and S/R coping for evangelical Christians. Participants were self-identified evangelical Christians in the United States of America who are 18 years of age or older and have experienced a minimum of one NLE within the last 12 months by self-report on SRE. The study had a cross-sectional design. These parameters were set based on trends for new research in the fields of S/R coping and S/R struggle in research literature previously noted.

Because of the chosen research problem and design choices I made to conduct the study, there is limited generalizability. The specific population of evangelical Christians was the chosen focus of this study and there was no attempt to generalize findings outside of this population to others in alignment with best practices in psychological research (see DeVellis, 2017). This study therefore is only interpreted to reflect the sample population and not generalized to the broader population. To increase generalizability,

future research can include longitudinal designs, specific populations of evangelical and nonevangelical Christians, other faith traditions and religious affiliations and populations who do not identify with spiritual or religious factors in Western and non-Western settings.

### **Limitations**

Within this study, there were several key limitations to consider. These were methodological, related to the included measurement tools, recruitment, sampling, and the online data collection design. An overview of these limitations follows.

Like other statistical analysis procedures, moderation analysis has limitations. Key limitations for moderation analysis included those consistent with regression analysis procedures, such as the potential for a lack of statistical validity (Warner, 2013). These limitations were addressed by acquiring a sufficient sample size and following data screening and preliminary data analysis procedures to yield data that will yield accurate information in moderation analysis.

Additional limitations existed for included measures to assess constructs and test hypotheses. Research on S/R struggle, S/R coping, and NLE was limited by the self-report nature of the Brief RCOPE, RSS, and SRE (see Abu-Raiya, & Pargament, 2015). Limitations for the Brief RCOPE, RSS, and SRE included an explanation of key terms in attempts to address the limitations of these measures (see Groves et al., 2009). However, the benefit of using self-report scaled survey methods were well suited to understand human experiences in a naturalistic setting (Groves et al., 2009) and therefore well suited to the purpose of this research.

Both spirituality and religion can be sensitive subjects to study and may result in participant response skew based on their preconceived ideas of the existence of a right and wrong response both informed by personal cultural factors and assumption about researcher's desires, known as social desirability effect (Groves et al., 2009). Consideration was also made for respondent bias in social desirability effect that can exist with sensitive topics, such as spirituality and religion (see Groves et al., 2009). Specifically, using a national sample with de-identified responses helped to alleviate some of this bias because of the multiple levels of anonymity included (see Groves et al., 2009).

While using an online sampling process helped with limiting social desirability effect, it resulted in sampling bias by excluding members of the evangelical Christian population who do not have internet access (see Groves et al., 2009). Using a large participant database helped to ensure as representative a sample as possible with an online format. In doing so, this limitation was addressed to the best possible degree.

Finally, researcher bias was also a factor in this study. Although researcher bias is primarily a focus in qualitative research where data analysis is more interpretive (Wadams & Park, 2018), as a Christian, pastor, trauma-specialist mental health therapist, and someone familiar with NLE, I have my own biases that I needed to recognize and manage during this study. Disclosure of consultation with my dissertation chair, keeping a research journal during the proposal stage of my dissertation, and making my bias plain to readers are all efforts to acknowledge and mitigate the impact of biases to the degree I was aware of them.

### **Significance**

This study both introduces the role of S/R struggle as a potential moderator for S/R coping by number and sum mean stress level of NLE and contributed to clarifying this dynamic relationship between related constructs, a noted need by leading researchers. This was accomplished with the intent to introduce a new focus to the existing body of knowledge and promote further study to better understand S/R coping and S/R struggle after NLE.

There exists potential for positive social change in the scope of the present study. Specifically, the experience of NLE is common and S/R coping and S/R struggle are important factors to consider because of their impact on NLE outcomes. Understanding these constructs better allowed for therapists, pastors, and other helping professionals and spiritual leaders to have the ability to offer increased support and better anticipate evangelical Christians' spiritual or religious needs following an NLE and promote ecumenical dialogue in faith communities about S/R struggle and S/R coping. Future research building on this study has the potential to do the same for increasingly generalized populations and lend to providing more accurate support for people after NLE.

### **Summary**

S/R coping and S/R struggle are important dynamic constructs, both highly researched in relationship to NLE. However, researchers have not yet considered the moderating role of S/R struggle on S/R coping by number and sum mean stress of NLE. This was an important area to study within this body of research literature. The specific

research questions I explored in this study help address this need by considering the impact of S/R struggle on the relationship between number and sum mean stress level of NLE and S/R coping for evangelical Christians. These questions introduced this new focus with the intention to provide a basis for ongoing exploration in future studies. A brief synopsis of the elements of this research study was included to review how this study accomplishes this aim.

The purpose of this quantitative study was to examine the moderating role of S/R struggle on the relationship between number and sum mean stress level of NLE's experienced in the last 12 months by evangelical Christians and S/R coping. The two research questions and associated null and alternative hypotheses were informed by religious coping theory and the general orienting system as theoretical orientation and conceptual framework, respectively. Recruitment and sampling procedures were conducted online and data collected that meets inclusion and exclusion criteria, informed by operational definitions, was analyzed with moderation analysis of S/R struggle on the relationship between number and mean stress level of NLE and S/R coping. This research design was critically evaluated through acknowledgement and discussion about important assumptions for the study, consideration to the scope and delimitations of the study, limitations, and the study's significance. This evaluation concluded the introduction to the study provided in Chapter 1.

Moving from an overview to in-depth evaluation, Chapter 2 provides a thorough review of the literature search strategies, theoretical orientation, and conceptual

framework with analysis of seminal and current research on S/R struggle, S/R coping, and NLE to provide an in-depth understanding of the body of literature.

## Chapter 2: Literature Review

The purpose of this study was to examine the moderating role of S/R struggle on the relationship between number and sum mean stress level of NLEs experienced in the last 12 months by evangelical Christians and S/R coping. S/R struggle was measured by the RSS, number and sum mean stress level of NLE was measured by the SRE, and S/R coping was measured by Brief RCOPE. These three measures were often used in studying the constructs included in this study. To date, the Brief ROCPE and RSS demonstrated the strongest validity and reliability measures for the study of S/R coping and S/R stress, respectively (Exline, et al., 2014; Pargament, 1997).

Current literature explored S/R struggle, S/R coping, and NLE in a variety of ways. Research themes focused on the moderating and mediating roles of S/R coping and S/R struggle on the relationship between NLE and mental health, wellbeing, and positive or negative outcomes (Abu-Raya, & Pargament, 2015; Buser et al., 2017; Kao, & Chen, 2016; Knabb et al., 2019; Wilt et al., 2021; Zarzycka, & Puchalska-Wasył, 2020). However, while studies discuss S/R coping and S/R struggle at length, few studies discussed both within the context of the same study. When S/R coping and S/R struggle were both included as constructs in the same study; the strongest empirically validated measures of both S/R coping and S/R struggle were not used in conjunction with one another; leaving the research community with a limited understanding in patterns of S/R coping and S/R struggle after a NLE. This limited understanding restricts the ability to identify when efforts should be made to mitigate the impacts of NLE. I sought to address



this gap in the research community's understanding and provide a better understanding of S/R coping and S/R struggle concurrently with NLE.

This chapter serves to provide context of the present study. Five main sections are included within this chapter to this aim: literature search strategy, theoretical orientation, conceptual framework, literature review, and summary and conclusion. The literature search strategy provides detailed information on the strategies that were taken to ensure an exhaustive review of seminal and current peer reviewed literature. The theoretical foundation, religious coping theory, is described and defended in context of the literature and justified for use with this research project. Similarly, the GOS is presented as the guiding conceptual framework and justified along with religious coping theory. The literature review provides a thorough summation of seminal and current peer reviewed literature on the important constructs for this study: S/R struggle, S/R coping, and NLE. Information is presented in this order with S/R coping first, followed by S/R struggle to mirror their introduction into the research literature, followed by NLE. Justification of construct use for this study, methodological fitness, and different perspectives and controversies in the literature were explored for each construct. Finally, a summary of Chapter 2 concludes this section and transitions the reader into Chapter 3, which explores the chosen methodology.

### **Literature Search Strategy**

Literature was sourced primarily through the Walden University Library via EBSCO Host advanced search and Thoreau. Search terms included *spiritual religious coping*, *spiritual religious struggle*, *Christian*, *coping*, *trauma*, *Post-Traumatic Stress*

*Disorder, Kenneth Pargament, religious stress, Post-Traumatic Growth, mediation, moderation, Religious Coping Theory, General Orienting System, religious schema, resilience, and negative life events.* Searches were conducted both with and without a 5-year timeframe for results to gain an accurate historical picture of literature, identify seminal work, and to understand broadly the current focus of the body of research on S/R coping and S/R struggle with an emphasis on literature that explored these along with NLE. Reviewed articles came from the following academic journal databases: Academic Search Complete, APA PsychArticles, APA PsychInfo, Arts and Humanities Citation Index, CINAHL Plus with Full Text, Directory of Open Access Journals, Education Source, Gale Academic OneFile Select, Health and Psychological Instruments, Journal@OVID, Mental Measurements Yearbook with Tests in Print, Psychology and Mental Health, PubMed, Science Citation Index, Science Direct, SocINDEX with Full Text, and Supplemental Index. Additional searches were conducted through Google Scholar, in previous Walden University courses, and book publications by the American Psychiatric Association and personal communication with Kenneth Pargament, leading researcher on S/R coping and S/R struggle.

These searches yielded hundreds of results. Articles were assessed for academic credibility, study quality, and relevance of study purpose, constructs, methodology, and future recommendations in relationship to the present study. These articles informed the present study and provided the foundational information that follows.

### **Theoretical Foundation**

This research study was guided by Pargament's (1997) religious coping theory. According to Pargament (1998), humans search for the sacred in times of stress to mitigate stress impacts and preserve the understanding of both natural and supernatural order (Xu, 2016). S/R coping elements were challenged in times of stress, like those experienced during NLE, as the understanding of natural and/or supernatural order was brought into question (Pargament, 1997). Drawing upon S/R coping during NLE was a natural process to resolve these questions. This evaluation had the potential to either reorient or reinforce one's understanding of order and as such; S/R coping contributed to resulting distress or resilience after NLE (Ano & Pargament, 2013).

Religious coping theory was developed from Jannoff-Bulman's (1989) shattered assumption theory. According to Jannoff-Bulman, trauma violates and causes the loss of basic assumptions about the goodness of the world and personal value, resulting in the development of mental health issues, like PTSD (Schuler & Boals, 2016). Pargament built religious coping theory on shattered assumption theory, broadening it from a sole focus on trauma and introduced measures with improved psychometric properties.

Religious coping theory quickly became the guiding theory for research on S/R coping and S/R struggle. The use of associated self-report measures along with qualitative studies strongly support religious coping theory as accurate for understanding and measuring S/R aspects of the human experience (Pargament et al., 2011). This held true for both religious and nonreligious populations studied (Pargament, 1997). Because of the fitness between religious coping theory and this area of research, religious coping

theory was almost exclusively relied upon to evaluate the relationship between S/R coping or S/R struggle and NLE (Abu-Raya & Pargament, 2015).

As such, religious coping theory was adopted as the theoretical orientation for this study. Although other theoretical orientations were considered, such as the noted alignment of theory, conceptual framework, constructs, and body of research to build upon, religious coping theory was found to be superior and an appropriate fit for the purpose and scope of this study. Specifically, it was the consistency in results across studies and established body of knowledge on S/R struggle, S/R coping, NLE, Christian populations, and associated constructs to build from that solidified S/R coping theory's adoption.

The present study built on this body of research, incorporating the utilization of both constructs for S/R coping and S/R struggle with evangelical Christian populations after experiencing an NLE. At the time of the study's proposal, there were no studies found which used both empirically validated measurements for S/R coping and S/R struggle. Thus; I sought to add clarification to the research community on the moderating role of S/R struggle on the relationship between number and mean stress level of NLE and S/R coping for evangelical Christians.

### **Conceptual Framework**

Further supporting this study, the GOS served as the guiding conceptual framework. The GOS is a complex system of meaning making that generally guided one's understanding of the world (Schultz, et al., 2014). The GOS allowed cognitive appraisal and meaning assignment to integrate experiences into memory in a manner that

is cohesive with one's general understanding; essentially as a network of established schemas (Schultz et al., 2014). Because religious coping theory, Brief RCOPE RSS measures, and previous studies were founded strongly in the concept of the GOS; it was appropriate to include the GOS as a framework for this study.

The GOS is less prominently named in research literature than religious coping theory. However, current literature used the GOS in the same or similar manner that I have to understand the relationship between S/R struggle, S/R coping, and NLE. The GOS was proposed to explain why NLE resulted in S/R struggle for some and S/R coping for others (Trevino et al., 2019). The GOS was found to have a moderating role in the relationship between NLE and S/R struggle where positive spirituality acted as a buffer for the development of S/R struggle after an NLE (Trevino et al., 2019). Furthermore, strain on the GOS and positive aspects of the GOS were noted to result in increased S/R struggle, specifically with increased negative emotions, social isolation, and increased insecure attachment with God (Trevino et al., 2019). Researchers also considered the nature of the GOS interacting with S/R coping and S/R struggle, not measured by the RSS (Wilt et al., 2018). Schultz et al. (2014) similarly found that increased S/R coping was helpful in the resolution of S/R struggle and leading to spiritual transformation, the process of either spiritual growth or decline after an NLE . These protective elements of the GOS directly related to the level of importance of spiritual or religious importance over the application of spiritual or religious principles, such as forgiveness (Schultz et al., 2014).

In my study, the GOS served to provide a foundation for understanding why religious coping theory was relevant after experiencing NLE. Without the GOS as a basis for understanding, the use of religious coping theory lacked depth because the two together essentially understand religious coping theory as the process of interacting with the GOS. Religious coping theory translates the beliefs of GOS into active thought and behaviors found in S/R coping and S/R struggle. Therefore, understanding the GOS and religious coping theory in conjunction provided a more accurate understanding of the constructs and measures used in this study along with guiding questions, hypotheses, research design, and results interpretation.

### **Literature Review Related to Key Variables and Concepts**

Three variables and concepts were included in this literature review: S/R struggle, NLE, and S/R coping. Efforts were made to create an accurate picture of the history and current state of research for each variable and concept. To support this, variables are presented in the order of S/R coping, S/R struggle, then NLE. This order reflected the order of concept for S/R coping and S/R struggle in research literature and allows connections for both to be made in relationship to NLE. Because there was such a breadth of research; literature for S/R coping and S/R struggle provided an understanding of the nature of each variable, impact on mental health and wellbeing, and considerations for specific populations. Literature was then critically evaluated, limitations and implications discussed, and the research gap this study justified in respect to the research literature.

To understand S/R coping and S/R struggle, it is important to first define spiritual and religious. Spiritual refers to the experiential aspects of connecting with and the search

for connection with the divine/ sacred, whereas religious refers to corporate or common expressions of shared faith through religious practices (Evans et al., 2018). Both spiritual and religious beliefs are a part of one's global meaning system embedded in their GOS (Pomerleau et al., 2019). Both are pertinent to the construct of S/R coping and S/R struggle and are referenced in literature reviewed for key variables and concepts.

### **Spiritual/Religious Coping**

S/R coping was first described in Pargament et al., (1988) study on three religious coping styles. From this time forward, research in S/R coping was leadby Pargament, who focused on the application of S/R coping with various populations (Pargament et al., 1998), exploration of S/R coping in relationship to NLE (Pargament et al., 1992), formal introduction of religious coping theory (Pargament, 1997), and clarifying S/R coping constructs, resulting in the development of the Brief RCOPE (Pargament et al., 1998). Evaluation of the Brief RCOPE resulted in critical analysis of the Judeo-Christian bias of the Brief RCOPE, and research quickly expanded to evaluate the merit of the Brief RCOPE with a diversity of religions (Tarakeswar et al., 2003) and diverse settings and populations on a global scale (Phillips et al., 2009).

As S/R coping became more recognized in the research community, the pool of researchers exploring S/R coping expanded greatly and added diversity in approach and understanding. Resultingly, research became increasingly broad in its scope, increasingly generalizability, and more specific as more researchers started to explore S/R coping in relationship to clearly defined populations and subpopulations (Abu-Raya, & Pargament,

2015; Buser et al., 2017; Kao, & Chen, 2016; Knabb et al., 2019; Lisman et al., 2017; Medlock et al., 2017; VanTongeren et al., 2018; Vitorino et al., 2017).

Even with the wealth of research, S/R coping continues to be a focus of research to this day with new studies being published on S/R coping on a regular basis. Emerging research included application to current struggles, such as implications of the COVID-19 pandemic (Zhang et al., 2021). These emerging studies support the relevance of S/R coping as an ongoing focus of research.

### ***The Nature of S/R Coping***

As demonstrated with the above summary of the nature of studies, a wealth of research was conducted to understand S/R coping. Partially, the amount of research results from the noted complex relationship between spirituality and religion with NLE. A relationship that continues to be studied for greater understanding. Since Pargament's seminal 1988 study, over 1,000 studies on S/R coping have been conducted with a variety of NLE (Rosmarin et al., 2016) and it has been the most widely studied aspect of spirituality and religion (Roasmarin et al., 2016). Yet, questions regarding the nature of S/R coping and NLE remain. Studies as recent as Harris et al.'s (2015) exploration of trauma and religion and Buser and colleagues' (2017) study on nonsuicidal self-injury and religion noted the complexity of the relationship between constructs and implicated the need for further research into understanding this relationship.

Even with the evolving nature of the research community's understanding of S/R coping, consistencies among studies have resulted in a clear conceptualization of some aspects of S/R coping. As such, the nature of S/R coping is generally accepted as true in



the research community despite the ability to draw definitive conclusions with the nature of noncausal research. The nature of S/R coping remains theoretical. Elements of complexity are highlighted in the following description of the nature of S/R coping.

S/R coping is a part of normal S/R development for both religious/spiritual persons and nonreligious/spiritual persons (Pargament, 1997). One's conceptualization of spirituality/religion contributes to one's pattern of meaning making (Ra, et al., 2015); thus, implicating spirituality/religion as an important part of one's GOS. S/R identity is a key developmental process that is evident in adolescence and emerging adulthood with the evaluation of cultural and institutional beliefs (Bailey et al., 2016). The positive/negative expression of S/R coping, along with individual and cultural factors, then interacts with daily events and major life events, influencing the impacts and outcomes of these events (Pargament, 1997). The resulting and evolving understanding are both systemic and variable from person to person (Bailey et al., 2016). This was the first element of complexity; the universal but individual experience of S/R development regardless of S/R affiliation.

Research demonstrated that both S/R coping and S/R struggle were normal experiences across populations (Abernathy et al., 2018; Bailey et al., 2016). There is a positive correlation between increased levels of stress and increased engagement in positive S/R coping (Pargament et al., 2006). Higher levels of S/R coping are associated with increased engagement in positive secular, or non-S/R coping methods, as well (Szczesniak et al., 2020). As such, the interactions between S/R coping and other related constructs are dynamic. This is a second area of complexity noted in S/R coping.

S/R coping is strongly indicated as important in relationship to significant events, such as NLE (Abu-Raya & Pargament, 2015). S/R coping was found to be important in understanding daily activities, such as work ethic and job performance (Brickerton & Morton, 2019). One's pattern of S/R coping is both consistent and fluctuating daily (Brickerton & Morton, 2019) and after NLE (VanTongeren, et al., 2018). The state/trait nature of S/R coping highlighted a third complexity described by research literature on the nature of S/R coping.

These noted complexities keep S/R coping a relevant and important area of study. The following sections on S/R coping explore more specifically what is known about S/R coping, highlighting themes in research focus and supporting the importance S/R coping and therefore the importance of continuing to pursue a better understanding of the nature of S/R coping.

### ***S/R Coping on Mental Health and Overall Wellness***

S/R coping was the most studied area of spirituality/religion among psychiatric populations (Medlock, et al., 2017). Research demonstrated strong themes of improved mental health and overall wellness (Ochu, et al., 2018) Research studies often included measures of anxiety, depression, and quality of life and/or wellness along with S/R coping (Vitorino, et al., 2017). Increased S/R coping was associated with increased positive coping with NLE; with noted themes of a reduction in depression, anxiety, reduced levels of self-harm, and PTSD symptoms across populations (Buser, et al., 2017; Lisman, et al., 2017; Vitorino, et al., 2017) and protective against secondary trauma and compassion fatigue (Newmeyer, et al., 2016). Participants further reported improvements

in quality of life with increased S/R coping; again, with a notable relationship to improvements post NLE compared to other study participants (Knabb, et al., 2019). In the treatment of psychiatric conditions, addressing issues of spirituality and religion as a focus of psychotherapy indicated increased psychological and spiritual gains in treatment, according to a meta-analysis by Captari and colleagues, (2018) and increased positive outcomes after SUDS treatment (Medlock, et al., 2017).

Much research on S/R coping's impact on mental health and wellbeing centered on traumatic experiences. A more focused exploration of this literature was included because trauma represents a particularly impactful form of NLE. Furthermore, literature on trauma illuminated patterns of frequency and mean stress level of NLE that were impactful for the present study. In this research, S/R coping was overwhelmingly found to be activated by traumatic experiences and served an adaptive trauma response (Kao, & Chen, 2016) that resulted in reduced post-traumatic impacts (Smith, et al., 2020; Ochu, et al., 2018). However, early exposure to trauma impacts S/R development (Proctor, et al., 2019); resulting in a loss of positive S/R coping with early trauma exposure. Research also demonstrated a small correlation between an increase in the number of traumatic events in a person's life and an increase in post-conventional spiritual growth (Harris, et al., 2015; Shannonhouse, et al., 2019). Taken together; while S/R coping was an adaptive response to trauma; early exposure to trauma and repeated exposure to trauma had the potential to negatively impact S/R coping. This was supported by research that found those with more established S/R meaning making systems demonstrated less spiritual

growth post-trauma than those with less-established S/R belief systems (Harris, et al., 2015).

Prayer aspects of S/R coping were connected with increased prefrontal activity in association with reports of a decrease in depressive symptoms one-year post-trauma; suggesting increased emotional control with the use of prayer (Baldwin, et al., 2016). In another study, the activity of praying for others resulted in statistically different levels of C-Reactive Protein after trauma experienced during one's lifetime; indicating a modest reduction in stress for the praying group (Krause, et al., 2016). These studies implicated communal aspects of S/R coping as important in the reduction of stress that can be measured on a physiological level as well.

Research considering the mechanisms or processes by which S/R coping impacted trauma outcomes found shift in perspective from negative trauma-based ruminations to faith ruminations increased stability after experiencing trauma and contributed to post-traumatic growth (Knabb, et al., 2019). Cognitive themes of empowerment and meaning through trauma associated with positive S/R coping were found to contribute to post-traumatic growth (George, & Bance, 2020). The cognitive appraisal illuminated the connection between S/R coping and one's GOS as people sought to find a cognitive framework that supported a positive and congruent narrative with divine purpose and/or redemption for experiences that would otherwise challenge one's positive beliefs about the world and natural and supernatural order (Trevino, et al., 2019).

**Health Crisis/ Chronic Health Issues.** Another theme in research literature centered on S/R coping with health crises and chronic health issues as NLE. Many of

these studies were conducted with cancer patients and cancer survivors. This research was expanded upon because in addition to supporting overall patterns of S/R coping's impact on mental health and wellbeing; these studies provided physiological markers like cortisol levels and connection to physical experience of pain. S/R coping was noted to be a mechanism for religion and health-related biology (Tobin, & Slatcher, 2016). Health related studies also included true experimental design, unlike other areas of study. This provided another perspective to validate research themes and strengthens the foundation the present study was built on.

Supporting Religious Coping Theory's postulation that S/R coping was more active during times of stress, health studies indicated S/R coping was utilized more during active diagnosis of cancer than in remission (Saarelainen, 2017). In support of the GOS, results also indicated S/R coping served to provide a way to have positive meaning-making for their experience of suffering; resulting in lower levels of distress and increased positivity in their pain (Lewis Hall, et al., 2020; Vitorino, et al., 2018).

This pattern was noted in other research where positive spiritual experiences and religious practices were associated with a reduction in the stress hormone cortisol in breast cancer survivors; providing support for a physiological reduction in pain in addition to increased positivity in the experience of pain (Hulett, et al., 2018).

Conversely, negative views of God and negative religious experiences correlated with increased cortisol levels in the same study (Hulett, et al., 2018). This indicated increased physiological experience of pain and distress. Prado Simao Miranda and colleagues,(2020) also analyzed saliva from people actively undergoing cancer treatment

and found differences between control and treatment groups with S/R coping interventions that indicated a reduction in physical pain experienced with cancer treatment.

S/R coping then had an important impact on physiological experiences along with cognitive appraisal. Another study provided insight into the long-term impacts of positive S/R coping with medical NLE. Longitudinal research demonstrated S/R coping related to a decrease in cortisol levels after 10 years post treatment for cancer (Tobin, & Slatcher, 2016). This demonstrated how important S/R coping can be in positive outcomes of NLE.

**Disaster/ Unexpected NLE Response.** Unexpected or uncontrollable NLE such as natural disasters, war, mass shootings, and others proved to be an important area of research for S/R coping. These circumstances most strongly illuminated the use of S/R coping to understand NLE and the importance of communal aspects of S/R coping for mental health and wellbeing.

S/R coping engagement increased during NLE and S/R coping was often utilized as a primary coping strategy (Abu-Raya, & Pargament, 2015). Communal aspects of S/R coping were of particular importance in response to this category of NLE. For example, in response to mass-shooting in a rural community; engaging in community-based S/R corporate activities resulted in reduced trauma impacts (San Roman, et al., 2019). High levels of S/R coping were also seen in war survivors and refugees and their families with shared faith/belief systems (Acquaye, 2017; Pargament, et al., 2011). Further supporting this research themes; faith practices and positive coping resulted in increased positive outcomes for female refugee trafficking victims and their families (Ginesini, 2018).

Conversely, research on elders with suicidal ideation during the COVID-19 pandemic indicated a decrease in positive S/R coping and increase in intensity of suicidal ideation with the increase of social isolation (Shannonhouse, et al., 2020). This further supported the importance of the communal nature of S/R coping on mental health and wellbeing.

Other disaster research sought to understand what makes disasters and unexpected NLE more impactful. The long-term impacts of a natural disaster such as finances, sleep concerns, and other energy expenditures, impacted how one was affected by the disaster (Shannonhouse, et al., 2019). This relationship was moderated by positive S/R coping (Shannonhouse, et al., 2019).

It was notable that S/R coping was recognized as important for managing disasters and relied upon to help with projections about the impact of the COVID-19 pandemic. Early research, such as Shannonhouse and colleagues' (2020) study above, were presented along with theoretical writings on S/R coping in a global crisis to help with conceptualizing potential pandemic impacts (Zhang, et al., 2021). This emphasized the acceptance of S/R coping as having pointed current and future significance both in research and in disaster support efforts. As such, it was anticipated that S/R coping would continue to be an important focus in research literature moving forward.

**Discrimination Studies.** The patterns of S/R coping were overwhelmingly consistent amongst studies; with variation in the strength of correlations; but an overall pattern of increased wellbeing with increased S/R coping. When facing issues of racism and discrimination, communal aspects of S/R coping were correlated with decreased distress with internalized racism (Vazquez, et al., 2021). Positive S/R coping was

associated with a decrease in fear of homicide and other racially based violent victimizations (Smith, et al., 2020).

Interestingly, there was one study that noted a different pattern. Brewster and colleagues (2016) found with internalized homophobia in sexual minorities; positive S/R coping did not have any noted correlation with increased mental health and wellbeing. Negative S/R coping did, however, continue to correlate with an increase in negative mental health and reduction in wellbeing outcomes (Brewster, et al., 2016). This was noted as an important factor to consider with the present study as this mean stress level of NLE may present a different picture of S/R coping patterns.

**A Comparison of Religions.** Research in S/R coping was initially conducted with mostly Judeo-Christian populations in the United States. The noted limitations in generalizability prompted adaptations to S/R coping measures for a broader range of religious traditions and encouraged application on a global scale (Abu-Raya, & Pargament, 2015). In a comparison among religions, Abu-Raya and Pargament (2015) conducted a meta-analysis of literature on S/R coping with Muslim, Jewish, Buddhist, Hindu, and Christian populations studied. Results of this meta-analysis indicated positive S/R coping was high across religions; with the highest levels of positive S/R coping with Christian populations studied (Abu-Raiya, & Pargament, 2015). Increased reliance on S/R coping during times of stress was consistent across studies as were themes of increased positive outcomes with positive S/R coping and increase in negative outcomes with an increase in negative S/R coping (Abu-Raya, & Pargament, 2015). However, these



results were cautioned to be interpreted cautiously due to the disproportionate number of studies with Christian vs. non-Christian samples (Abu-Raya, & Pargament, 2015).

Many studies were conducted with various religions since this meta-analysis presented preliminary results on S/R coping with religiously diverse populations. Simsir and colleagues (2017) conducted a qualitative study with Muslims; finding themes in S/R coping similar those the categories of the RCOPE; including meaning making, acceptance, and social support in the wake of NLE. So important were S/R elements that it was noted incorporating religion into trauma work makes this work more valid for Muslim communities internationally. This was noteworthy because, while the focus of the proposed study was with evangelical Christians, it could be replicated with other religious traditions as well as future focuses of research.

For Christian populations, Christians who held fundamentalist beliefs demonstrated higher levels of positive S/R coping than other Christians with non-fundamentalist beliefs (Phillips, & Ano, 2015). This information was important because it highlighted positive aspects of fundamentalist beliefs which often were viewed negatively in research (Phillips, & Ano, 2015). This led to the adoption of evangelical Christians as the target population for the study. The expected pattern of S/R coping was established and would serve as a good framework for understanding S/R coping and S/R struggle after NLE.

This study included a focus on evangelical Christian populations. This was largely in part to the over-use of this demographic in research literature. While this was a noted limitation in several research articles; the validity in repeat patterns with a well-studied

population provided a clear picture of S/R coping patterns to reference for the present study and therefore a benefit for this study.

### **Spiritual/Religious Struggle**

Through extensive research, a clear picture of the current state of S/R coping knowledge was achieved and summarized above. The volume of research has provided the ability to address many gaps in the literature and allowed for a reliable understanding of S/R coping from many viewpoints. In an evaluation of S/R coping studies; study methodology, limitations, and considerations for future research were considered. These were then connected to the intent of the present study.

### ***Methodological Approaches***

S/R coping was studied from a variety of perspectives and research designs. While primarily quantitative, qualitative studies were important in confirming and qualifying themes present in literature. Study sizes ranged from a case study of 1 (Proctor, et al., 2019) to a large-scale study of 744 participants (Szczesniak et al., 2020). Studies on S/R coping were more diverse than studies on S/R struggle with more international studies and a broad range of populations.

The number of researchers considering S/R coping brought a rich combination of quantitative, qualitative, mixed methods approaches, and meta-analyses. Research methodologies included both cross-sectional (Ochu, et al., 2018; Vitorino, et al., 2018) and longitudinal (Phillips, & Ano, 2015; Van Tongeren, et al., 2018) quantitative analysis with a general emphasis on moderation and mediation analysis (Shannonhouse, et al., 2019; Szczesniak et al., 2020; Vazquez, et al., 2021). Themes of regression analysis

(Medlock, et al., 2017) and correlational analysis (Hulett, et al., 2018) also existed in quantitative literature.

Qualitative studies included exploration of the experiential nature of S/R coping. Approaches included grounded theory (Bailey, et al., 2016; Lewis Hall, et al., 2020), narrative (Saarelainen, 2017), case study (Proctor, et al., 2019), content analysis, (Simsir, et al., 2017), exploratory (Ginesini, 2018), phenomenological (George, & Bance, 2020), and mixed methods approaches (Parente, et al., 2020; Ray, et al., 2015).

Finally, meta-analysis studies helped to summarize findings that are now considered generally accepted knowledge about the nature of S/R coping (Abu-Raya, & Pargament, 2015; Captari, et al., 2018; Garssen, et al., 2021). The majority of this research aimed at understanding S/R coping in relation to one or more types of NLE.

### ***Limitations***

Noted limitations included the retrospective nature of studies (Shannonhouse, et al., 2019), over-reliance on Christian populations (Abu-Raya, & Pargament, 2015), Self-report measures used (Abu-Raya, & Pargament, 2015), non-experimental design (Prado Simao Miranda, et al., 2020), and utilization of an online sampling format (Szczesniak et al., 2020).

### ***Connections to the Present Study***

There were many strong research designs to evaluate for use with the present study. The studies for S/R coping, being more in quantity and variety of research, were relied upon for informing the design of the present study more than S/R struggle studies discussed below. S/R coping literature led to the adoption of a moderation model and

selection of Religious Coping Theory and GOS as guiding theory and concept. The lack of consideration of both S/R coping measures and S/R struggle measures together was particularly instrumental in this being included in the present study. However, this literature was not the sole influence in the present study. Additional influences from S/R struggle literature, discussed below, had additional influences discussed at the end of the review of the S/R struggle construct below.

### **Spiritual/Religious Struggle**

S/R coping was the focus of rigorous research since Pargament's (1988) seminal work, introducing the concept of S/R coping as a relevant human experience. As research progressed; the construct definition of S/R coping to negative S/R coping shifted to S/R coping to S/R struggle; resulting in S/R struggle being defined as a clarified and expanded understanding of negative S/R coping (Ano, & Pargament, 2013; Magyar-Russell, et al., 2014), as a type of negative S/R coping, and as a separate construct (Tobin, & Slatcher, 2016). This complicated the understanding of S/R struggle and the question of the relationship between S/R coping and S/R struggle was the most common point of confusion for researchers and research consumers in this discipline (Pargament, 2021). To keep a clear delineation of S/R coping and S/R struggle and not misrepresent data pertaining to S/R struggle, all literature referenced for S/R struggle were dated 2013 and later after a formal definition of S/R struggle was presented in the literature and the RSS' development in 2014 (Exline, et al., 2014). Any references to quantitative data referenced for S/R struggle using the Brief RCOPE, RCOPE, or other measurement

outside of the RSS were specifically noted in the review of the literature to clarify constructs.

For the purposes of this research project, S/R struggle was defined with the most dominant understanding of S/R struggle present in literature. With this definition, S/R struggle was the experience of internal conflict with spiritual and/or religious beliefs and practices resulting in disruption to one's held belief system (Ano, & Pargament, 2013). S/R struggle was experienced as one or a combination of struggle with the divine, interpersonal, and intrapersonal aspects of spiritual/religious beliefs (Ano, & Pargament, 2013). S/R struggle was often seen in response to a negative life event or other experience that challenged or violated held beliefs resulting in existential upheaval where a situation or circumstance's meaning was not compatible with one's established spiritual or religious meaning system (McCormick, et al., 2017; Wilt, et al., 2021).

Studies demonstrated 30%-80% of people experienced significant levels of S/R struggle after experiencing a NLE (Pomerleau, et al., 2019). While these data indicated S/R struggle was a common experience that could be considered a normative response to a NLE, one's inability to resolve S/R struggle effectively was known to lead to mental health issues and general decrease in wellness and life satisfaction (McCormick, et al., 2017; Pomerleau, et al., 2019).

### ***Studies Related to S/R Struggle***

Studies on S/R struggle largely focused on understanding the nature of S/R struggle, S/R struggle on mental health and overall wellness, the impact of S/R struggle on specific populations, S/R struggle over time.

**The Nature of S/R Struggle.** S/R struggle, while sometimes considered as synonymous with negative S/R coping, became a targeted focus of study in 2013 and 2014 with the development of the RSS. Notable studies that highlighted this transition period included Ano and Pargament's (2013) study identifying factors that lead to S/R struggle; religious, interpersonal, and intrapersonal. Exline's (2013) study expanding the elements of the Brief RCOPE to what would become the RSS (Exline, et al., 2014). These studies resulted in the ability to conduct exploratory research, like Faigan, and colleagues (2014) exploratory study focused on expanded perspective of S/R struggle rather than an emphasis on the positive aspects of S/R coping.

The RSS allowed for deeper understanding of S/R struggle. Inherent personality traits of negative appraisal, insecure or ambivalent attachment to God, and neuroticism contributed to the degree of S/R struggle (Ano, & Pargament, 2013). The Big 5 personality traits along with self-concept are also related to experience of S/R struggle (Grubs, et al., 2016).

More recently, this understanding of factors comprising S/R struggle resulted in research exploring the mediation and moderation roles of external factors on the relationship between S/R struggle and known impacts of S/R struggle on mental health and overall wellbeing in the wake of a NLE. Other studies have noted the mediation role of S/R struggle on outcomes after a NLE or other stresses (Hill, et al., 2017; McCormick, et al., 2017; Pomerleau, et al., 2019). Meta-Analyses of studies predating the RSS also indicated a mediation relationship of the impact of S/R struggle on wellbeing (Ano, & Vasconcelles, 2005; Smith, et al., 2003). Guilt/shame and meaning making were noted as

mediatory between a NLE and experience of S/R struggle (Currier, et al., 2015). This was clarified further below in discussion on the impact of S/R coping on mental health and overall wellbeing.

S/R struggle contributed to cognitive shifts from understanding God as positive and benevolent to increasingly negative perspectives of God; impacting the doctrinal framework for the understanding of God (Van Tongeren, et al., 2019). These results indicated temporary shifts associated with a NLE could result in negative fundamental shifts in God related belief system.

Studies also demonstrated that meaning in life served as a buffer for the impact of S/R struggle on PTSD symptoms after experiencing a NLE (Apel, et al., 2020). Religious commitment, life satisfaction, religious support, and religious hope moderated the impact of S/R struggle on wellbeing (Abu-Raiya, et al., 2016). Internal dialogues with supportive and social simulating themes mediated S/R struggle's impact with noted increase in positive wellbeing and themes of rumination increasing negative wellbeing (Zarzycka, & Puchalska-Wasył, 2020).

Other studies supported the relational nature of S/R struggle. In their (2021) study, Wilt, et al., asked participants to imagine a conversation with God after a NLE vignette. Results indicated imagination and internal dialogues with God were often positive and protective; supporting the tendencies for people to relate to God in relational and positive ways (Wilt, et al., 2021). In support of the relational nature of S/R struggle, it was found that S/R struggle existed both in one's interaction with God and from God to a person (Exline, et al., 2016). Because of this relational nature, S/R struggle was viewed

as a personal and religious experience (Currier, et al., 2018). Students in one study when presented with vignettes on S/R struggle were more likely to recommend professional help for others as a reference for the scenario and more likely to seek out spiritual support if they were the reference point for the S/R struggle vignette (Currier, et al., 2018).

**S/R Struggle on Mental Health and Overall Wellness.** S/R struggle had a negative impact on mental health and overall wellness and both induced and exacerbated distress (Evans, et al., 2018; Exline, 2013). Many studies focused specifically on anxiety, depression, and life satisfaction (Abu-Raiya, et al., 2015). S/R struggle as a whole and each sub-category were repeatedly found to have a positive correlation with depression and anxiety and negative correlation with life satisfaction (Abu-Raiya, et al., 2015).

Ongoing S/R struggle related to the loss of faith and/or pulling away from S/R practices (Exline, et al., 2020). In their (2016) study, Tobin and Slatcher found that an increase in S/R struggle ten years after a major medical crisis was correlated with less engagement in S/R practices and increased stress, measured by cortisol levels.

Other studies focused on Post-Traumatic Stress Disorder (PTSD) in isolation or in conjunction with depression, anxiety, and/or life satisfaction. Increased levels of PTSD were correlated with increased S/R struggle and other MH issues with participants who experienced negative life experiences in childhood (McCormick, et al., 2017). Currier, et al., (2015) found levels of S/R struggle negatively impacted success in the treatment for PTSD. S/R struggle was also found to mediate the relationship between a NLE and PTSD (Evans, et al., 2018; McCormick, et al., 2017).



Additionally, studies both using and pre-dating the RSS have found S/R struggle to be connected with increased mortality rates (Pargament, et al., 2011), suicidality (Trevino, et al., 2019), and adjustment difficulties (Lichenthal, et al., 2011; Wortman, et al., 2012).

**Impact of S/R Struggle on Specific Populations.** S/R struggle was evident in research from adolescence through older adulthood (Wilt, et al., 2021). However, S/R struggle was particularly salient in emerging adulthood as evaluating belief systems was a natural part of development in this phase of life (Wilt, et al., 2021). Because of this, there were reasons college aged students were selected as the focus of study outside of the convenience factors of conducting studies through higher education institutions (Stauner, et al., 2016).

Studies also focused on veteran populations, with Currier and colleagues (2015), Fletcher and colleagues (2020), Breuninger and colleagues (2019), and Bockrath and colleagues (2021) studying veteran populations with PTSD. Notably, the majority of mixed-methods research and qualitative research with S/R struggle was represented in the above studies. This highlights how little qualitative research there was on S/R struggle and the recent introduction of mixed-methods and qualitative research in the study of S/R struggle.

Efforts were also made to consider the impact of S/R struggle on large samples of the general population experiencing a NLE; finding S/R struggle to significantly impact wellbeing in a large-scale non-clinical population (Pomerleau, et al., 2019).

**S/R Struggle over time.** S/R struggle was studied in depth both through cross-sectional and longitudinal designs. A meta-analysis of 34 longitudinal studies supported the negative impacts of S/R struggle over time (Bockrath, et al., 2021). While some studies demonstrated potential for post-traumatic growth and similar constructs over time (Exline, et al., 2017); meta-analysis did not support a positive growth perspective over time with a significantly more salient pattern on negative influence over time (Bockrath, et al., 2021).

One study adopted a trait vs state perspective; studying varying levels of S/R struggle from day to day over a one-week period (Wilt, et al., 2021). Results of this study indicated that there were statistically significant changes in day-to-day experiences of S/R struggle in addition to the more enduring patterns of change or stability over time demonstrated in previous research (Wilt, et al., 2021). S/R struggle was found to mediate the relationship between day-to-day discrimination and depression (Hill, et al., 2017). Conversely, S/R struggle was also found to be stable over short periods of time (Grubbs, et al., 2016). This emphasized the dynamic nature of S/R struggle.

Current measures of S/R struggle in veterans with PTSD indicated that the introduction of S/R struggle with military service in retrospect altered patterns of S/R struggle over time; with increased distress levels as civilians in addition to military related experiences (Bockrath, et al., 2021).

**Methodological Approaches.** S/R struggle was researched thoroughly since the development of the RSS in 2014 and prior through the emerging understanding of S/R struggle. Population sizes have ranged from smaller studies of well under 100

participants (Magyar-Russell, et al., 2014) to over 4,000 (Stauner, et al., 2019). Studies utilized cross-sectional (Abu-Raiya, et al., 2016), longitudinal (Wilt, et al., 2018), and meta-analysis (Walker, et al., 2009).

Most studies on S/R struggle were quantitative, with only one qualitative study and two mixed-methods studies on S/R struggle to date (Magyar-Russell, et al., 2014). This was a limiting perspective because it largely neglected the experiential nature of what is known to be a deeply personal and meaningful experience.

Research has considered the relationship of S/R coping and S/R struggle previously (Exline, et al., 2016). Results from these studies indicated that increased S/R coping correlated with a decrease in S/R struggle (Tobin, & Slatcher, 2016). Conversely, it was also suggested that S/R struggle may be a more influential experience and override the positive impacts of spirituality and religion (Stauner, et al., 2016). The confusing nature of the relationship between S/R coping and S/R struggle was noted as a central question in this field of study (Pargament, 2021). However, at the time of this study's proposal, no studies included an evaluation of S/R coping and S/R struggle with the use of the Brief ROCPE/RCOPE and RSS in conjunction with one another. Therefore, this noted relationship is being described without the use of the two most researched and endorsed measures in the field of study.

**Limitations.** While there was a considerable amount of research taking place on the topic of S/R coping and S/R struggle both in relationship to and independent of NLE; the family tree for researchers remained quite small; presenting information that was inherently skewed by the perspective and approaches taken by a small group of dedicated

researchers. For example, the predominate perspective was for S/R struggle to indicate violation of global meaning, as noted in literature above. Another perspective was introduced by Apel and colleagues (2020) proposed S/R struggle to be related to but not reflective of meaning violations. However, little exploration of perspectives divergent from the dominant perspective existed in the literature; particularly on S/R struggle.

**Connection to the Present Study.** Literature on S/R struggle was relatively new in the research community. Being a new area of targeted focus, there were significantly larger gaps in research literature, although new studies were being released on a regular basis. This provided an opportunity to make a needed contribution to the research community in a timely manner. The ability to connect S/R struggle with S/R coping tied S/R struggle literature to the well-established S/R coping literature; starting to weave these two areas together. By understanding these constructs concurrently provided the opportunity to narrow this gap slightly and provide new directions for future research to build on.

### **Negative Life Events**

Studies with NLE in connection with S/R coping and S/R struggle were explained above under their respective sections in the literature review above. To summarize; S/R coping included variable degrees of both positive and negative coping traits, or S/R struggle, at any given moment with the potential for significant change and reorientation with NLE (Pargament, 1997). The focused section on NLE served to provide a picture of the range of experiences that were considered NLE and included in S/R coping and S/R struggle literature. Discussion on methodological approaches and limitations were

explored above and not included in this section. Rather, literature review on NLE concluded simply with connections to the present study.

### ***Studies Related to NLE***

Studies indicated an estimated fifty percent of people experienced a traumatic event in their lifetime (Newmeyer, et al., 2016). While not inclusive of NLE, many studies indicate some trauma or similar patterns of emotional, cognitive, and or physiological distress associated with NLE (Stauner, et al., 2019).

S/R struggle studies included specific types of NLE (Stauner, et al., 2019); including increased distress with significant losses (Lichenthahl, et al., 2011; Wortman, et al., 2012), substance addictions (Faigain, et al., 2014), pornography addiction (Grubbs, et al., 2016), post major medical crisis (Maygar-Russell, et al., 2014), and chronic illness/surviving chronic illness (King, et al., 2017). Studies also focused on broader definitions of NLE; including potentially morally injurious events (PIME), experiences that violate one's foundational beliefs and values (Evans, et al., 2018), adverse childhood experiences (ACES) (McCormick, et al., 2017), and the impact of cumulative NLE on S/R struggle (Stauner, et al., 2019).

There was some research supporting that more stressful NLE impacted levels of S/R coping and S/R struggle more than less stressful NLE. Highlighting this, Christians who lost a loved one due to homicide or suicide demonstrated an increase in S/R struggle compared to other deaths (Neimeyer, & Burke, 2017). Neimeyer and Burke (2017) note the traumatic loss of a loved one was a significantly more stressful loss than other types of death. Research suggested that PIMES were detrimental to a person because of the

resulting S/R struggle (Evans, et al., 2018). Experiencing more NLE resulted in increased levels of S/R struggle (Stauner, et al., 2019; Trevino, et al., 2019).

**Connection to the Present Study.** NLE was well established as an important construct in literature on S/R coping and S/R struggle. Maintaining these constructs in connection allowed for the present study to provide clarity in an ongoing conversation, rather than needlessly introducing novel concepts and constructs to the research conversation. By considering number and sum mean stress level of NLE with both S/R coping and S/R struggle; the relationship between constructs can be further clarified.

### **Summary and Conclusions**

Review of seminal and current literature indicated S/R coping was associated with increased wellbeing and a reduction in negative impacts after experiencing a NLE. Conversely, S/R struggle was associated with a decrease in wellbeing and an increase in negative impacts after experiencing a NLE. NLE was known to activate one's pattern of S/R coping and S/R struggle and that these patterns were generally consistent over time but variable in response to NLE as the result of challenge to one's GOS.

These results were true across populations; however, special considerations were made for these trends as they were identified in Christian populations. These themes held true in both quantitative and qualitative literature and in a diversity of populations and NLE. Thus, it was well known that increased S/R coping was generally helpful and protective after experiencing a NLE and increased S/R struggle was generally detrimental after experiencing a NLE.

However, the lack of research comparing levels of S/R coping and S/R struggle with both the Brief RCOPE and RSS, the two most utilized and empirically validated measurements, together in a single study. As such, there were gaps in our understanding of how patterns of S/R coping and S/R struggle vary simultaneously after a NLE.

By studying a population that has a wealth of previous research and utilizing a research design supported by literature, this present study brought together S/R coping and S/R struggle to better understand levels of both S/R coping and S/R struggle simultaneously after experiencing a NLE. Therefore, this study sought to increase understanding of the patterns of S/R coping and S/R struggle simultaneously, a new focus for this field of study. By understanding these patterns, there was opportunity for future research to clarify a relationship indicated by these patterns and allow for better risk mitigation after experiencing NLE. Chapter 3 provides a detailed explanation of the research methodology used to achieve this aim.

### Chapter 3: Research Method

The purpose of this quantitative study was to examine the moderating role of S/R struggle on the relationship between number and sum mean stress level of NLE experienced in the last 12 months by evangelical Christians and S/R coping. This chapter provides a detailed explanation of the research design used to fulfil the study's intent, with justification for the research design elements. Specifically, I outline information on the chosen population, sampling, and sampling procedures that I used, recruitment, participation, and data collection methods. I discuss the instrumentation and operationalization, the plan for data analysis, acknowledge threats to validity and the ethical procedures. I then conclude with a summary.

#### **Population**

The population of interest for this study was evangelical Christians who have experienced a minimum of one NLE within the last 12 months. For the purposes of this study, evangelical Christian was defined as a person who identifies as a Christian and holds fundamentalist beliefs of the Bible as truth, salvation through Jesus Christ (see Phillips & Ano, 2015). This population was selected both for consistency with previous studies introducing a new area of focus in the research community for S/R struggle, S/R coping, and NLE and for ease of access to study participants.

Christian populations, particularly western Christian populations, were the focus of initial research on S/R coping and S/R struggle (Abu-Raiya & Pargament, 2015). Evangelical Christians demonstrated a pattern of strong S/R coping and less S/R struggle than other, less traditional, or conservative Christian faith practices (Abu-Raiya &



Pargament, 2015). As such, this population was the most well studied population in the field of S/R coping and S/R struggle literature. This allowed for confidence in the ability to draw a comparison between the findings of this present study and previous studies and context for understanding and interpreting the meaning of the study's results. This population was also chosen for convenience and ease of finding enough study participants.

S/R coping and S/R struggle literature often relied on this population when introducing a new concept or area of focus (Abu-Raya & Pargament, 2015). Similar to the present study, this may be due to the ease of access to participants in this population. The most recent Religious Landscape Study, a nationwide study of 35,000 adult participants with the purpose of collecting religious demographics, found that 70.6% of the American population identified as Christian (Pew Research Center, 2014). Within that 70.6% of the sample population identifying as Christian, 46.6% of participants were classified as evangelical Christians by this study's definition (Pew Research Center, 2014). The U.S. Census data from 2021 indicated an adult population of 257,867,541 (U.S. Census Bureau, 2021). If the data from the Religious Landscape Study are both generalizable and accurate for the year 2023, there is a roughly estimated population of 84,837,400 evangelical Christians in the United States today.

## **Sampling and Sampling Procedures**

### **Sampling Method**

This study was conducted with the use of Amazon's MTurk (see Chandler & Shapiro, 2016) crowdsourcing features. While this allows for ease of access to

participants, it also eliminated the option of conducting probabilistic research. Because of the limitations of MTurk, I adopted a nonprobabilistic convenience sampling procedure for the study.

Using a nonprobabilistic sampling method prevents the ability to generalize information to the broader population (Groves et al., 2009). This is due to the inability to ensure accurate representation of the population whole within the sample (Frey, 2018). However, nonprobabilistic sampling is more practical for large populations and reduce the time, complexity, and expense of the study (Frey, 2018). Where the intent of this study was to introduce a new perspective of S/R struggle, S/R coping, and NLE, the limitations inherent in nonprobabilistic sampling were outweighed by the benefits of convenience and sample accessibility.

Additional limitations were inherent in using a convenience sample. Most poignantly, there is an increased risk of sampling error resulting in misrepresentation of the population as a whole (Frey, 2018). Subpopulations were over or underrepresented in the sample and this carried the risk of misapplication of results of data analysis if attempts to generalize findings exceed the study's in-good-faith generalizability. By emphasizing the demographic information and comparing the differences to what is known about the population, this risk is minimized and demonstrates research transparency and integrity (Frey, 2018). These efforts clarified the ways in which the data can and cannot be generalized.

Final considerations included the use of Amazon's MTurk to specifically recruit evangelical Christians. The population of participants using Amazon's MTurk was

known to identify as less religious than the general American population (Chandler, & Shapiro, 2016). However, Amazon's MTurk was used for similar studies with sufficient samples of Christian populations and no concerns were presented that would support its lack of viability or appropriateness for this study (Exline et al., 2020). The population differential was acknowledged in interpretation of the results.

### **Sampling Procedures and Sampling Frame**

The sample for this study was collected with the use of Amazon's MTurk. Per the model of MTurk, a description of the study was made available, and members of the sample were those who self-select to participate in the study. I continued the sampling process until sufficient participants were recruited to ensure an adequate sample size for the study with an additional 25% buffer to account for potential exclusion based on the study's exclusion criteria and requirements for data for valid results with moderation analysis.

The specific sampling frame for this study included inclusion and exclusion criteria. Participants had to be adults 18 years of age or older in the United States who participate in Amazon's MTurk and self-select to participate in the study. Respondents were excluded if they did not identify as evangelical Christian in accordance with the study's given definition, had not experienced an NLE within the last 12 months, or did not complete the demographics data, RSS, Brief RCOPE, and/or SRE.

### **Sampling Power Analysis**

I used G\*Power Version 3.1.9.7 to calculate the minimum sample size necessary to yield valid results (see Buchner, et al., 2021). I selected the option for *F* Test with

linear multiple regression: fixed model,  $R^2$  increase. A priori was set to determine computer required sample size given  $\alpha$ , power, and effect size. Input parameters were set with standards for multiple regression and for data analysis (see Hayes, 2016). In line with good practices and statistical standards, indicated effect size  $f^2$  at 0.15,  $\alpha$  error probability at 0.05, power ( $1-\beta$  error probability) at 0.95, with two test predictors (PV and MV) with a total number of two predictors (PV and MV). With this calculation, noncentrality parameters  $\lambda = 16.0500000$ , critical  $F = 3.0837059$ , numerator  $df = 2$ , denominator  $df = 104$  for a total sample size of 107 with actual power at 0.9518556.

As such, the following procedures were informed by the need to yield a minimum of 107 valid results at the end of the test. To provide a cushion, I sought to obtain a minimum of 150% of the minimum required sample size for a minimum of 156 initial participants.

### **Procedures for Recruitment, Participation, and Data Collection**

Recruitment, participation, and data collection took place via the internet. The design was meant to be simple for participants and able to be completed in a single sitting. In this section I describe how recruitment, participation, and data collection was conducted.

#### **Recruitment**

Participants were recruited online via Amazon's MTurk. I set parameters for participants:

- Located in the United States of America
- Age 18 years of age or older

- Identified as evangelical Christian

M Turk sent an invitation to prospective participants based on the provided parameters from their database of members. The sampling window was set to run for 1 week or until sufficient sample size was achieved. If there was an insufficient number of participants, the recruitment procedure was set to repeat as described until sufficient participants respond.

### **Participation**

Once participants respond to the invitation, they were directed to Survey Monkey to complete the study. There, participants were provided with written information on the purpose of the study. They were provided with an electronic copy of informed consent to review and to sign. Informed consent included contact information for the appropriate persons to contact for further information about the nature of this study. This consent was approved by Walden University's Institutional Review Board (IRB) in addition to approval from my dissertation committee.

### **Data Collection**

Data collection took place through a single online survey that included demographic data, SRE, Brief RCOPE, and RSS. Once informed consent was obtained, participants were directed to provide demographic information. The following demographic information was collected:

- Age
- Gender
- Race/Ethnicity

- State of residence
- Education
- Employment
- Income
- Yes/No identification with study's provided definition of evangelical Christian
- Denominational affiliation/ faith tradition

These items were deemed as points of interest and were relevant to understand the study's results. This was based on findings from previous studies on S/R coping and S/R struggle indicating there are key differences in S/R coping and S/R struggle patterns by age (Pargament et al, 2011), gender (Van Tongeren, 2018), race/ethnicity (Smith et al., 2020), geographic location (Pomerlou et al., 2019), education level (Wilt et al., 2021), employment status (Brickerton & Miner, 2019), socioeconomic status/ income (Stauner et al., 2019), and sect of Christianity (Phillips & Ano, 2015). These demographic data were used to describe the study's population.

Immediately upon completing the demographic data section of the data collection, participants progressed to the next section of the survey where they completed the SRE, followed by the Brief RCOPE, and RSS. Once completed, participants concluded their data collection and participation requirements for the study.

### **Concluding Participation**

Once participants submitted their responses to the survey, they were directed to an electronic thank you note for their participation. Participants were informed they will not

receive any follow-up because the study was conducted anonymously without identifying information, preventing future follow-up. The sensitive nature of the questions carried risk for potential distress for participants. To address this, participants were provided with mental health crisis and support resources, spiritual resources, and directed to their medical provider, and emergency medical services in case they are needed for support.

### **Instrumentation and Operationalization of Constructs**

I used three constructs to fulfill the purpose of the study and answer guiding research questions: S/R struggle, S/R coping, and NLE. Examples of these items are included below; the full measures can be found in appendix A through C for Brief RCOPE, RSS, and SRE, respectively. This section provides information on the operationalization of these constructs, including their operational definition, identifying how each variable is measured, and each variable's scale of measurement with the specific measure used.

#### **S/R Struggle**

S/R struggle is the experience of internal conflict with spiritual and/or religious beliefs and practices resulting in disruption to one's held belief system (Ano & Pargament, 2013). S/R struggle was measured with the RSS (Exline et al., 2014). The RSS is a 26-item measure comprised of declarative statements that relate to the six identified areas of S/R struggle: divine, demonic, interpersonal, moral, ultimate meaning, and doubt (Exline et al., 2014). An example of an item on the RSS is "Felt hurt, mistreated, offended by spiritual/religious people" (Exline et al., 2014). No response scale is provided with the RSS. In their research, Exline et al. (2014) used a Likert scale

with five response categories; however, for clarity and purposes of comparison, I used the same four item response options as with the Brief RCOPE (1 = strongly disagree, 2 = disagree, 3 = agree, 4 = strongly agree). Because the RSS does not include any differentiation between positive and negative items, reverse coding was not necessary. The RSS was used at the interval level of measurement in analysis. The RSS was scored with an overall sum for all included items.

The RSS was tested with exploratory factor analysis with maximum likelihood extraction and direct oblimin rotation and confirmatory factor analysis with maximum likelihood estimation of Likert type rankings (Exline et al., 2014). Results of exploratory factor analysis for the RSS yielded 11 factors with eigenvalues accounting for 70% of total variance. Further analysis led the removal of five factors for a total of six factors retained in the model with strong psychometric properties. Results of confirmatory factor analysis was conducted using AMOS version 20 for a total of six factors and provided preliminary support for a very good fit for the model and therefore strong support for validity with fit indices  $\chi^2(284, N = 1141) = 878.03, p = 0.000, CFI = 0.968, RMSEA = 0.042,$  and  $PCLOSE = 1.0$ . Descriptive statistics for each factor were as follows; moral ( $M = 1.9, SD = 1.0, \alpha = 0.88$ ), ultimate meaning ( $M = 2.0, SD = 1.0, \alpha = 0.87$ ), doubt ( $M = 1.9, SD = 1.0, \alpha = 0.89$ ), interpersonal ( $M = 1.8, SD = 0.9, \alpha = 0.82$ ), demonic ( $M = 1.7, SD = 1.0, \alpha = 0.90$ ), and divine ( $M = 1.6, SD = 0.8, \alpha = 0.89$ ). All items were positively correlated with variance ranging from  $r_s$  0.28 to 0.58. Results did not vary significantly when demographic and various bio/psycho/social factors were controlled for. These data supported good convergent, discriminatory, and predictive validity (Exline et al., 2014).



Further analysis used second-order factor analysis to determine how well the RSS assessed the constructs it claimed (Stauner et al., 2016). Furthermore, these studies of psychometric properties utilized religious adult samples from the United States, also using Amazon's MTurk (Exline, Pargament et al., 2014; Stauner et al., 2016), appropriately placing this study's sample and sampling procedure within the context of broader literature and strengthening the validity of results.

### **S/R Coping**

S/R coping is a pattern of relating to, interacting with, and expressing the spiritual and religious resulting in a pattern of internal and external coping behaviors (Ano & Pargament, 2015). S/R coping was measured by Pargament, Koenig, and Perez's (1998) Brief RCOPE. The Brief RCOPE is a 14 item self-report measure broken into two categories, each with seven items. The first seven items that are positively coded and correlate with positive religious coping methods and the second seven items that are negatively coded and correlate with what is sometimes termed as negative religious coping methods (Pargament et al., 1998). Each item is presented as a declarative statement indicating some sort of internal or external action, as coping is an active process (Pargament et al., 1998). An example of a positive and negative item are as follows "Sought God's Love and Care", and "Wondered whether God had abandoned me", respectively (Pargament et al., 1998). No specific response scale is provided with the Brief RCOPE, although it was most used in research with a 1-4 scale, with ratings of 1 and 2 indicating degrees of disagreement with each item and 3 and 4 indicating degrees of agreement (Pargament et al., 2011). This was favorable for the present study because

there was no statistical benefit for the intent of the study to provide a neutral response, if say a 5-item scale were adopted (see DeVellis, 2017). Therefore, items were given a 1-4 response scale with the following values assigned to each response number: 1 = strongly disagree, 2 = disagree, 3 = agree, 4 = strongly agree. Items 1-7 were scored with standard values and items 8-14 reverse coded.

Because each item is a declarative statement and the value is ascribed to each item in the response options as a matter of personal interpretation and evaluation, the Brief RCOPE as used is a Likert scale measure (DeVellis, 2017). While Likert scales are at the ordinal level of measurement because there is no set value between responses, they can be used as interval level of measurement for analysis (DeVellis, 2017). As such, the Brief RCOPE was used as an interval level measure. The Brief RCOPE was scored by overall sum for both positive and reverse coded negative items.

Psychometric properties for the Brief RCOPE were initially evaluated in 1998 by Pargament, Smith, and colleagues via exploratory factor analysis. Three studies were included in this analysis, including a faith community post-Oklahoma City bombing, a college sample, and persons receiving medical care for significant illness (Pargament et al., 1998). The process of analysis reduced the original RCOPE from 105 items to a 14-item measure with two subsets; positive religious coping factors and negative religious coping factors (Pargament et al., 1998). A two-factor solution indicated the Brief RCOPE in the three studies yielded ( $t(295) = 35.92, p < 0.001$ ) with eigenvalues accounting for 33% of variance with internal consistency average at  $\alpha = 0.90$  for positive items and a = 0.81 for negative items (Pargament, Smith, et al., 1998).

Further psychometric analysis was conducted by Pargament et al. (2011) evaluation of psychometric properties for the Brief RCOPE. Confirmatory factor analysis was conducted with sample of 30 studies spanning 2005 to 2010 with varied demographic profiles for median  $\alpha$  of 0.92 for positive religious coping items and median  $\alpha = 0.81$  for negative religious coping items, indicating good internal consistency. Concurrent validity measures indicated positive religious coping items had 16 positive relationships and 19 nonsignificant relationships with a pattern indicating higher scores on positive subset items correlates with improved wellbeing, but lower scores did not have an inverse correlation with more negative symptoms . Negative religious coping items yielded 12 significant relationships with two positive, 10 negative, and 19 nonsignificant correlations . This pattern indicated negative items were generally related poor wellbeing with few exceptions. Predictive validity was assessed with limited studies; only two being included in this analysis. While studies indicated good predictive value in follow-up studies for both positive and negative subsets, information provided was preliminary in nature. Incremental validity indicated the Brief RCOPE was effective in assessing positive and negative religious coping items when controlling for several factors; including various bio/psycho/social influences (Pargament et al., 2011). These results contributed to the wide use and adoption of the Brief RCOPE as a leading measurement tool of S/R coping on a global scale. These results contributed to the wide use and adoption of the Brief RCOPE as a leading measurement tool of S/R coping on a global scale.

## **NLE**

The operational definition for NLE was: Unpleasant experiences that have the potential to have deleterious impact and challenge the GOS (Evans, et al., 2018). NLE was measured with Holmes and Rahe (1967) SRE. The SRE was developed by Holmes and Rahe by evaluating a series of 42 common stressors found among psychiatric patients (Dohrenwend, 2006). These stressors were outlined on the SRE, and participants indicate how often they have experienced each item within the specific timeframe being utilized for the study (Dohrenwend, 2006). The SRE had some criticism for its psychometric properties in testing reliability and validity of the measure (Dohrenwend, 2000). However, recent defense of the SRE indicated the study of designs reviewed and use of SRE in these studies attributed to the less-than ideal metric properties (Dohrenwend, 2006) and the SRE did seem to accurately capture events that are disproportionately represented in psychiatric populations (Dohrenwend, 2000).

Little information was provided regarding reliability and validity by original authors, with noted connection between items on the SRE and subsequent dysfunction (Zarske, 1989). Despite the challenges with the lack of information provided on validity, according to Zarske, (1989), subsequent research has demonstrated the SRE to be a valid and relevant measure for stressful life events in adults with decent to good predictor validity for the onset of illness as the result of NLE. Holmes and Rhae (1967) conducted a study with a population of psychiatric inpatient participants ( $N = 5000$ ) utilizing clinical records to identify life events that were predictive of psychiatric dysfunction. This resulted in the 42 items listed on the SRE (Holmes, & Rhae, 1967). The SRE measures

both by number and the stress quality of each item; with stress rankings from 1-100 (Holmes, & Rhae, 1967). The stress value ranking was established by evaluation of magnitude estimations for the degree of change that resulted from each item on the SRE through a review of clinical records in a psychiatric hospital (Holmes, & Rhae, 1967). Increased stress rankings were associated with increased distress and dysfunction, with correlation to psychiatric hospitalization (Holmes, & Rhae, 1967). Reliability measures were not included in the original review and subsequent research indicated the SRE has adequate reliability, with increased reliability with shorter timeframe for review than longer review periods (Stone, 1989). For example, reliability coefficients for two-to-five-month review periods ranged from  $r = 0.78$  to  $r = 0.83$  and  $r = 0.34$  for two or more-year retrospective review (Stone, 1989). Research also demonstrated the summative score on SRE correlated with negative health change within the year following the NLE (Stone, 1989). Specifically, there was a 37% chance of negative health change with scores 150 – 190, 51% chance with scores 200-299, and 79% with scores 300 and above (Stone, 1989). The NLE was selected for this research study because of this connection between NLE and the potential for negative outcomes. It is also utilized in other research on S/R coping and S/R struggle (Pomerlou, et al., 2019; Trevino, et al, 2019). Thus, it was a good fit for the stated research purpose and in line with research practices for this area of study. However, for the purposes of this study, a few items were removed that are deemed stressful, but not likely to be considered negative. The addition, removal, and/or amendment of items on the SRE was regularly practiced due to the significant influence of cultural, demographic, and bio/psycho/social factors on the experience evaluation of

stress (Zarske, 1989). This was acknowledged by Holms and Rhae in their original construct (Zarske, 1989). There was no information on the impact of the addition/removal of items on the SRE, but was a common practice in research (Zarske, 1989). Additions and subtractions from the SRE were noted as common in research literature and the removal of items from the SRE for the purposes of this research study is also within normative use of the SRE for psychological research (Paykel, et al., 1971; Steele, et al., 1980). Items removed from the SRE for the purposes of this study include “marriage”, “outstanding personal achievement”, and “vacation”. One additional item “Changing to a new school” was removed because of the age range of participants being 18 years of age or older and therefore less relevant for participants. The final number of items is thus reduced from 42 to 38.

Many studies utilize a 6 month to 12-month timeframe for understanding an experience as recent, therefore the utilization of a 12-month timeframe is within the normative range for use of the SRE (Dohrenwend, 2006). Therefore, the use of the SRE with a one-year evaluation period with the removal of the noted items was deemed appropriate for this study. This one-year timeframe was in line with previous research and allowed for close enough proximity between NLE and present day to get a clear picture of S/R coping and S/R struggle with respect to NLE.

As written, the SRE captured the number of NLE experienced. This study provided a 12-month timeline for the SRE. Despite having 38 items, the potential number of NLE that are represented on the SRE may be much larger, as there is no cap on how many times participants may experience each item within the 12-month period. For

example, take the item “Death of a close family member (other than spouse)”. This may hypothetically be experienced a total of zero times within the past 12 months, or, say 10 times. This to be said, there is a seemingly infinite number of times NLE can be experienced. This was simplified to either indicating the presence of the NLE or not rather than a count of how many times this stressor may have been experienced within the past year. For research questions considering the number of NLE, items were considered at the ratio level of meaning. I used the sum of items for analysis.

For research questions evaluating mean stress level of NLE, these were categorized by the mean value assigned by Holmes and Rahe (1967). Mean values of stress ranging from 0 – 100 were assigned to each item (Holmes, & Rahe, 1967). In their original study, these items responded to degree of stress associated with each item and were then associated with likelihood of sickness (Holmes, & Rahe, 1967). While this study was not using associate mean value of stress to determine likelihood of sickness, it did consider that there are different levels of stress. The mean stress level was calculated by adding the mean value of stress for each NLE experienced within the past 12 months. An item for each category includes: “A major change in your church activities” (mean value 19), “A major change in your financial state” (mean value 38), “Major personal injury or illness” (mean value 53), “Divorce” (mean value 73), and “Death of a spouse” (mean value 100) (Holmes, & Rahe, 1967).

Assigning a mean value, while on a 1- 100 scale does not represent a static value between one and two and two and three, for example, as the experienced value is

different within categories of mean value. This is a continuous variable at the interval level of measurement.

The SRE was developed as a measure of experiences that were likely to cause adjustments and therefore result in a measure of stress or distress (Holmes, & Rahe 1967). While checklists were deemed a valid way to measure this, there were criticisms about the use of a checklist because of the variance in significance that can exist for each item, resulting in vague information (Dohrenwend, 2006). For example, if I lose my job and I am married with my spouse being the primary source of income for the family, the meaning of this loss is likely to impact me different than if I am the sole income provider for my family. Or if I lose my job in an economy that allows for me to easily obtain a new job compared to an economy where there is a shortage of positions available, this was likely to result in a qualitatively different experience that is not captured in the checklist format. However, these risks did not exceed those of checklists as a whole (DeVellis, 2017) and impacts validity to the degree that the researcher could not guarantee equitable meaning between incidences of NLE reported by a single participant or between participants.

## **Data Analysis Plan**

### **Chosen Analysis Overview**

Moderation analysis considered the impact of a moderating variable on the relationship between an independent and dependent variable (Diebold, 2019). For the purposes of this study, the MV was S/R struggle, the PVs were number and mean stress level of NLE, and the OV was S/R coping. Moderation analysis was in essence a multiple



regression analysis with the addition of a moderating variable (Barron, & Kenney, 1986). It was therefore sometimes referred to as moderation multiple regression (MMR) (Laerd Statistics, n.d.). The chosen data analysis plan therefore followed the statistical processes and limitations of multiple regression analyses.

Data analysis was conducted with Hayes (2018) PROCESS macro, Model Number 1, Version 3, in IBM's SPSS Statistics Version 28 (Hayes, 2022). Statistical assumptions followed those for all multiple regression analyses as outlined by Barron and Kenney (1986) with interpretation, understanding, and corrections for assumption violations guided by Hayes and Rockwood (2016).

Data was organized and assessed for any missing data. Cases with missing data were removed from analysis. These cases were counted and noted in the data analysis section. Remaining data was screened and cleaned through testing of assumptions that were applicable to MMR. A detailed explanation of these is included in the following section of the data analysis plan.

### **Research Questions and Hypotheses**

In order to explain rationale for the specific chosen data analysis plan, it was important to reference again the research questions and hypotheses guiding this study. As previously stated in this paper, the guiding research questions and associated hypotheses were as follows:

RQ1: To what extent does S/R struggle moderate the relationship between number of NLE and S/R coping for evangelical Christians?

Ha1: S/R struggle will significantly moderate the relationship between number of

NLE and S/R coping for evangelical Christians.

Ho1: S/R struggle will not significantly moderate the relationship between number of NLE and S/R coping for evangelical Christians.

RQ2: To what extent does S/R struggle moderate the relationship between sum mean stress level of NLE and S/R coping for evangelical Christians?

Ha1: S/R struggle will significantly moderate the relationship between sum mean stress level of NLE and S/R coping for evangelical Christians.

Ho1: S/R struggle will not significantly moderate the relationship between sum mean stress level of NLE and S/R coping fore evangelical Christians.

### **Statistical Tests used to Test Hypotheses**

#### ***Testing Assumptions***

All assumptions for multiple regression needed to be screened for and data cleaned to yield valid data for moderation analysis (Laerd Statistics, n.d.). Not all applicable assumptions caused the inability to run statistical analysis; some assumption violations limited the credibility of results (Diebold, 2019). As such, each violation encountered required a thoughtful and appropriate response with respect to the impact of the violation on the final analysis. Assumptions for moderation analysis are provided below with explanation of the limits for determining whether each assumption was or was not violated, procedures used to test these assumptions, and the response to these violations with justification for my response to each violation.

There were assumptions related to all variables included in moderation analysis. The following section provided an overview of the preliminary data analysis that would

be used to test associated assumptions along with the treatment of data that would be found in Chapter 4 if indicated.

It was assumed the DV has a continuous scale. The number of NLE experienced within the past 12 months was continuous and mean stress level of NLE experienced within the past 12 months was also continuous. As such, this assumption was met for one of the analyses. The PV at a continuous level of analysis was able to be measured at the ordinal level. The SRE used to measure NLE had arbitrary differences between data points based on individual experience and interpretation (Laerd Statistics, n.d.). Having an ordinal level scale was considered a limiting variable for final data analysis and interpretation of results (Diebold, 2019).

It was also assumed there is independence of observation (Laerd Statistics, n.d.). Independence of observation indicated that each observation is independent of others. This was tested with preliminary analysis via the Durbin-Watson statistic in SPSS (Laerd Statistics, n.d.).

There should have been a linear relationship between IV and DV with the MV in moderation regression analysis (Laerd Statistics, n.d.). A non-linear relationship would impact the correlational power of final analysis procedures, weakening them (Diebold, 2019). A lack of linearity would not be an impasse but would need to be noted and taken into consideration when determining power. Linearity as tested with visual evaluation of scatterplots for each pairing in SPSS (Diebold, 2019). Any relationships that violated this assumption to the degree it yielded invalid results were removed from analysis. Non-

linear relationships within acceptable limits were retained for data analysis and noted along with potential impacts on data in the results.

Homoscedasticity, or similar error variance, would ideally be absent for each combination of the IV and DV. For the purposes of this study, homoscedasticity was deemed present if the difference between the largest and smallest variance for all combinations of PV with the DV were 1.5 or less (Statistics How To, n.d.).

Homoscedasticity would be tested with visual analysis of a scatterplot of standardized residuals and standardized predictor values in SPSS (Diebold, 2019). If homoscedasticity was violated, there would be decreased power and increased risk of Type 2 Error, where results look invalid when they are in fact valid (Diebold, 2019). If homoscedasticity was present, data analysis will proceed as planned and would be noted and potential impacts on results acknowledged in interpretation of data.

It was also assumed there will be an absence of multicollinearity, evidenced in high levels of correlation between PVs (Laerd Statistics, n.d.). Multicollinearity skewed the relationship with the DV (Laerd Statistics, n.d.). This is tested through preliminary evaluation of correlation coefficients and variance inflation factor (VIF) values in SPSS where coefficients  $< .70$  and VIF  $< 2.0$  respectively with each variable regressed on all remaining variables (Diebold, 2019). Multicollinearity, if present, would be reported with Mahanaobis distance values greater than critical chi square value or may be removed from final analysis (Diebold, 2019).

Furthermore, there was to be an absence of univariate and multivariate outliers (Laerd Statistics, n.d.). Outliers and unusual data points were screened for via Cook's

Distance (Laerd Statistics, n.d.). Univariate outliers are determined present if univariate values are greater than  $z = \pm 3.29$  (Diebold, 2019). If present, these would be removed from the data set prior to analysis and  $z$  scores will be recalculated upon their deletion (Diebold, 2019). Multivariate outliers would be screened for with the use of Mahalanobis distance ( $DM$ ) (Diebold, 2019). Graphic display of  $DM$  were evaluated for datapoints that exceed maximum chi-square at  $p = .001$  by degrees of freedom ( $df$ ) allowable for the number of multivariate variables (Diebold, 2019).  $DM$  analysis was to be re-run to screen for any additional outliers now that extreme outliers have been removed. This process would repeat until data indicates the absence of multivariate outliers. This would be noted along with justification for the removal of data points.

Finally, if present, normality of distribution indicated a typical or somewhat expected pattern of datapoint distribution (Laerd Statistics, n.d.). Lack of normality would increase the risk of Type 1 error where results seem valid when in fact, they were not (Diebold, 2019). While risk and potential impact of this violation decrease with increased sample size  $\geq 200$  (Diebold, 2019), evaluation of normality of distribution remained an important assumption to test. Evaluating normality of distribution was essential, partially due to the Likert Scale measures included in this study, which are subject to increased floor and ceiling effect, which causes abnormal distribution (Diebold, 2019). Normality of distribution was typically tested for using Shapiro-Wilkes in SPSS with skew  $\leq 3.0$  and kurtosis  $\leq 10.0$  (Diebold, 2019). If present, floor and ceiling effects would be reported by providing the percentage of responses within each standard deviation above and or below the mean (Diebold, 2019). There was also a need to test for

multivariate normalcy of distribution in Moderation Analysis. The statistical procedure for this was to test for appropriate skew and kurtosis for all variables and all relationships are linear (Diebold, 2019). This process ensured multivariate normalcy of distribution and no action was needed if results determine normalcy of distribution.

### ***Moderation Analysis Methodology***

While Barron and Kenney (1986) presented a thorough approach to moderation analysis and informed the preliminary statistical analyses the final approach selected for this analysis is Hayes PROCESS macro (2018) method. Hayes and Rockwood (2016) provided a critical analysis of Barron and Kenney's approach and found the established parameters for yielding valid results to be unnecessarily strict and impractical for real world data. Therefore, while the preliminary data screening and analysis considered all assumptions outlined by Barron and Kenney, the analysis was conducted with Hayes' understanding of data limitations and will follow his PROCESS macro in SPSS, and Ordinary Least Squares (OLS) Multiple Regression analysis (2018).

Two separate moderation analyses were conducted for number and for sum mean stress level of NLE. One set of moderation analyses was used to test the moderating role of S/R struggle on the relationship between number of NLE and S/R coping. A second set of analyses tested the moderating effect of S/R struggle on the relationship between sum mean stress level of NLE and S/R coping.

**SPSS Procedures.** The following procedures were utilized in SPSS. Under Analyze, Regression was selected then PROCESS v3.3 by Andrew F. Hayes. Variables included NLE, as the X variable, S/R coping as the Y variable, and S/R struggle as the W

variable. This analysis adopted Model Number 1 with confidence intervals set at 95%. Additional options under the Options tab include “Generate code for visual interactions” and “Mean center for construction of products”, Probe interactions were selected for -1SD, Mean, +1SD if  $p < .10$ , and selecting the Johnson-Neyman output.

Interpretation of results should have included a comparison of the coefficient (b), standard deviation (sd), and correlational coefficient (p) in the model section of the Outcome Variable table with the change in  $R^2$  as seen in the Test(s) of highest order unconditional interaction(s) table. This indicated the change in  $R^2$ , the proportion of variance on the DV with the interaction of  $X*W$  and results indicate percentage change in variation on  $Y$  (Crowson, 2019; Hayes & Rockwood 2016). For statistically significant results, this needed to exceed the percentage of variation of the PV on the OV without the MV (Warner, 2013). Even a small percentage of variation attributed to the interaction between  $X$  and  $Y$  was statistically significant ( $p = .05$ ) as moderating effects tended to be small (Hayes, & Rockwood, 2016). The resulting data provided the effect size of the interaction (Warner, 2013).

If a statistically significant interaction was found, an evaluation of the conditional effects of the focal predictor at values of the moderator(s) table was evaluated to clarify the nature of the interaction, whether positive or negative. A test of Simple Slopes was interpreted to determine the nature of the interaction to understand the degree of a positive or negative moderation effect with any notable changes that should be interpreted (i.e., if the degree of moderation increases with higher levels of S/R coping).

**Presentation of Results.** The results section included a narrative on the purpose of the analysis procedures. A table presenting key demographic information that were later used to describe results was included at the start of the results. The statistical level and value ranges for each construct were outlined as part of this introduction to the data. Following this, the methods for preliminary data screening and the results of preliminary data analysis, with any corrections, were acknowledged and lead to the statistical results of the moderation analysis conducted. Statistical significance and non-significance were presented and the results concluded with a caution to the inability to draw causal conclusions and importance of using critical evaluation when assessing the interpretation of results.

**Interpretation of Results.** The findings from statistical analysis were interpreted in accordance with the boundaries of moderation multiple regression analysis. No attempt was made to indicate causation. Furthermore, the existence of statistically significant results did not fully explain the hypothesized relationships, as the attribution of the results to the PV, OV, and MV are theoretical rather than mathematically factual (Hayes, & Rockford, 2016). Results noted any limitations for reliability based on the nature of moderation analysis and the results of preliminary data screening and analysis. This information was presented with respect to the research questions and associated hypotheses for this study.

**Discussion.** These results were then discussed in reference to the overall purpose of the study and grounded in current literature. Points of support for present thought were



included along with any challenges for furthering of information that was found in this study. Implications for future research and limitations were included.

### **Threats to Validity**

#### **Construct Validity**

There were some notable limitations to the Brief RCOPE, RSS, and SRE. Among these was the self-report nature of these instruments. While self-report measures were good at capturing experiences (DeVellis, 2017), they forfeited the ability to make claims of causation. Other measures of validity were strong for the Brief RCOPE and the RSS. There were mixed reviews and results for the SRE with more recent defense to earlier criticisms. These are discussed below.

#### **Statistical Conclusion Validity**

This study did not utilize an experimental or quasi-experimental design, resulting in a major limitation in the inability to report findings as causal (Hayes, & Rockford, 2016) Rather, results needed to be understood as correlational. Discussing the study's results within the context of the strong research foundation that exists in this field of research helped to strengthen confidence in the nature of the results; nevertheless, interpreting results should always be guided by an understanding of this limitation.

Moderation multiple regression results were strengthened or weakened by the result of preliminary data analysis and data screening as part of attempts to meet the methodological assumptions for multiple regression analyses as described in the data analysis plan above. The results and interpretation of results considered these limitations transparently. Finally, the interpretation of the presence of a statistically significant or

non-significant moderation effect was conceptual and should be presented as such (Hayes, & Rockford, 2016).

## **Ethical Procedures**

### **Access to Participants**

Participants were accessed via Amazon's MTurk via the use of their algorithms to match the researcher with potential participants. Participants self-selected to participate in the research study; being directed to informed consent documents with information on inclusion and exclusion criteria with justification along with contact information for the appropriate point of contact with Walden University for any additional questions potential participants may have. Informed consent was reviewed and approved by the researcher, dissertation committee, and IRB in accordance with Walden University's policy for conducting dissertation research. Participants electronically signed the informed consent form, indicating they understood the contents of the form, that their participation is voluntary, and they understand they would not receive compensation outside of what is offered by Amazon's MTurk and will not receive any follow-up communication post-study because of the anonymous nature of their participation in the study. It was only at this time participants will be directed to the study survey.

### **Treatment of Participants**

To proceed with this research study, the researcher obtained permission from their dissertation committee and Walden University's IRB. Applicable permissions and reference number was 01-11-23-1018782. These permissions governed all aspects of participation, including recruitment, data collection, and participant follow-up.

Research conducted with sensitive subjects, such as religious/spiritual beliefs and practices needed to include additional considerations for participants. There existed the potential for distress for participants who have personal experiences and thoughts that differ from the religious or spiritual belief system or creed they ascribe to (Bradburn, et al., 2004; Groves, et al., 2009). Participants may also have wanted to provide the answers they believe the researcher was looking for (Groves, et al., 2009). To mitigate these risks to the degree possible, an anonymous response format was selected in an online format where there is an increased ability for the participant to select the setting and manner in which they wish to participate (DeVellis, 2017).

There was relatively low ethical risk for data collection for this study. By allowing for anonymous participation and opting for a national sample pool of participants, there was a very low risk of the researcher inadvertently knowing or being able to identify one of the participants. Participants were aware from informed consent that their participation was optional and there was no penalty or consequence for terminating their participation at any point in the process. Furthermore, participants were provided with national resources for mental health and spiritual supports should their providing data cause unintended distress or discomfort.

Because the study was conducted anonymously, participants were made aware in informed consent they would not be provided any follow-up information from their participation in this study. The protections provided participants with the anonymous format were deemed of greater benefit than the ability to provide information with participants once the study results are disseminated.

### **Treatment of Data**

Data was collected anonymously in an online format. The researcher did not have access to identifying information for participants at any point in the data collection or analysis process. Once data collection was complete, data was exported into a password protected folder for data analysis and backed up on a password protected cloud drive. Only the researcher and any other specified persons with Walden University required access to the data had access to the data for necessary purposes (i.e., Dissertation Chair, University Research Reviewer, etc.). Data will be deleted out of all storage locations at the earliest time when it is no longer needed for the purposes of this study and other studies that may be conducted with the data collected. There was some disclosure of personal information in the dissemination of this research through demographic information. However, this information was provided categorically (i.e., responses by gender, age range, etc.) rather than by participant. This added a layer of protection and prevents any ability to ascertain the identity of any specific participant.

### **Summary**

Chapter 3 provided a detailed research plan for the present study. This study was conducted with adult participants who identify as evangelical Christians who have experienced a minimum of 1 NLE within the last 12 months. This was a large target population and the sample were drawn from a national sample utilizing Amazon's MTurk crowdsourcing. This sampling method was a non-probabilistic convenience sampling process with a goal of obtaining a minimum of 156 participants with hopes to achieve the minimum 107 necessary valid responses for analysis as determined by G\*Power.

recruitment, informed consent, data collection, and debriefing took place online in an anonymous format. There was no need within the research design for any participant follow-up.

The focus of Chapter 3 then transitioned to evaluation of the Brief RCOPE, RSS, and SRE. The source of each measure was provided along with information on method of administration, permissions, metric properties, and justification for use with the identified population for this study. These were discussed in connection with their assigned variable, S/R coping for the Brief RCOPE, S/R struggle for the RSS, and NLE for the SRE. More specific information on scores, calculation, and level of measurement for data analysis were provided.

The data analysis plan provided a detailed overview of the plan for analysis, including identification of the software used for analysis, preliminary data analysis and screening procedures, and the tests and process being utilized to answer the research questions and test hypotheses. IBM's SPSS version 28 was used for Hayes' PROCESS macro version 3.3 for OLS Moderation analysis. Preliminary analyses were conducted in accordance with the standards for multiple regression analyses and the treatment of any violations of assumptions were conducted with Hayes and Rockford's (2016) understanding of the limiting impacts of violated assumptions. Results were interpreted with reference to the statistical processes associated with Hayes PROCESS macro.

The data analysis plan provided a detailed overview of the plan for analysis, including identification of the software used for analysis, preliminary data analysis and screening procedures, and the tests and process being utilized to answer the research

questions and test hypotheses. Limitations to validity were acknowledged and the use of the included measures and statistical process justified. Ethical considerations and attempts to mitigate risks were discussed and the reason for the remaining level of risk justified for the purposes of the study.

This concludes the introduction to the study, review of literature review, and research methods utilized for conducting the present study. The study was therefore justified and placed within the context of research literature. The following chapter marks a transition to the presentation of results after the study's conduction.

## Chapter 4: Results

In this quantitative study I used Hayes PROCESS v. 3 in IBM's SPSS v. 28 to conduct moderation multiple regression analysis to achieve the purpose of examining the moderating role of S/R struggle on the relationship of number and sum mean stress level of NLE's experienced in the last 12 months for evangelical Christians and S/R coping. The PVs were number of NLEs and sum mean stress level of NLE, the OV was S/R coping, and the MV was S/R struggle.

Analysis was conducted to answer two guiding research questions and corresponding hypotheses. The guiding research questions and hypotheses are listed below:

RQ1: To what extent does S/R struggle moderate the relationship between number of NLE and S/R coping for evangelical Christians?

*H<sub>a1</sub>*: S/R struggle will significantly moderate the relationship between number of NLE and S/R coping for evangelical Christians.

*H<sub>01</sub>*: S/R struggle will not significantly moderate the relationship between number of NLE and S/R coping for evangelical Christians.

RQ2: To what extent does S/R struggle moderate the relationship between sum mean stress level of NLE and S/R coping for evangelical Christians?

*H<sub>a1</sub>*: S/R struggle will significantly moderate the relationship between sum mean stress level of NLE and S/R coping for evangelical Christians.

*H<sub>01</sub>*: S/R struggle will not significantly moderate the relationship between sum mean stress level of NLE and S/R coping for evangelical Christians.

Chapter 4 provides detailed information about the procedures used for data collection, including the data collection timeframe, response rates, an overview of descriptive statistics, and estimation of accuracy of the sample's representation to the actual population. Additionally, the study's results are presented with the study's demographic data, evaluation of the statistical assumptions, and a report of the study's findings in reference to the guiding research questions and hypotheses. This information provides an overall analysis of the study conducted and provides a basis for implications outlined in Chapter 5

### **Data Collection**

Data collection was conducted on April 17, 2023, via Amazon's MTurk in accordance with the data collection plan outlined in Chapter 3. No changes were made to the outlined plan. The recruitment window was set to run from April 17 through April 23, 2023, and data was ultimately collected within 6 hours of the study's launch on April 17, 2023, and the study was closed early. The sample size needed for valid results as determined by evaluation via G Power was 107 participants. The recruitment goal was set at 150% of the needed sample, 156 participants, to account for cases that needed to be removed due to not meeting the study's criteria, incomplete responses, and data that was screened out through preliminary data analysis. Participants self-selected into the study by review of the informed consent document. Within the amended recruitment window of 6 hours a total of 189 people provided informed consent and participated in completing the survey to the degree their eligibility allowed.



Participants were excluded from the study if they answered no to the three inclusions criterion questions:

- What is your age? Inclusion criteria precluded anyone who answered with 17 or younger.
- Do you identify as an evangelical Christian in accordance with this definition: “Someone who identifies as Christian and holds fundamentalist beliefs of the Bible as truth, salvation through Jesus Christ” (Phillips, & Ano, 2015).
- Within the last 12 months, have you experienced one or more negative life events?

After responding to first question, 189 participants were retained, after item second question, seven respondents were excluded for 182 participants, and after final question, nine participants were excluded, for a total of 173 participants. All 173 participants completed the study and there were no incomplete responses in the sample.

There was a need for preliminary data screening and additional responses were removed from the data set due to entering the wrong response type for items on the SRE. For example, participants entered a written description of their experience or their friend’s experience, rather than following the instructions to provide a numeric response. This resulted in the removal of an additional 21 participants for a sample of 152. Finally, participants were removed from analysis if they answered “0” to all items on the SRE, indicating a lack of NLE within the past 12 months with the study’s given parameters. This resulted in the removal of an additional two participants for a valid sample of 150 participants.

**Demographics**

Demographics items for this study include age, gender, race/ethnicity, state of residence, employment status, total household income, and Christian denominational affiliation. A detailed accounting of descriptive statistics is found in Table 1.

**Table 1***Baseline Descriptors and Demographic Characteristics of the Sample*

Baseline characteristics	<i>n</i>	%
<b>Gender</b>		
Female	58	38.7
Male	92	61.3
<b>Race/Ethnicity</b>		
American Indian or Alaska Native	5	3.3
Asian or Asian American	7	4.7
Black or African American	6	4.0
Hispanic or Latino	4	2.7
Native Hawaiian or Pacific Islander	1	.7
White	126	84.0
Another Race	1	.7
<b>Place of Residence</b>		
Alaska	12	8.0
Arizona	1	.7
California	26	17.3
Colorado	2	1.3
Connecticut	2	1.3
Florida	11	7.3
Georgia	9	6.0
Illinois	3	2.0
Indiana	20	13.3
Iowa	1	.7
Kansas	1	.7
Kentucky	1	.7
Louisiana	4	2.7

Baseline characteristics	<i>n</i>	%
Maine	1	.7
Maryland	2	1.3
Massachusetts	1	.7
New Hampshire	2	1.3
New Jersey	3	2.0
New York	5	3.3
North Carolina	2	1.3
Ohio	5	2.65
Oklahoma	2	1.3
Pennsylvania	1	.7
South Dakota	1	.7
Tennessee	5	3.3
Texas	15	10.0
Utah	2	1.3
Vermont	1	.7
Virginia	3	2.0
Washington	3	2.0
Wisconsin	2	1.3
<b>Employment Status</b>		
Employed, working full-time	137	91.3
Employed, working part-time	3	2.0
Self-employed	8	5.3
Not employed	0	0
Retired	2	1.3
Other	0	0
<b>Annual Household Income</b>		
Less than \$20,000	4	2.7
\$20,000 to \$34,999	21	14.0

Baseline characteristics	<i>n</i>	%
\$35,000 to 49,999	41	27.3
\$50,000 to \$74,999	34	22.7
\$75,000 to \$99,999	33	23.3
\$100,000 to \$149,999	9	6.0
\$150,000 or more	6	4.0
Christian Denominational Affiliation		
Anglican	32	21.3
Baptist	31	20.7
Protestant	34	22.7
Methodist	18	12.0
Lutheran	10	6.7
Pentecostal	12	8.0
Non-denominational	9	6.0
Other	4	2.7

*Note.* *N* = 150. Participants ranged from 18-76 years of age with a median age of 35.58.

Not all U.S. state were represented in this sample. States with a response rate of 0 included Alabama, Arkansas, Delaware, Hawaii, Idaho, Michigan, Minnesota, Mississippi, Montana, Nebraska, Nevada, New Mexico, North Dakota, Oregon, Rhode Island, South Dakota, West Virginia, and Wyoming.

The demographic composition of this study was considered in interpretation of the results and were noted in limitations. The remainder of this section provides a comparison of the sample population to both the population of Amazon MTurk workers and the population of interest at large. The sample population differed from these

populations meaningfully and this was acknowledged thoroughly in understanding the results and implications of the data.

According to meta-analysis of three population studies conducted by the Institute for Family Studies, it is estimated 52% - 57% of the Christian population is female and 43% to 48% are male (Stone, 2019). Interestingly, the sample population demographics are both flipped and more exaggerated, with 61.3% male respondents and 38.7% female. The sample demographics were also inconsistent with the population of Amazon MTurk participants, where an average of 57.7% of adult participants ages 18 and older were female (Moss & Litman, n.d.). The resulting picture was a sample that was disproportionately male.

Also notable, no participants identified as other than male or female. It could be the topic of study either garnered participants who identified within binary gender classifications, or participants were perhaps more comfortable selecting the options of male or female rather than self-identifying in the provided category “other”.

These demographics indicated the sample may be overrepresented by a more privileged gender and data may be lacking input from more marginalized genders. It is generally understood that increased marginalization carried with it increased risk and potential for NLE and this lack of representation is therefore notable.

Other sample demographics were exaggerated outside of what would be expected with consideration for population characteristics of Amazon MTurk workers, and from the broader population as reported by the U.S. Census Bureau Current Population Study (2018). For example, this study had predominately White participants, 84.0%. The

population for MTurk workers is 79.8% White (Moss & Litman, n.d.) where the general US population is 76.5% (US Census Bureau, 2018). Asian or Asian American and Hispanic or Latino participants were underrepresented, with sample representation of 4.7% of Asian or Asian American in comparison to 11% MTurk workers and 5.9% general population and 2.7% Hispanic or Latino in comparison to 20.4% MTurk workers and 18.3% general population (Moss, & Litman, n.d.; U.S. Census Bureau, 2018). While somewhat exaggerated, it was known that White men are significantly more likely to identify as Christian in the United States of America than other racial or ethnic groups (Stone, 2019).

Other areas of discrepancy from the general population include college education and income levels. College education, particularly at a bachelor's level, was overrepresented in the sample population and income is more concentrated between categories for \$35,000 - \$99,999 than for the general population.

In general, the sample population was disproportionately characterized by White college educated males with median household income. It was therefore not likely the sample was a true representation of the broader population of interest, confirming the criticism of convenience sampling noted in Chapter 3. These results therefore indicated the need to be conservative in understanding the study's results.

## **Results**

### **Preliminary Data Analysis**

In review, participants for this study were 61.3% male and 38.7% female. The median age of participants was 35.59 years old with a range of 18 years to 73 years of

age. Most participants identified as White (84.0%) with representation from American Indian or Alaskan Native, Asian or Asian American, Black or African American, Hispanic or Latino, and another race. It was most common for participants to have a bachelor's degree and most participants have a household income ranging between \$35,000 and \$99,999 annually. The sample represented 32 of the 50 states within the United States of America. Denominational affiliation varied with representation from each demographic category provided, providing information across evangelical Christendom within the sample population.

### *Statistical Assumptions*

I conducted multiple regression analysis by following all the statistical assumptions for multiple regression analysis. These included the assumption that the OV and PVs are on a continuous scale, independence of observation, linearity, homoscedasticity, the absence of multicollinearity, the absence of univariate outliers, the absence of multivariate outliers, and normality of distribution. Each of these assumptions were tested with the methodology outlined in Chapter 3. Results for these preliminary data analyses are presented below. All preliminary data analyses were conducted with IBM's SPSS v. 28.

**Continuous Scale.** The first assumption that the OV and PVs are on a continuous scale was violated. S/R coping was measured via the Brief RCOPE, yielding data at an ordinal level data. However, questionnaires are typically ordinal and are generally accepted as continuous scale measures for the purposes of psychological research. Therefore, this was not considered a limiting variable and data was evaluated as such.



The PVs number of NLE experienced in the past 12 months and sum mean stress of NLE were considered continuous variables and meet this assumption for multiple regression analysis.

**Independence of Observation.** I tested the independence of observation, ensuring that each response was independent of the others, via the Durbin-Watson statistic. Durbin-Watson provided an acceptable correlation range of 1.5 to 2.5. Data analysis for linear regression yielded model summary with a Durbin-Watson of 1.88 which fell within the acceptable range and indicates no autocorrelation within the data set as indicated in Table 2. The assumption of independence of observation was therefore met for this study.

**Table 2**

*RQ 1 Model Summary*

Model	<i>R</i>	<i>R</i> <sup>2</sup>	Adjusted <i>R</i> <sup>2</sup>	Std. Error of the Estimate	Durbin-Watson
.404a	.163	.158	4.76791	1.797	

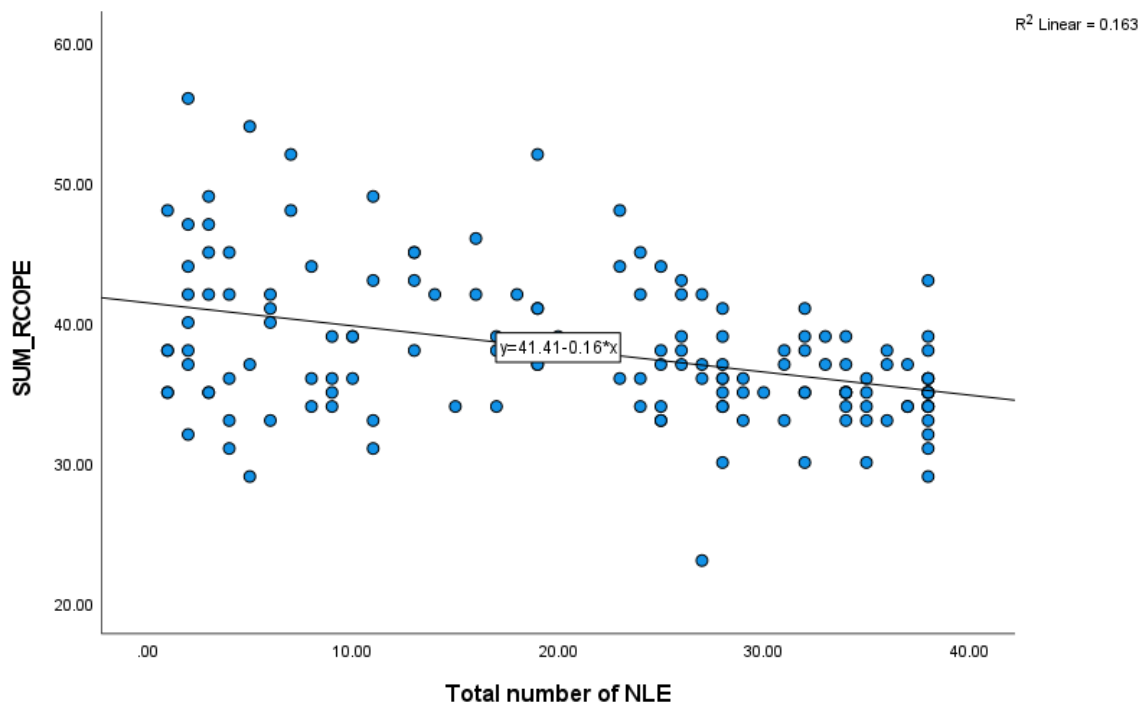
*Note:* Predictors: (Constant), Sum of NLE stress level, Total number of NLE. Dependent Variable: SUM\_RCOPE

**Linearity.** The evaluation of linearity ensured that there was in fact a relationship between each PV and the OV. Linearity was assessed via a visual evaluation of scatterplots of each pairing of the number of NLE (PV<sub>1</sub>) with S/R coping and the sum mean stress score of NLE (PV<sub>2</sub>) with S/R coping. The line of best fit for PV<sub>1</sub> and OV  $y =$

$41.41 - 0.16 * x$ . This indicated a linear relationship within acceptable limits. For  $PV_2$  and OV  $y = 41.57 - 5.25E - 3 * x$ . Visual examination of these scatterplots indicated a

**Figure 1**

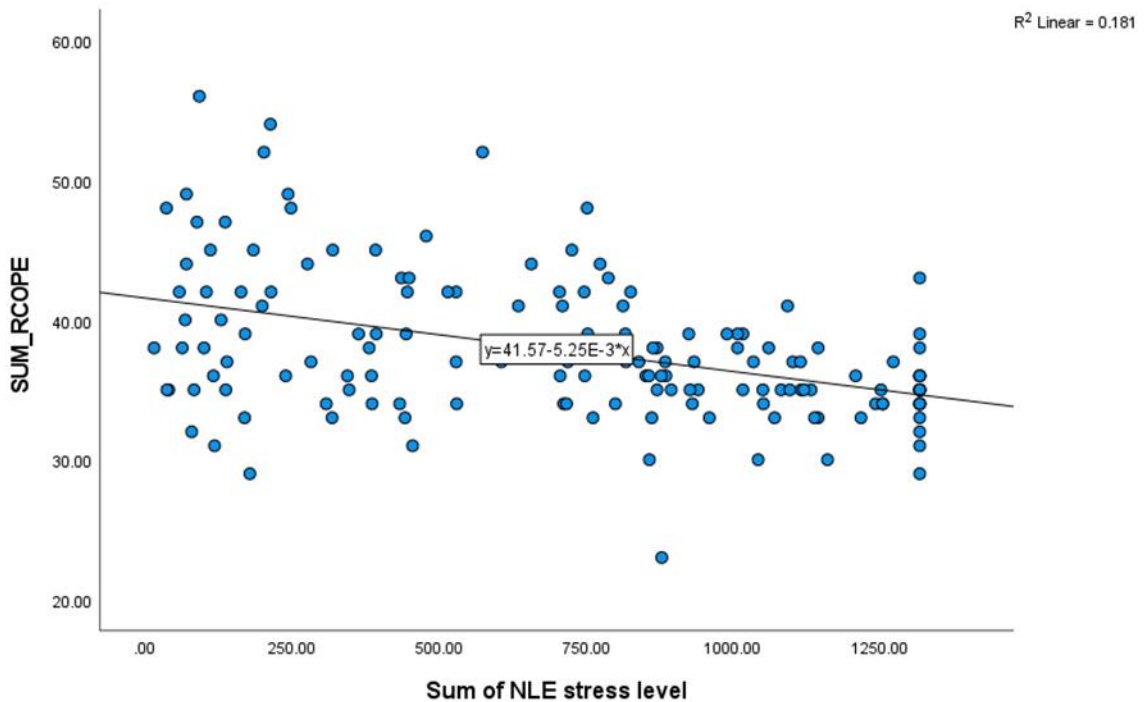
*Number of NLE Line of Best Fit*



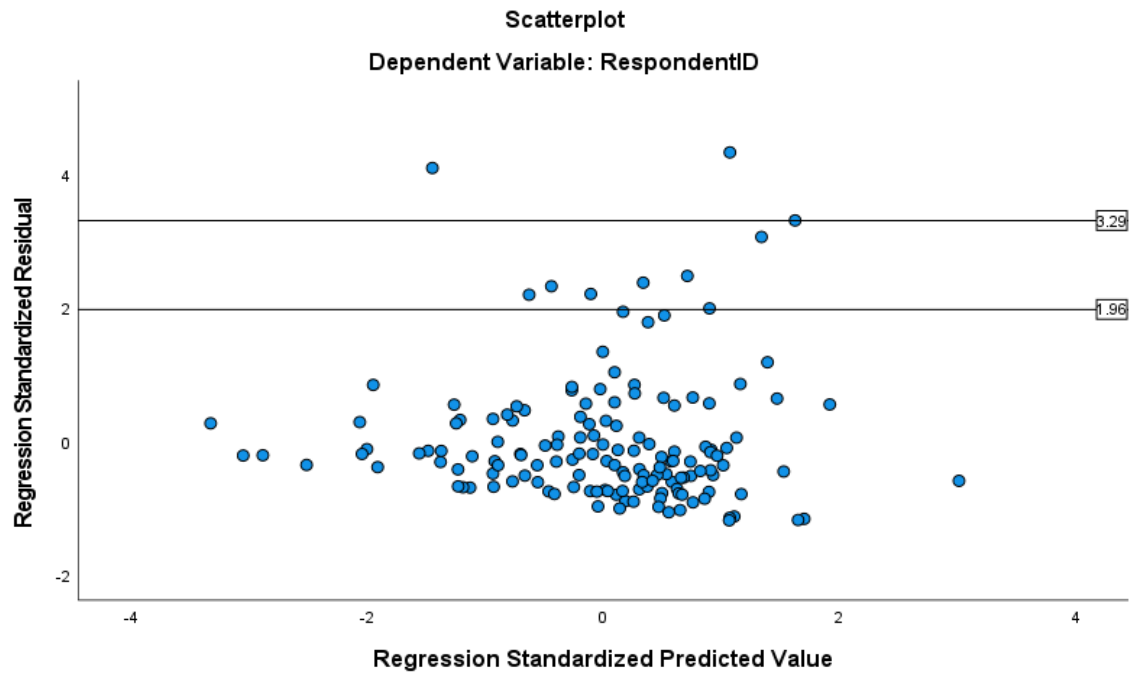
linear relationship within acceptable limits for both  $PV_1$  with the OV and  $PV_2$  with the OV. Results indicated the ability to proceed with preliminary data analysis without removal of any participants from analysis.

**Figure 2**

*Sum Stress Level of NLE Line of Best Fit*



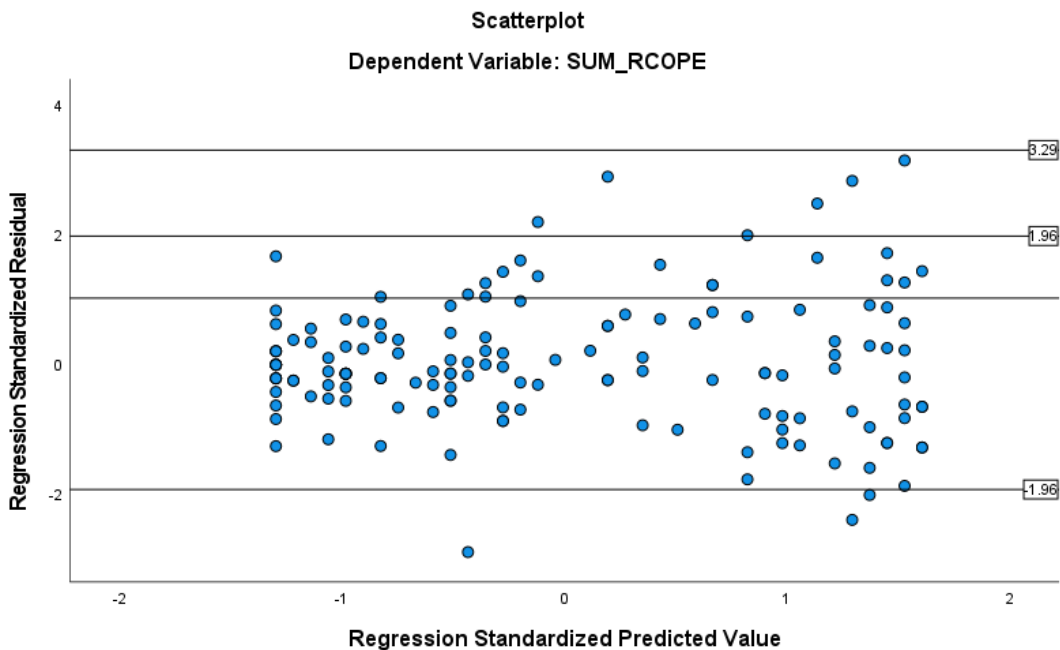
**Homoscedasticity.** Homoscedasticity measures the likelihood that error variables have the same impacts across variables. This was tested with linear regression analysis was performed with collinearity diagnostics and normal probability plots. The plots indicate homoscedasticity is met as the points have a more random pattern and do not indicate a cone shaped distribution that is characteristic of heteroscedasticity.

**Figure 3***Homoscedasticity Scatterplot*

**Multicollinearity.** PVs should not be too highly correlated, demonstrating multicollinearity. If present, multicollinearity provided a skewed relationship with the DV. Multicollinearity was tested with collinearity diagnostics in linear regression analysis. See results in Table 4 below.

**Figure 4**

*Multicollinearity Scatterplot*



**Table 3**

*Number of NLE Coefficients Table*

Collinearity Statistics		
Model	Tolerance	VIF
S/R Coping	.512	1.952
S/R Struggle	.451	2.219
Total Number of NLE	.732	1.366

Dependent Variable: RespondentID

VIF values < 2 were considered great and < 5 were considered acceptable, where a VIF of 2 = 50% of the variance in each variable can be attributed to the other variables and a VIF of 5 = 80% of the variance can be attributed to the other variables. Results for

PV1 are VIF = 1.952, 2.219, and 1.366 for PV1, OV, and MV, respectively. Results for PV1 are provided in Table 3. Results are shown in Table 4 for PV2 are VIF = 1.964, 2.189, and 1.377 for PV2, OV, and MV. Results indicate VIF for the DV and MV are within the good range for both PV1 and PV2. Results for PV1 and PV2 are in the acceptable range, but only slightly exceed the optimal range of VIF = 2.

**Table 4**

*Sum Stress Level of NLE Coefficients Table*

Collinearity Statistics		
Model	Tolerance	VIF
S/R Coping	.509	1.964
S/R Struggle	.457	2.189
Sum Stress Level of NLE	.726	1.377
Dependent Variable: Respondent ID		

Since the results indicated a VIF > 2 for PV1 and PV2, it was appropriate to include an evaluation of Mahalanobis distance to ensure there were no violation of the critical distance. For 2 variables, Mahalanobis distance was 13.816 where  $\chi^2 = \alpha .001$ , df. For PV1 Mahalanobis distance = 12.357 and PV2 = 12.296, therefore there was no violation of critical distance, supporting a lack of multicollinearity. The assumption of multicollinearity was therefore met, and it was accepted that the data does not present a skewed relationship with the OV. These results are displayed below for PV1 and PV2 as an excerpt from the Residual Statistics table in SPSS.

**Table 5***Residual Statistics for Mahal. Distance*

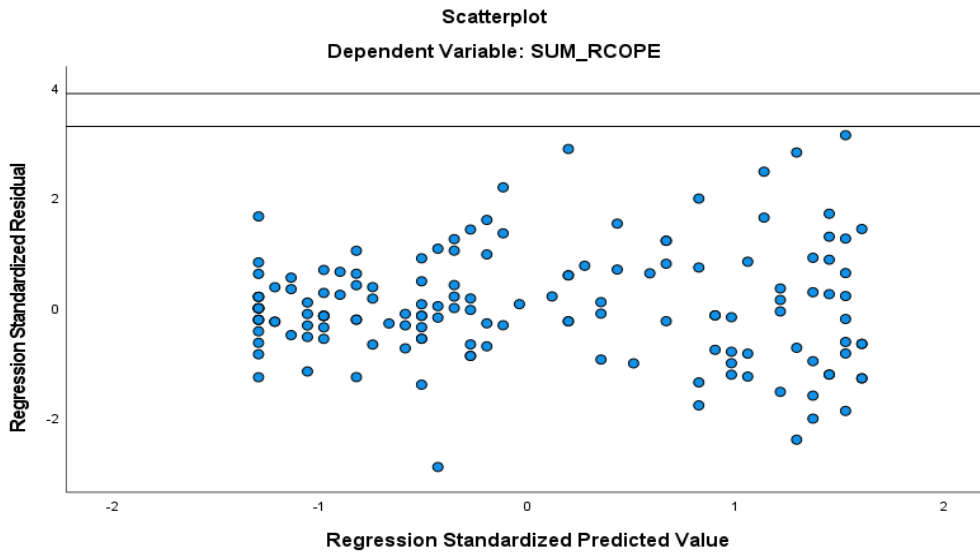
	Minimum	Maximum	Mean	St. Deviation	N
PV1 Mahal. Distance	.093	12.357	2.980	2.461	150
PV2 Mahal. Distance	.030	12.296	2.980	2.455	150

***Dependent Variable: Respondent ID***

**Univariate and Multivariate Outliers.** There should not be any univariate or multivariate outliers. If present, these were to be removed from analysis prior to conducting final analysis. Univariate outliers were screened for via Cook's distance. Evaluation of Cook's distance where  $4/N (36) = 0.111$ . Cook's distance for all data points in PV1  $< 0.111$ , meeting this assumption. For PV2, Cook's distance  $4/126 = 0.032$ . PV2 indicates 7 unusual data points  $> 0.032$ . The presence of 7 data points for PV2 warranted analysis of z-scores. Z-scores were analyzed with scatterplots and all data points needed to be within the acceptable range of  $\pm 3.29$ . For all data points for PV1 and PV2, z scores fell within  $\pm 3.29$ . As such, data points were considered acceptable and none were removed from analysis. Refer to figure 4 and 5 for associated scatterplots.

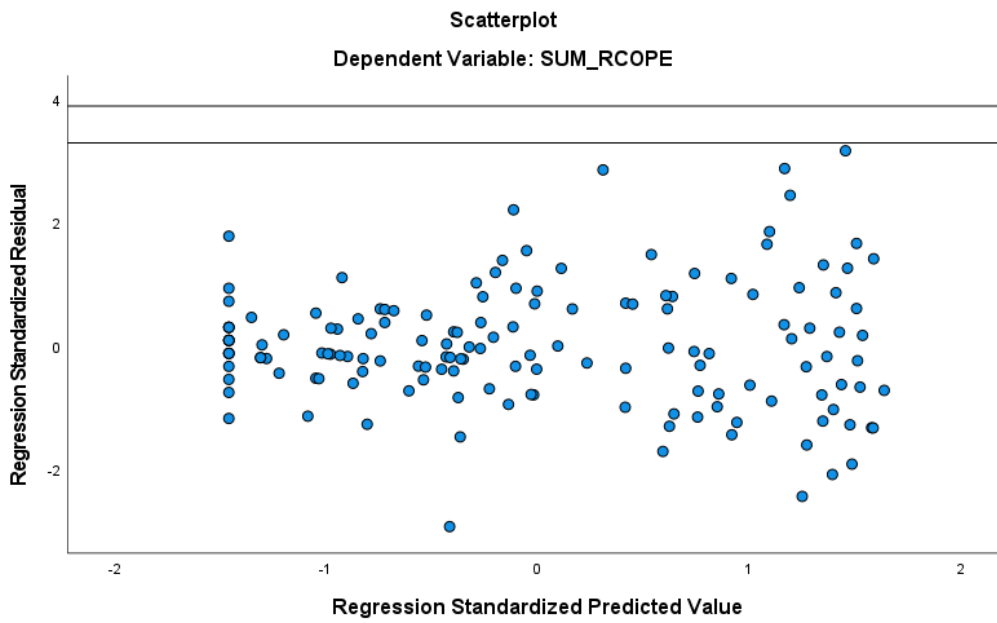
**Figure 5**

*Number of NLE Outliers Scatterplot*



**Figure 6**

*Sum Stress Level of NLE Outliers Scatterplot*





Multivariate outliers were screened for via Mahalanobis distance. A detailed report of Mahalanobis distance results was provided in the previous subsection on multicollinearity, as this test was indicated as part of this previous assumption. In review, Mahalanobis distance did not violate the critical distance for a study with 3 variables and no data points justified removal from the study and all participants were retained.

Normality of Distribution. Datapoints would ideally follow a normal distribution pattern within the acceptable limits of skew  $\leq 3$  and kurtosis  $\leq 10$  to avoid increased risk of a Type 1 error through floor and ceiling effects. Normality of distribution was evaluated with Shapiro-Wilk's test. Predictor variables were best with  $W < .05$  with skew and kurtosis within acceptable limits. For PV1,  $W = .900$ ,  $p = .001$ , skew = 0.858 and kurtosis = 1.294. For PV2,  $W = .928$ ,  $p = .001$ , skew = -.103 and kurtosis = -1.304. Results indicate normality of distribution was met. Table 6 displays the skew and kurtosis for each variable is provided below.

**Table 6***Skew and Kurtosis*

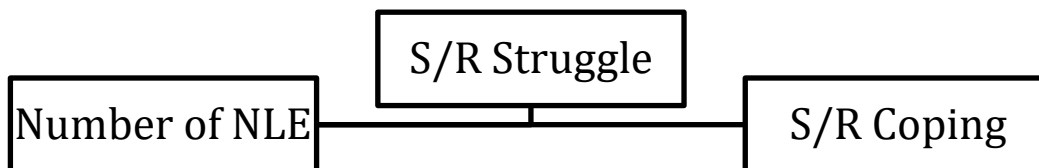
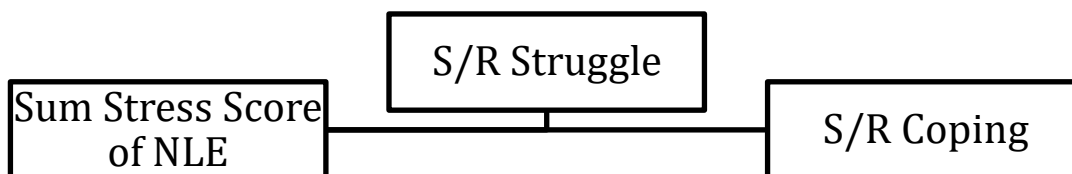
	Statistic	Std. Error
<b>S/R Coping</b>		
Skewness	.858	.198
Kurtosis	1.294	.394
<b>Number of NLE</b>		
Skewness	-.260	.198
Kurtosis	-1.401	.394
<b>Sum Mean Stress of NLE</b>		
Skewness	-.103	.198
Kurtosis	-1.304	.394

This concludes the presentation of results for preliminary data screening. All assumptions were met with a final sample  $N = 150$  included in analysis.

**Report of Findings**

Final analysis was conducted via Haye's PROCESS macro v. 3.3 (2018) with IBM's SPSS, v. 28. Detailed results are provided below with respect to their research question and associated hypotheses. The presentation of data analysis starts out with overall model significance and progresses to deeper levels of analysis to provide a clear and detailed picture of the study's results. Results were presented in the following order, overall model significance, significance by variable, conditional effect, and concluding with zone of significance. Results were interpreted in Chapter 5.

Figures 6 and 7 provide a picture of the hypothesized moderation model for RQ1 and RQ2 for reference to best understand the results of analysis.

**Figure 7***Moderation Model for RQ1***Figure 8***Moderation Model for RQ2****Research Question 1***

The presentation of data in this section was in reference to RQ1: To what extent does S/R struggle moderate the relationship between number of NLE and S/R coping for evangelical Christians? The associate hypotheses are:

*Ha1*: S/R struggle will significantly moderate the relationship between number of NLE and S/R coping for evangelical Christians.

*Ho1*: S/R struggle will not significantly moderate the relationship between number of NLE and S/R coping for evangelical Christians.

The overall model significance for RQ1 was  $F(3, 146) = 49.39, p < .001, R^2 = .50$ , providing general support for accepting  $H_{a1}$  and rejecting  $H_{o1}$ , as shown in Table 7.

**Table 7**

*Model Summary for RQ 1*

<i>R</i>	<i>R</i> <sup>2</sup>	MSE	<i>F</i>	<i>df1</i>	<i>df2</i>	<i>p</i>
<b>.7097</b>	.5037	13.6708	49.3851	3.0000	146.0000	.0000

Because the overall model was significant it warranted evaluation of the slope for the number of NLE predicting S/R coping at each level of S/R struggle. For the model, the slope for number of NLE  $B = -.0254, SE = .0277, t(146) = -.9156, p = .3614$ . For RQ1,  $P > .001$  and therefore while the overall model was significant, the model for number of NLE alone was not significant. The slope for S/R struggle  $B = -.19, SE = .0217, t(3, 146) = -8.7, p < .001$ . For RQ1,  $P > .001$ . The slope for S/R struggle alone was significant. The slope for the interaction of number of NLE \* S/R struggle  $B = .0032, SE = .0015, t(146) = 2.1590, p = .0325$ . The slope for the interaction of number of NLE \* S/R struggle was significant, indicating for every 1-point increase in the number of NLE and RSS score, there was a .03 decrease in score on the Brief RCOPE. Results are displayed in Table 8.

**Table 8***Results of Multiple Linear Regression for RQ1*

Variable	<i>B</i>	<i>SE</i>	<i>t</i>	<i>p</i>	95% CI
Number of NLE	-.0254	.0277	-.9156	.3614	[-.0801; .0294]
S/R Struggle	<b>-.1893</b>	.0217	-8.7346	.0000	[-.2322; -.1465]
Sum NLE*S/R Struggle	<b>.0032</b>	.0015	2.1590	.0325	[.0003; .0062]

*Note:* The outcome variable is S/R coping. Bold values indicate statistical significance.

Analysis of the conditional effect, the slope for S/R struggle to predict the S/R coping at each level of number of NLE provided more detailed information on the pattern of significance within the slope for number of NLE \* S/R struggle. Please see table 9 for results. This was analyzed at three levels of number of NLE (-1 SD, Mean, and +1 SD): low (16%) = -.0844, average (50%) = -.0168, and high 84% = .0345. For low RSS score  $B = -.08$ ,  $SE = .0388$ ,  $t(146) = -2.18$ ,  $p = .03$ , average RSS score  $B = -.0168$ ,  $SE = .0280$ ,  $t(146) = -.6000$ ,  $p = .5495$ , and high RSS score  $B = .0345$ ,  $SE = .0393$ ,  $t(146) = .8781$ ,  $p = .3813$ . For RQ1,  $P > .001$ .

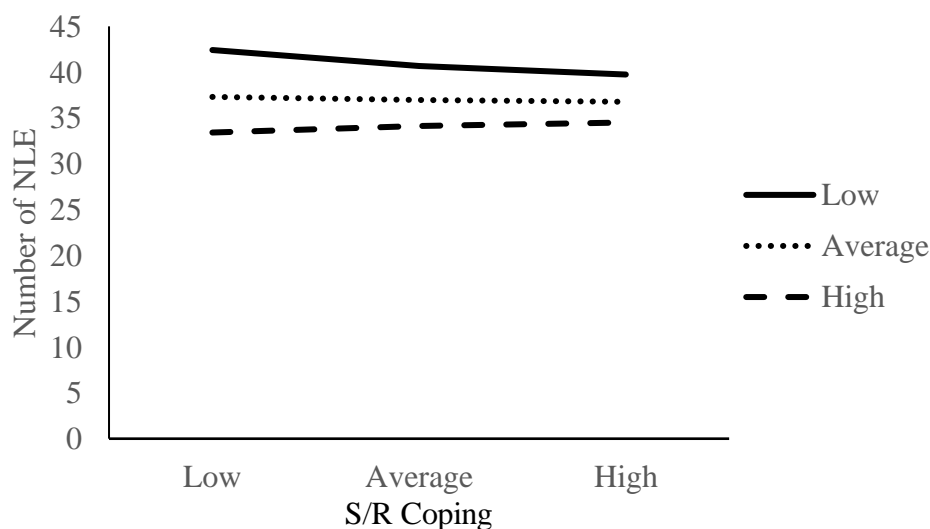
**Table 9***Conditional Effects of the Focal Predictor at Values of the Moderator for RQ 1*

SUMRSS	<i>B</i>	<i>SE</i>	<i>t</i>	<i>p</i>	95% CI
-18.2000	-.0844	.0388	-2.1756	.0312	[-.1610; -.0077]
2.6400	-.0168	.0280	-.6000	.5495	[-.0722; .0385]
18.4800	.0345	.0393	.8781	.3813	[-.0432; .1123]

These data demonstrated that for every 1-point increase in the number of NLE with a low RSS score, there was a -.08% change in Brief RCOPE score, there was a -.02% change in Brief RCOPE score, and at high RSS score, there was +.03% change in Brief RCOPE score. Results are displayed in Figure 9.

**Figure 9**

*Graphic Display of Conditional Effects for RQ1*



The expected pattern for significance included a zone of significance and non-significance. The zone of significance for RQ1 was  $t(146) = -1.98, p = .05, B = -.07, SE = .0334$ , resulting in significance at an RSS score of -12.52 or lower for a zone of significance of 22.67% and non-significance at RSS score of -12.51 or higher for a zone of non-significance of 77.33%. Because the strength of significance increased within the zone of non-significance the farther away a data point is from the point of significance,

with an RSS score of -43.36,  $B = -.17$ ,  $SE = .0706$ ,  $t(146) = .07$ ,  $p = .02$ . Meaning that S/R struggle moderates the relationship between number of NLE and S/R coping with RSS scores of -12.52 or lower.

Analysis indicated the overall model was significant. The relationship of S/R struggle and number of NLE \* S/R struggle with S/R coping were significant and number of NLE alone was not. Conditional effects demonstrated a stronger relationship between low RSS scores, increased SR struggle, and decrease in SR coping, and the zone of significance showed that the relationship between the number of NLE and SR struggle was significant with RSS scores of -12.52 or lower, with the largest significance,  $p = .02$  at RSS score of -43.36.

These results thoroughly support the overall model's significance and rejection of the null hypothesis and adoption of the alternate hypothesis; SR struggle significantly moderated the relationship between the number of NLE and SR coping starting at a score of -12.52 on the RSS with increasing significance as the RSS score decreases. Specifically, this indicates that with increased SR struggle moderates the relationship, resulting in a decrease in SR coping with increased number of NLE experienced within the past 12 months for evangelical Christians.

### ***Research Question 2***

A second moderation analysis was conducted for RQ2. The analysis mirrored that of RQ1 except the analysis was conducted with the sum mean stress level of NLE, rather than the number of NLE. Because the analysis procedures were parallel to that previously

discussed, data was presented in a condensed manner with relationship to RQ2. For reference, RQ2 with *Ha1* and *Ho1* were provided.

RQ2: To what extent does S/R struggle moderate the relationship between sum mean stress level of NLE and S/R coping for evangelical Christians?

*Ha1*: S/R struggle will significantly moderate the relationship between sum mean stress level of NLE and S/R coping for evangelical Christians.

*Ho1*: S/R struggle will not significantly moderate the relationship between sum mean stress level of NLE and S/R coping for evangelical Christians.

The overall model of significance for RQ2 was  $F(3, 146) = 49.91, p < .001, R^2 = .51$ .

The overall model was significant. Results are displayed in Table 11. Following this is Table 12 which provides the results for multiple linear regression for RQ2.

**Table 10**

*Model Summary for RQ2*

<i>R</i>	<i>R</i> <sup>2</sup>	MSE	<i>F</i>	<i>df1</i>	<i>df2</i>	<i>p</i>
<b>.7116</b>	.5063	13.5973	49.9148	3.0000	146.0000	.0000

**Table 11**

*Results of Multiple Linear Regression for RQ2*

Variable	<i>B</i>	<i>SE</i>	<i>t</i>	<i>p</i>	95% CI
Sum Stress of NLE	-.0012	.0008	-1.4076	.1614	[-.0028; .0005]
S/R Struggle	<b>-.1848</b>	.0217	-8.5204	.0000	[-.2276; -.1419]
Sum NLE*S/R Struggle	<b>.0001</b>	.0000	2.1340	.0345	[.0000; .0002]



*Note:* The outcome variable is S/R coping. Bold values indicate statistical significance.

Significance by variable for sum stress level of NLE was:  $B = -.001$ ,  $SE = .0008$ ,  $t(146) = -1.41$ ,  $p = .16$ , MV  $B = -.19$ ,  $SE = .0217$ ,  $t(146) = -8.52$ ,  $p < .001$ , and sum stress level of NLE \*S/R struggle  $B = .0001$ ,  $SE = .0000$ ,  $t(146) = 2.13$ ,  $p = .03$ . The model was not significant for sum stress level of NLE alone and was significant both for S/R struggle alone and interaction of sum stress level of NLE \* S/R struggle. At low RSS score of 16%,  $B = -.003$ ,  $SE = .0012$ ,  $t(146) = -2.46$ ,  $p = .02$ , at an average RSS score of 50%,  $B = -.001$ ,  $SE = .0008$ ,  $t(146) = -1.10$ ,  $p = .27$ , and at a high RSS score of 84%,  $B = .001$ ,  $SE = .0012$ ,  $t(146) = .52$ ,  $p = .60$ . Data is provided in Table 12.

**Table 12**

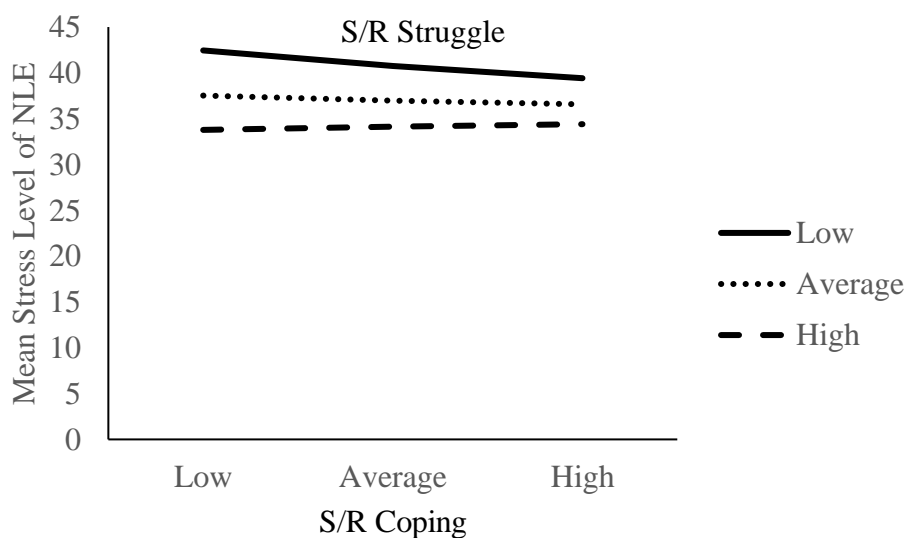
*Conditional Effects of the Focal Predictor at Values of the Moderator for RQ 2*

SUMRSS	B	SE	t	p	95% CI
-18.2000	-.0029	.0012	-2.4598	.0151	[-.0053; -.0006]
2.6400	-.0009	.0008	-1.0974	.2743	[-.0026; .0007]
18.4800	.0006	.0012	.5194	.6042	[-.0017; .0029]

The zone of significance started at an RSS score of -5.98 with increasing significance as RSS scores decrease for 32.67% of RSS scores falling into the zone of significance and 67.33% of scores proving to be non-significant. At the threshold for significance RSS  $B = -5.98$ ,  $SE = .009$ ,  $t(146) = -1.98$ ,  $p = .05$ , and at the lowest RSS,  $B = -43.36$ ,  $SE = .0022$ ,  $t(146) = -2.49$ ,  $p = .01$ . Please see Figure 9 for graphic representation of data.

**Figure 10**

*Graphic Display of Conditional Effects for RQ2*



The overall model was significant and supported the adoption of RQ2 *Ha1* and rejection of RQ2 *Ho1*. Further analysis shows the relationship followed a similar pattern to that of RQ1 with differential in the size of the zone of significance and in strength of the moderation. SR struggle becomes significant with an RSS score of -5.98 with a zone of 32.67% of responses significant compared to significance with an RSS score of -12.52 and 22.67% significance for RQ1. The effect size is also greater for RQ2 than for RQ1 with  $p = .01$  at  $B = -43.36$  compared to  $p = .02$  at  $B = -43.36$  for RQ1.

It was affirmative that SR struggle moderates the relationship between sum mean stress score of NLE and SR coping, decreasing SR coping as the sum mean stress score of NLE and SR struggle increase. Furthermore, data indicated that SR struggle moderates the relationship between sum mean stress level of NLE and SR coping at higher RSS scores, included a greater percentage of significant interactions, and with a stronger effect

size. It was noteworthy to provide a reminder that these results were presented as conceptual rather than factual in accordance with the limits of the chosen methodology.

### **Summary**

Results of data analysis indicated that the alternative hypothesis should be adopted for RQ1. SR struggle moderated the relationship between the number of NLE and SR Coping for evangelical Christians, with a zone of significance of 22.67% with stronger significance as SR struggle increased. When scores on the RSS decreased, demonstrating an increase in SR struggle, the number of NLE increased and this was associated with a decrease in SR coping, as evidenced in a decrease in scores on the Brief RCOPE.

Results also supported the alternative hypothesis in favor of the null hypothesis for RQ2. SR struggle moderated the relationship between the mean stress level of NLE and SR coping for evangelical Christians. The zone of significance for RQ2 was 32.67% with stronger significance as SR struggle increased. Increasing SR struggle moderated the relationship with an increase in the mean stress score of NLE in relation to a decrease in SR coping evidenced in lower scores on the Brief RCOPE. This concludes Chapter 4. The 5<sup>th</sup> and final chapter provides a summary of the purpose of the study and interpretation of the results therewithin. Findings were discussed in relation to other key concepts from Chapters 1-3, including discussing results within the context of existing literature, discussing limitations and generalizability, and making connections to the study's results and positive social change, among others.

## Chapter 5: Interpretation

The purpose of this study was to determine if sS/R struggle had a moderation effect on rS/R coping after experiencing NLE for evangelical Christians with specific consideration for both number of and sum mean stress level of NLE. This study was guided by two research questions, each with one alternative and one null hypothesis. To answer these research questions, I conducted two multiple linear regression analyses using Haye's PROCESS macro v 3.3 in IBM's SPSS v.29, one analysis for PV<sub>1</sub>, number of NLE, and one for PV<sub>2</sub>, sum mean stress level of NLE.

The study resulted in the adoption of the alternative hypothesis and rejection of the null hypothesis for both RQ1 and RQ2, with both analyses demonstrating a range of significance, indicating the presence of a moderating relationship of SR struggle on the relationship between number and sum mean stress levels of NLE and SR coping. Specifically, for RQ1 there was a zone of significance of 22.67% and for RQ2, 32.67%. As expected for moderation analysis, within the zone of significance, the statistical significance increased the further RSS scores were away from the point of significance with a maximum significance for RQ1 of  $p = .02$  and for RQ2,  $p = .01$ . The emerging relationship demonstrated that lower RSS scores, increased SR struggle, the more the relationship between number and mean stress scores of NLE and SR coping was impacted. Results indicated that the sum mean stress score of NLE may be a stronger moderator than number of NLE experienced within the last 12 months for the sample population.

### **Interpretation of Findings**

I interpreted the study findings with respect to the existing body of literature, emerging research, and guiding theoretical orientation and conceptual framework. The study was therefore presented as a relevant piece of information to consider within the broader body of literature on S/R coping and S/R struggle. However, given this was a new area of research to consider both S/R coping and S/R struggle together with the used constructs and other limitations, the study's interpretation should be considered exploratory rather than confirmatory, and conceptual rather than factual in accordance with methodological appropriateness.

### **Interpretation Within Existing and Emerging Literature**

S/R struggle moderated the relationship between number and sum mean stress level of NLE and S/R coping. Literature in this field of study illustrated the significant protective factors of S/R coping after experiencing NLE and the detrimental effects of S/R struggle. For example, Iraq and Afghanistan veterans who demonstrated positive S/R coping experienced lower rates of posttraumatic stress disorder and depression with an increase in adaptive process of their experiencing (Lisman et al., 2017). Veterans in the same war who experienced negative S/R coping were found to have an increase in negative outcomes for their wellbeing and patterns of maladaptive processing of their combat experiences (Lisman et al., 2017). Similar patterns of protective S/R coping factors and injurious S/R struggle factors were found across a wide range of populations, including survivors of war (Ochu et al., 2018), cancer patients (Saarelainen, 2017), those detoxifying from substance use (Medlock et al., 2017), refugees and human trafficking

victims (Ginesini, 2018), community trauma due to mass shooting (San Roman et al., 2019), parents who lost a child (Parente & Gimenez Ramos, 2020), sexual minorities (Brewster et al., 2016), and biracial Black/White Americans (Vazquez et al., 2021).

The relationship between NLE and S/R coping and S/R struggle were researched both with a considerable amount of depth of detail, ranging from general symptom impact (Captari et al., 2018) and measures of diurnal cortisol levels (Prado Simao Miranda et al., 2020). And yet there was little research that considered the coexistence of both S/R coping and S/R struggle. The relationship between these constructs is not well defined and an area that is largely unstudied in this field of research (K. Pargament, personal communication, October 15, 2020). Pargament indicated there was basis for furthering research through a moderation or mediation framework to promote a better understanding of these constructs (K. Pargament, personal communication, October 15, 2020). This perspective was supported by the literature in the field and provided further justification for the chosen research purpose and methodology.

Results for this study support previous findings that number of NLE (Harris et al, 2015) and stress level of NLE (Neimeyer et al., 2017) were associated with a decrease in S/R coping. This study extended this data both by adding another confirmation of these results with a different research design, but also provided a theoretical exploratory understanding that it may be the moderation of S/R struggle on the relationship between both number and sum mean stress level of NLE and S/R coping that can account for the decrease in S/R coping rates for both conditions.

This provided a rich context from which to understand the results of the present study. This study built on the body of existing literature by including both the Brief RCOPE and RSS in studying both S/R coping and S/R struggle within the same study. In fact, at the time of the study's proposal, no studies were found in research literature that included both the Brief RCOPE and RSS to measure S/R struggle and S/R coping within the same study. Since this time, research has been conducted with the use of both the Brief RCOPE and RSS. Da Rosa and Esperandio (2022) used these constructs to consider whether S/R coping and S/R struggle co-occur, finding S/R coping and S/R struggle do co-occur. An exploratory research study considered S/R coping strategies to combat S/R struggle (Wilt et al., 2022). Data from this study suggested that people attempt to deploy both more S/R coping and secular coping strategies when they face an increase in S/R struggle (Wilt et al., 2022). Finally, Blake Kent and colleagues (2022) used both constructs to consider the potential for a moderation relationship with S/R coping, spiritual/religious commitment, and spiritual fortitude with suffering and S/R struggle. Their results demonstrate spiritual/religious commitment and spiritual fortitude were associated with change in suffering and S/R struggle where S/R coping was not.

Therefore, not only did this research build on the existing foundation, it was well aligned with emerging research trends and extends knowledge in this field of study by considering both S/R coping and S/R struggle as separate but related constructs that co-exist and interact after experiencing NLE. Considering recent research, this study confirmed the ability for S/R coping and S/R struggle to coexist, supported the idea that increased S/R struggle impacted S/R coping, and supported the finding that S/R coping

may not moderate stress and S/R struggle but rather, adds a needed perspective, considering that conversely, S/R struggle may moderate the sum mean stress level of NLE and S/R coping.

### **Interpretation Within the Chosen Theoretical Orientation and Conceptual Framework**

This study was grounded in Pargament's (1997) religious coping theory where Pargament presented S/R coping and S/R struggle are related but separate constructs operating within a person's network of meaning making belief networks, their GOS, developed by Folkman (1984). Considered together, religious coping theory and GOS framework understood S/R coping and S/R struggle as coexisting separate but related concepts that interact and can have an impact on a person's ability to or not to adaptively understand and assimilate new experiences into existing schemas. I developed this study with the understanding that S/R struggle may disrupt adaptive processing and cause distress when S/R coping strategies were ineffective to understand multiple or more stressful NLE. It supposed that S/R struggle and S/R coping were separate constructs but had meaning in relationship to each other.

I found that S/R struggle moderated the relationship between number and sum mean stress level of NLE and S/R coping with a pattern that demonstrates an increase in S/R struggle was associated with a negative relationship between number of NLE and sum mean stress level of NLE and decreasing strength of S/R coping. With respect to religious coping theory and the GOS, my results can be interpreted to support the idea that an increase in S/R struggle may alter S/R coping as multiple or increasingly stressful



NLE occur in a person's life by impacting the ability to adaptively understand experiences within existing S/R coping based schemas, resulting in increased distress and therefore increased S/R struggle.

Because the sample population was not an accurate reflection of the broader population, this should be considered at this time only for the demographic makeup of the study's sample that is predominately White, with a disproportionate percentage of males with bachelor's degrees with median household annual income of \$35,000 - \$99,999. Nevertheless, for the sample population, because S/R struggle was found to moderate the relationship between number and sum mean stress level of NLE and S/R coping, the idea that S/R struggle can impact the strength of S/R coping by way of impacting one's ability to adaptively understand their experiences was reasonably supported.

### **Limitations**

The following limitations were outlined in Chapter 1 and discussed in their subsequent sections in Chapters 2 and 3: methodological, related to the included measurement tools, recruitment, sampling, and the online data collection design. These limitations had merit in understating the study's interpretation. There were additional limitations resulting from the discrepancies between the study's sample population and actual population identified in Chapter 4 that were also considered.

Methodological limitations for moderation analysis included insufficient sample size, the use of ordinal level Likert scale measures in the analysis, and the many assumptions that needed to be reasonably met for trustworthy data. While a sufficient sample was garnered for valid results, samples with fewer than 200 participants had an

increased risk for being inaccurate with the use of Shapiro-Wilks statistic used for preliminary analysis of normality of distribution, carrying with it an increased risk for a greater probability for a statistically significant result (see Laerd Statistics, n.d.). This caused the results to be less reliable and caused some increased caution in interpreting results. However, the data passes preliminary screening and analysis, and results were overall considered reasonably reliable per methodological requirements and as a result, data was presented with a critical evaluation of these limitations and the degree of limitation evaluated and disclosed.

Furthermore, self-report measures, particularly Likert scaled questions, carried inherent limitations of being self-report and are subject to increased risk of floor and ceiling effects (Abu-Raiya, & Pargament, 2015). Attempts were made to remove responses where participants incorrectly answered self-report questions on the SRE, but there was no appropriate way to guarantee subjective consistency between unique responses and therefore the risk of subjective influence in self-report measures was unavoidable and should be acknowledged with the study results. The acceptance of this limitation was previously acknowledged in assumptions for the study described in Chapter 1 where assuming participants understood the measures and were capable of and chose to provide accurate information was a necessary predication for the study.

Sampling procedures attempted to limit undue influence of the risk of social desirability effect, but there was no appropriate way to assess for undue social pressure to alter responses with respect to perceived rightness or wrongness in responses. The recruitment procedures and anonymous online data collection procedure was adopted in

attempts to mitigate this limitation to the degree possible. However, it was possible social desirability effect was a limiting factor for participants and as such, the limitation of studying sensitive subjects remains and should be considered with the interpretation of the study.

Additionally, the attempt to minimize the limitations of social desirability effect led to the adoption of convenience sampling with a wide sampling area of the United States of America in an anonymous online format. This came with a known increase in limitation due to a non-probability sampling structure. However, this may have had some unpredicted consequences in garnering a sample population that is not an accurate representation of the actual population, further limiting generalizability. This may have been minimized or mitigated with a random sampling procedure, but the risk of limitations was accepted for the benefits of the chosen sampling procedure.

Resultingly, the results were assumed to be reasonably trustworthy for the sample population only. The study was considered reliable to the degree it can only reflect the sample population without generalization to the general population and understood to reflect the subjective interpretation of constructs by participants and may be influenced by the sample size. Results were only considered correlational, not causal. Finally, interpretation within the existing body of literature, theoretical orientation, and conceptual framework were both theoretical and exploratory and the presentation of results was intended to generate direction for further study rather than to make exacting claims of strong correlation, only to suggest the hypothesized moderation role of S/R

struggle on the relationship between number and sum mean stress level of NLE and S/R coping had some preliminary support and merited further study.

### **Recommendations**

This study demonstrated S/R struggle moderates the relationship between both number and sum mean stress level of NLE experienced within the past 12 months and S/R coping for evangelical Christians. This study had inherent limitations that restricted the understanding of these results as both exploratory and only generalizable to the sample population. Never-the-less, this study provided reasonable justification to support additional research on the moderating role of S/R struggle on the relationship between NLE and S/R coping. Research can expand on this study by including larger sample populations, targeting populations underrepresented in this study, exploring the domains within S/R struggle that had the strongest moderating effect, and including random sampling procedures. Focusing on these changes would afford the ability to either support or disconfirm the moderation role of S/R struggle as a whole and would clarify directions for future research to better understand the relationship between S/R struggle and S/R coping in the wake of NLE.

### **Positive Social Change**

It was important that individuals, family, friends, clergy, and helping professionals have awareness of the protective factors of S/R coping and injurious nature of S/R struggle after experiencing NLE. Increased awareness could lead to better assessment of need and the ability to provide adequate and appropriate support to meet the spiritual/religious needs of people after experiencing NLE. This study was limited in

its scope, but it provided the ability to understand that for people represented in the study's population, S/R struggle increased with multiple or increasingly stressful NLE, and this was correlated with a reduction in S/R coping. This was important because it may not be enough to acknowledge the presence of S/R coping alone but this study suggest it was also important to know that S/R coping was variable and increased S/R struggle may be a moderator in the relationship between number and sum mean stress level of NLE and S/R coping, potentially increasing the risk for negative outcomes.

The exploratory results of this study also invited curiosity into the potential for a similar pattern for the broader population. This matters because the population represented in this study was generally believed to have more privilege and access to resources than other populations not sufficiently represented in this study. If the results of this study were found in the dominant and most privileged population in US society, it provokes curiosity and consideration to take active prudent measures to increase support for a diverse range of populations while further research can confirm or disconfirm findings with greater generalizability and confidence in the event these patterns are consistent or increase across populations. It was important to take this statement with caution, there is no assumption the findings are generalizable; only recommending that appropriate support is increased across populations out of an abundance of caution while further study can be conducted.

Results also have the potential to increase ecumenical dialogue in evangelical Christendom about S/R struggle and S/R coping in meaningful ways that could lead to increased understanding of these constructs and the role of faith, spirituality, and

religious tradition in promoting improved outcomes and mitigating risk of negative outcomes for people with an evangelical Christian spiritual/religious orientation.

### **Methodological and Empirical Implications**

The study provided initial support for further exploration of S/R struggle as a moderator for the relationship of NLE and S/R coping. As such, there was support for furthering moderation multiple linear regression methodological approaches in exploring the studied constructs. There was conservative preliminary empirical support for S/R struggle moderating the relationship between NLE and S/R coping. This should be further studied to strengthen or weaken the results and implications outlined in this study and to further clarify the interaction of the study's constructs in a meaningful way.

### **Conclusion**

There was a rich history and growing body of research in understanding S/R coping and S/R struggling and NLE. Consistently, results demonstrated the significance of both S/R coping and S/R struggle in the wake of NLE on human welfare and wellbeing. Now that the positive and negative impact of S/R coping and S/R struggle on human wellbeing was understood, emerging research considered how S/R struggle and S/R coping interact. Little was known about these constructs in relation to each other after NLE. This study took an important next step in exploring this relationship, supposing a hypothesized moderation role of S/R struggle on the relationship between number and sum mean stress level of NLE and S/R coping. The study's results supported the potential for the proposed construct interactions and encouraged ongoing research. Following the developmental pattern of research in this field of study, the focus of this

study centered on the experience of evangelical Christians and future research should both seek to confirm or disconfirm the study's results and broaden the scope to include additional populations. Building on this study was important for improvements in intervention and support for people experiencing NLE on individual, family, spiritual/religious, and helping professional levels.

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