

LIBERTY UNIVERSITY
JOHN W. RAWLINGS SCHOOL OF DIVINITY

CHURCH LEADERSHIP PERSONALITIES:
A COMPARATIVE STUDY OF THE PERSONALITY COMPONENTS
OF SENIOR AND EXECUTIVE PASTORS

A Dissertation Presented in Partial Fulfillment

Of the Requirements for the Degree

Doctor of Philosophy

by

Christopher Sean Conrad

Liberty University, Lynchburg, VA

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ABSTRACT

The purpose of this quantitative correlational research was to understand the relationship between the personality components of Senior and Executive Pastors. This study collected data in a quantitative form using a personality assessment called The Birkman Method. The data was then analyzed to understand the relationship between the personality types of Senior and Executive Pastors. Research was needed to understand the relationship of personality types of Senior and Executive Pastors. Research questions derived from the problem statement and research purpose are presented as they provide the structure for the dissertation. These questions led to the gathering of information related to personality components to identify if a correlation existed between the personalities of Executive and Senior Pastors, and if one was found, what that correlation was. The population for this study was 11 Senior and Executive Pastors who had served in their current positions in Oklahoma Southern Baptist churches that had an average Sunday morning worship attendance of 500 or more. This study will add to the literature related to the development of church and ministry staff and will benefit churches and ministries in their hiring practices. Further, this research will significantly help those who work together in executive leadership positions in a hierarchical reporting structure.

Keywords: Birkman, Executive Pastor, leadership, Senior Pastor, personality

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Dedication

I dedicate this dissertation to the faithful examples of leadership in my life: Jesus Christ, His apostle Paul, and my brother-in-law Steve Harden.

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This work would not have been possible without the endless support of my wife Kimberly, daughter Kate, and son Sam. They selflessly surrendered so that I could chase yet another dream.

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List of Abbreviations

Analysis of Variation Test (ANOVA)

Assertiveness Needs (ASN)

Assertiveness Usual Behavior (ASU)

Baptist General Convention of Oklahoma (BGCO)

Coefficient of Variation (CV)

Correlation Ratio (η)

Cumulative Frequency (CF)

Dependent Variables (DV)

Difference Between Means (T-Test)

Emotional Energy Needs (EEN)

Emotional Energy Usual Behavior (EEU)

Executive Pastor (EX)

Incentives Needs (ICN)

Incentives Usual Behavior (ICU)

Insistence Needs (ISN)

Insistence Usual Behavior (ISU)

Institutional Review Board (IRB)

Kolmogorov–Smirnov (K-S)

Level (LVL)

Liberty University (LU)

New American Standard (NAS)

Probability Value (p -value)

Physical Energy Needs (PEN)

Physical Energy Usual Behavior (PEU)

Restlessness Needs (RSN)

Restlessness Usual Behavior (RSU)

Self-Consciousness Needs (SCN)

Self-Consciousness Usual Behavior (SCU)

Senior Pastor (SR)

Social Energy Needs (SEN)

Social Energy Usual Behavior (SEU)

Thought Needs (THN)

Thought Usual Behavior (THU)

Variance Test (F-Test)

CHAPTER ONE: RESEARCH CONCERN

Introduction

Pastors are responsible for modeling leadership values and characteristics that all Christians are to practice (Beeley, 2009). Christian leaders have Jesus as their primary source and example. Because of His leadership model, Christian leaders should focus their development of others on the principles of selflessness and sacrifice (Geiger & Peck, 2016). The church's laity learns to lead as they watch how the church staff works together and follow the examples set for them by their pastors. A self-serving leadership style that seeks to satisfy a need for control often negatively impacts followers inside and outside of the church (Shaw, 2006). This leadership abuse leaves little room for application of a Christ-like leadership style and can result in the inability to maintain healthy relationships among those who share leadership responsibilities.

Human relationships are a blessing, but they can be difficult when people do not take the time to try and understand other's perspectives and personalities. God creates every person uniquely, and it is often problematic when individuals expect others to think and behave the same way that they do. This is true for families, coworkers, friends, and teammates. Conflicts can occur both inside and outside the church when people do not give of themselves to learn about those around them. This conflict creates friction between people, affects productivity in the workplace and adds stress to a world already broken by sin (Lawson & Boersma, 2017). For a church staff, not taking the time to understand the way everyone has been created in their uniqueness can hinder the effectiveness of the individual staff members and the success of the team as they lead in the ministry and purpose of the church.

The selfish desire for control reveals the need for leaders to maintain developmental relationships by placing the needs of those they lead before their own, which can help them grow

and flourish (Muoneme, 2013). Those who lead from the mindset of a servant should take the time to reflect on how each person has been created uniquely by God. Successful leaders adjust to the distinctive personalities of their followers to create healthy environments in which staff members can contribute to the mission of the team and find individual fulfillment.

Research was conducted to understand if correlations in personality types exist between Senior and Executive Pastors. This chapter describes the problem that was researched and provides background information related to the problem. Research questions derived from the problem statement and research purpose have been presented as they provide the structure for the dissertation. These questions led to the gathering of information related to personality components for the purpose of analyzing if a relationship exists, and if so, how that relationship can be described. Assumptions and delimitations related to the research have also been provided along with a list of defined terms to offer context. Finally, Chapter 1 provides a summary of the significance of this research and the methodology utilized in the research process.

Background to the Problem

The role of an Executive Pastor is a common position on the staff of many mid-size and large churches (Fletcher, 2004). This position helps minimizing the staff leadership and administrative responsibilities of Senior Pastors. However, the success of the individual in this position is often determined by their personality and their relationship with their Senior Pastor (Bonem & Patterson, 2005). The Executive Pastor traditionally reports to the Senior Pastor and therefore must be comfortable leading while being under the care and direction of a leader. Managing responsibilities in the areas of church organization and operations, the Executive Pastor must maintain a strong but subordinate relationship with the Senior Pastor to implement the directional vision of the Senior Pastor effectively.

This research study will strengthen the understanding the relationship between the personality components of Senior and Executive Pastors. A preliminary review of recent literature was conducted to identify information related to this topic and to discover if there were potential gaps in the literature worthy of further research. The types of literature presented for this review included references that were theological, theoretical, and thematic in nature. This preliminary review of available literature is expanded in the following chapter.

Theological Literature

There are many biblical areas that relate to the topic of pastoral relationships and personality. God, as Creator of man and the church, is the authority for defining the way in which man is to behave and how people should function within the church. The theological texts selected for review were written to provide a systematic theological overview. In doing so, they present valuable information related to the relevance of man's creation in God's image, how people are to treat each other, and the purpose of the church.

Priority of Humanity

The first area of relevance is the fact that mankind is created in God's image (Gen 1:26). God displayed the priority He has for humankind through this act. This honor was given only to man and sets humanity apart from all creation (Geisler, 2003). God holds human life as sacred above all other created beings. The fact that man is set apart from the rest of the living beings and given a position of authority is evidenced in the fact that man can make intelligent decisions, moral choices, and select contrary options based on one's conscience (Boyce, 2010). Man's created purpose is to reflect God to the world. God's image served as the plan from which man was designed and created (Kilner, 2015). Adam was created in God's image and represented all of humanity both in his creation and in his sin. The first sin harmed man's ability to reflect God's

glory. However, God's image was not damaged or changed because nobody can thwart the plans of God (Job 42:2). God created humans in His image, and they continue to be human despite sin. Therefore, they are still made in His image (Geisler, 2004). This is significant to the current area of study because it reveals that people are important to God and that He intends for people to treat each other with honor and respect. In doing so, they prioritize the value of others as God's creations and value the lives of those with whom they have relationships.

Human Relationships

Another theological topic common in the literature is human relationships. God is clear in the Bible regarding how He intends for humans to treat each other. God expects all humans to share in this view of each other because He regards all human life as valuable (Erickson, 1998). Erickson (1998, pp. 559 –75) adds that a systematic review of Scripture reveals that God's value for human life applies to anyone who may experience discrimination because of race, gender, age, national origin, or marital status. God created man for His own glory (Grudem, 2004). Man should glorify God in everything, including how he treats other people. This applies directly to the relationships shared between members of a team. Therefore, church Pastors and staff members glorify God in their relationships with each other when they serve from a desire to serve rather than to be served.

Church Polity

Church governance is a central theme in the literature related to leadership within the local church. There are three prominent styles of church polity (Grudem, 2020). First, the episcopal style of church polity operates with an overseer or bishop at the top of an organized structure of leadership and management. Roman Catholic churches are an example of this as they are governed by an immense hierarchal structure under the Pope that encompasses all the

Catholic churches in the world. Some mainstream denominations operate with a similar structure with a priest over the congregation but who reports up a chain of priests who are all led by the bishop (Geisler, 2005). The leadership of some independent churches may also operate under this structure of polity if they have a single pastor or priest who maintains all authority for the church.

Next, churches with a presbyterian form of government are led by a body of elders, or presbyters, that are under the authority of denominational elders (Rhodes, 2015). The appointment of church elders varies among these churches. Some are selected by current elders while others are elected by the church body (Getz, 2003). Authority over the denomination resides with the general assembly of elders while elder bodies of local churches maintain authority over matters involving their individual congregations.

The third type of church polity is the congregational form of church governance (Grudem, 2020). Rather than final authority of church matters belonging to a bishop or elder board, authority within local congregations belongs to the congregations themselves. This style of leadership is found in both independent and denominational churches. For example, churches belonging to the Southern Baptist Convention maintain the authority to make all decisions related to their church and ministry (Kelley et al., 2007). Ultimately, Christ is the head of the church. However, human leadership resides with the congregation. Though each church may be led by a Senior Pastor and staff, major decisions made by the pastoral staff are voted on by the congregation and are reversible. Likewise, the congregations have the final say in the addition and removal of all staff positions. The authority that congregational church leaders and staff members have is granted to them by the congregation, and leaders such as the Senior Pastor are accountable to the local body of which they serve.

Understanding the polity of a local church relates directly to the relationship between staff members of a local church. The responsibilities, levels of authority, and reporting structure is usually different for Senior and Executive Pastors depending on the governance structure of the church and denomination in which they serve (Bonem, 2005). The Senior Pastor may have ultimate authority within the church, or they may report to someone else within or outside the local congregation. Similarly, Executive Pastors may report to the Senior Pastor or a board of church elders (Getz, 2003). Knowing who each pastor reports to may not affect personal relations, but it may change the way each must operate in their role so that they are effective in their service to the church. Though church polity may affect the roles of church leaders, it should never negate the biblical teaching that promotes honor and Christ-like treatment of others in the workplace and body (Eph 6:5 –9; 1 Cor 12:12 –26; Col 3:22 –25).

The Purpose of the Church

The final theme to consider from the review of theological literature is God’s intended purpose for the church and how it relates to the research topic. The purpose of the gathered church is to provide a place for believers to worship God (Col 3:16), a community to minister to each other (Eph 4:11–13), and a launching point to evangelize the world [Matt 28:19–20] (Grudem, 2004). This second purpose is relevant as the church is given the task to present every member as mature before the Lord (Col 1:28). This is accomplished through the building up of each other rather than the tearing down of others for the purpose of self-promotion and selfish gain. Believers are nurtured and disciplined for the glory of God through the kindness displayed to others. Therefore, it is important to remember that fellowship, though beneficial to self, is for the benefit of building up the body of Christ through the selfless acts of teaching and sharing [Acts 2:42] (Geisler, 2005). It is also through the kind acts shown toward strangers that they come to

know Christ as Savior. Those who treat others with love and respect in the works of discipleship and evangelism glorify God through their efforts and demonstrate obedience in worship.

Believers live out the created purpose for the church as they prioritize the benefit of others. This is true for all believers, and it is highly relevant to this research as a reminder of how church staff should relate to each other.

Theoretical Literature

Several resources provide theories related to the leadership of organizations including churches and Christian ministries. These theories are relevant to the current research as they share common methods that are applicable to the leadership roles of a church staff. The two theories identified in this limited review are transformational and servant leadership.

Transformational Leadership

Transformational leadership is the style of leadership that actively provides for the development of subordinates and creates opportunities for intellectual stimulation (Northouse, 2018). Research has shown that transformational leadership results in the empowerment of employees (Sang et al., 2016). Employee satisfaction was directly proportionate to having leaders who provided for their development and gave them increased authority to use their growing knowledge and skills to perform their jobs.

Servant Leadership

Servant leadership is like transformative leadership in that it shares the common goal of serving others for their benefit (Northouse, 2018). The literature reviewed adds the theme of humility to discussions regarding servant leadership. Servant leaders recognize their own personal limitations yet are comfortable with providing for the development of others to fill the

identified gaps in personal ability (Spears, 1995). These leaders exhibit humility in seeking opportunities for the growth and development of others.

Related Literature

As with the theoretical literature, several themes are present in the material reviewed for this research. These themes relate directly to both secular organizations and Christian ministry organizations. The themes identified are culture and teamwork.

Staff Culture

The literature reveals several factors that are key to improving and maintaining a positive work culture for employees. Research has shown that teams operate more effectively when members share common values and beliefs (Körner et al., 2015). Likewise, positive work cultures share the common factor of having leaders who share the vision, mission, and strategy with their employees. This creates an atmosphere where employees feel trusted and where they can buy into the work being completed. It also provides an environment where employees feel safe to connect their beliefs and values with the vision of the organization. This research benefits the current study as it connects directly to the results that healthy work relationships can have on employee job satisfaction.

Teamwork

Finally, related literature highlights the importance of teamwork. Lencioni (2016) presents research showing that effective team members are humble, hungry, and smart. They must have humility to put the needs of others first, hunger to work hard, and awareness of the skills and abilities of everyone on the team so that they can step forward in service to others when needed. Other literature reveals the importance of relationships between team members and the need to see others as more important than self.

Researcher's Relationship to The Problem

This researcher has extensive experience in the areas of staff development, the effects of personality on relationships, and the hiring of personnel in both corporate and ministry settings. This author also served for several years as an Executive Pastor. He persevered through the experience of facing a lack of clarity regarding the purpose and process of the job description related to his position. He has also encountered the confusion that results when the expectations of the Senior Pastor and elders were not clearly communicated. The desire to research the relationship between these positions has revealed a lack of information and prompted the aspiration for creating related literature.

The theological, theoretical, and thematic literature were extremely relevant in the research conducted in areas of staff relationships and leadership development. This literature also highlighted the need for further research related to meeting the needs of others through the role one plays on the staff or team. A few resources in the review related specifically to the relationships shared among executive staff members of a local church. However, these resources did provide general information related to the proper treatment of others, positive examples of leadership characteristics, and proven leadership methodologies. There is a gap in literature related to the relationship between staff personalities and the effectiveness of staff job performance and relationships. Further research in this area will be beneficial for staff hiring, development, and retention.

Statement of the Problem

Managing the staff and ministries is a difficult task which opens itself to many conflicts given that the nature of the position is to be the go-between person for the elders or overseers of the church, the staff, and the congregation. The Executive Pastor must manage all these

relationships while providing leadership to the church and submitting to the Senior Pastor (Bonem & Patterson, 2005). All the responsibilities of the Executive Pastor can be thrown out of balance if the relationship with the Senior Pastor is not maintained.

The research literature presented many ideas related to the effectiveness of an individual on a team. Several theories have been presented that share how staff members can participate individually for the betterment of the team. The literature also related directly to how leaders can promote a culture that encourages staff members to take part in the vision of the company by stepping out in roles of leadership that may not apply directly to their job descriptions. These theories and themes can be applied directly to the work of a church or ministry staff as the information presented in the literature is applicable to many environments and organizations. Though this information is helpful for organizations and leads to a positive culture, there is little information available in the reviewed literature that relates directly to the relationships between those who share executive leadership as partners yet operate in a hierarchical system where one executive reports to the other.

There is an even bigger gap in the literature related to how personality types affect these relationships. Some resources related to personality assessments are focused on those already in leadership positions. These resources identify that assessments can be used to help leaders improve as well as develop and manage their employees. One such assessment is known as the DiSC Profile. The DiSC Profile identifies eight different personality components related directly to behavior (Sugerman et al., 2011). These components can help leaders improve their leadership abilities but are less valuable in developing relationships with others.

There was research available related to the use of personality assessments, for example the NEO Personality Inventory and the Hogan Personality Inventory, and meeting the emotional

needs of employees (Wiernik, 2016; Earl et al., 2019). The aim is likely getting more out of people through the identification of their personal interests rather than serving them through meeting emotional needs. However, these same assessments can help individuals at all levels recognize their ability to lead and grow in that ability through knowledge of themselves. One specific assessment that stands out from the rest in its ability to help leaders recognize the specific personality needs of others is The Birkman Method. Applied data from the assessment can help people be more effective in the work they do and the relationships they have with others. Literature and assessments focused on helping leaders understand the unique personality needs of their staff members will benefit the relationships and developmental needs of individual team members and lead to improved staff effectiveness. Definitive information is needed to address the gap in literature to understand how the relationship between the personality components of Senior and Executive Pastors can impact their roles and relationships within the church.

Purpose Statement

The purpose of this quantitative correlational research was to understand if a relationship exists between the personality components of Senior and Executive Pastors. This study collected data in a quantitative form using a personality assessment. The data was then analyzed to determine if a correlation exists between the personality components of Senior and Executive Pastors.

Research Questions

The following research questions guided this study:

RQ1. What personality components (as measured by The Birkman Method) are most prevalent in Executive Pastors among the sample group?

RQ2. What personality components (as measured by The Birkman Method) are most prevalent in Senior Pastors among the sample group?

RQ3. What relationship exists, if any, between the personality components (as measured by The Birkman Method) of Senior and Executive Pastors?

Assumptions and Delimitations

Research Assumptions

For this research it was assumed that all participants understood their roles and job descriptions within their respective churches and that they understood their roles as they related to the roles of their counterpart.

Also, this researcher has experienced the negative impact of those who have participated in the personality assessment with a bad or pessimistic attitude toward the process and a disbelief in its accuracy. However, it is assumed that all participants participated fully in the research process and had a genuine interest in the results of the personality assessment and the research results.

Finally, it was assumed that church leadership would not use the results of the personality assessment and/or the results of the research in a negative manner towards the participants of the research. It was assumed that this research would be used for the development of church leadership and staff.

Delimitations of the Research Design

1. Given that the nature of the research problem relates to the relationship between Senior and Executive Pastors, it is important to note that this research was delimited to churches that had both a Senior and Executive Pastor on staff.
2. Further, the research was delimited to Senior and Executive Pastors who had served in their respective positions for at least two years. This allowed for the opportunity for a season of goal setting and yearly reviews to take place.
3. Finally, the study was delimited to Pastors serving in Southern Baptist churches in Oklahoma with an average weekly attendance of at least 500 attendees.

Definition of Terms

1. *Senior Pastor*: The pastor who serves as the senior leader on a church staff, responsible for preaching/teaching as well as vision creation and casting (Bonem & Patterson, 2005).
2. *Executive Pastor*: The pastor who serves as the second in command, fulfills a subordinate leadership role, reports to the Senior Pastor, responsible for implementing the vision, leads in the development of the church staff and ministries (Taylor & Bonem, 2015).
3. *Birkman Assessment*: A personality assessment developed by Roger Birkman that helps individuals identify their unique interests as well as the usual behaviors and the needs of their unique personality (De Filippis, 2018).
4. *Personality Components*: The nine components of the personality (as identified by Roger Birkman) that can, when understood and applied, help individuals become more effective in the work they do and the relationships that they have with others. The nine components are Social Energy, Physical Energy, Emotional Energy, Self-Consciousness, Assertiveness, Insistence, Incentives, Restlessness, and Thought (Fink & Capparell, 2013).

Significance of the Study

This study will add to the literature related to the development of organizational staffs and teams, specifically to those organizations that are related to the church and ministry. Further, this research will be significant for those who work together in executive leadership positions in a hierarchical reporting structure where one executive is subordinate to another executive on the leadership team.

This research will apply directly to individuals who have struggled in their relationships with others in the past and have been affected negatively by the consequences of damaged relationships in the workplace and on church or ministry staffs. This research will also help ministry and church leadership teams make better hiring decisions by helping to identify new hires and leaders that can work effectively with leaders and staff members already in place.

Summary of the Design

This research used a quantitative correlational research design to determine if a relationship existed between the personality components of Senior and Executive Pastors. The researcher collected data using a personality assessment called The Birkman Method (Birkman, 1995). The participants for this study were Senior and Executive Pastors from Southern Baptist churches that had an average Sunday worship attendance of 500 or more. These Pastors were assessed for individual levels of the following personality components: Social Energy, Physical Energy, Emotional Energy, Self-Consciousness, Assertiveness, Incentives, Insistence, Restlessness, and Thought (Birkman, 1995). The results of the Senior Pastor's assessments will be analyzed and compared to the results of the Executive Pastors to determine if a correlation existed in each of the nine components.

Chapter 1 laid the foundation for this work by presenting the purpose for the study and the research questions that guided the research. Assumptions and delimitations, definitions of terms used, and the significance of this research were also presented. The following chapter presents a literature review that includes a theological and theoretical framework for the study, as well as other literature related to the topic.

CHAPTER TWO: LITERATURE REVIEW

Overview

The purpose of this quantitative correlational research is to understand if a relationship exists between the personality components of Senior and Executive Pastors. The people in these ministry positions often have personalities that differ from each other given the nature of their work and the tasks that each must accomplish in their roles (Bonem & Patterson, 2005; Taylor & Bonem, 2015). Understanding how they are created and how their unique personalities differ from each other will add value to their individual contributions and enable these individuals to work and communicate more effectively (Cervone & Pervin, 2019; de Filippis, 2018; Fink & Capparell, 2013). This research contributes to the overall effectiveness of ministry leaders by adding relevant data and analysis to available leadership literature related to these two key ministry positions.

The following chapter provides a review of relevant literature related to the topics of relationships, human personality, leadership, and ministry personnel. First, theological information is presented regarding the biblical view of God's priority of man, human relationships, the role of the church, and Christian leadership. The next section covers a theoretical framework of employee development and personality theory. Finally, literature is reviewed regarding career and staff development, leadership, and personality development. The chapter concludes with rationale for the intended study and the identified gap in existing literature.

Theological Framework for the Study

The Bible has much to say about pastoral relationships and human personality. God is the authority for defining how people of His creation are to treat and respond to other people and

provides guidance for human relationships in the Bible. Systematic theologies provide an organized review of valuable information related to the relevance of man's creation in God's image, how people should treat one another, and the purpose of the church in the world. Additional commentary sources provide extended explanations of biblical references regarding God's intentional design of human relationships and its relevance to the church and its leadership.

Created to be Unique

God creates each person distinctly, each with unique personalities and purposes. Evidence for this is found in the book of Jeremiah. God told Jeremiah that He had intimate knowledge of him and formed him as a specific person (Jer 1:5). He also told him that He had a specific purpose for Jeremiah and that He had made plans for his future (Jer 29:11). God had set Jeremiah aside for the special role of serving as a prophet for God's purpose (Dearman, 2002). Though he was expected to choose to accept this calling, God's intentional design of Jeremiah and the plans He had for him reveal God's intimate handiwork in creating each person as a specific and unique individual. Because of this, people should learn to discern the needs and behaviors of others and not assume that everyone needs to be treated the same way. Nor do they learn by the same methods or require to be treated the same way to be the best they can be.

The psalmist elaborates God's intimate knowledge for the individuals He creates (Ps 139). The understanding that God knows everything about the psalmist displays the fact that God sees everyone as unique and special. The expanded explanation of all that God knows about the psalmist displays God's interest and involvement in getting to know the individual people that He creates (Tucker & Grant, 2018). God is omniscient and He also displays an interest in

knowing each person. Believers follow God's example by admiring the uniqueness of each human life and by pursuing that uniqueness to better understand the needs of others.

Priority of Humanity

Genesis reveals that God made man in His image (Gen 1:26). This serves as evidence of God's priority for humanity. God set man apart from the rest of His creation in their likeness to Him. He also set them apart from each other in their uniqueness. The design for priority afforded people the opportunity to develop within their uniqueness and grow in their specific purpose prepared by God (Ps 138:8). This privilege was afforded only to man, and it set humankind apart from the rest of creation (Geisler, 2003). Because of this, human life is to be held sacred above that of all other creatures. Having been created to make intelligent decisions, make moral choices, and select contrary options based on one's conscience, man is set apart from the rest of the living beings and given a position of authority as one created in God's image (Boyce, 2010). God created humankind to reflect Himself in and to the rest of His creation. His image served as the plan from which man was designed and created (Kilner, 2015). Man's life is to be considered as sacred because he was made in God's image, and he was given the responsibility of being God's representative on earth (Wenham, 1987). Therefore, man is given priority over all of creation and each human life is to be valued amongst all humans. Any attack on a human's life is offensive to God as the Creator because of the value He has placed on the life and importance of His creation.

Adam, who was created in God's image, represented all of humanity both in his creation and in his sin. The first sin affected man's ability to reflect God's glory to creation. God's image was not harmed because no one could thwart the perfect plans of God (Job 42.2). God created humans in His image, and they remain human despite sin and are therefore still made in His

image (Geisler, 2004). Job humbled Himself before God and acknowledged that God's will would always prevail above his personal wishes and expectations (Clines, 2011). On a larger scale, God's image, and His purpose for creating man in His image, will never be affected by the actions of His creation.

The fact that humans have been created in God's image is significant to the current area of study as it reveals God's intention for people to treat each other with honor and respect. The Bible teaches much regarding the need to treat others with kindness and honor (i.e., Prov 21:21, Zech 7:9 –10, Luke 6:31, Gal:5.13, and Eph 4:13). Coupled with the fact that God created people uniquely, believers can and should show regard for each other by learning to treat each other with respect as God designed. This applies to this study as it shows that church leaders should recognize and understand the personality differences of those with whom they work and appreciate those differences. They can do this by treating others as each individual needs to be treated rather than how they themselves want to treat others. By doing so, they prioritize the value of others as God's creations and value the lives of those with whom they have working relationships.

Human Relationships

Another theological topic common in the literature is human relationships. As with any working relationship, members of a church staff must work together in a manner that reflects the honor and respect God intends for all people to have for each other while offering the freedom needed to develop according to their unique design. However, working relationships are often affected in negative ways by a misunderstanding of the differences between personality types (Birkman, 1995). This can lead people, including pastors, to misinterpret the responses and motives of others because they make assumptions of their perceptions rather than reality. God is

clear in the Bible regarding how He intends for humans to treat each other. From the beginning, God intended humans to be in relationships with each other. God created Eve to be a partner and companion for Adam (Gen 2:18 –25). Eve’s purpose was more than functional (Walton, 2001). Eve fulfilled the need for companionship and partnering for which Adam had been searching (Gen 1:20).

The author of Hebrews commands believers to continue the practice of meeting together regularly (Heb 10:25). Beyond the spiritual benefit of Christian fellowship, God created people to be in relationships with each other for their general welfare (Hagner, 2011). Members of the early church met together to escape the Jewish and Roman persecution of the church and to provide for the physical, social, and emotional needs of other believers. Meeting together is beneficial for the individual, but it also serves as a work of service because of the blessing it provides for other people.

The selfless act of entering a relationship with another member of God’s redeemed family is governed by many passages in the Bible. One such set of verses is 1 Corinthians 13. As believers serve and minister within their relationships, they are to do so with the selfless love modeled by Christ that puts the other person first in the relationship. A true display of this love is provided in a way that is best for the receiver to meet the needs of their welfare (Thiselton, 2000). Patient love identifies the best time to meet the needs of others and does so with empathy and sacrifice. This reveals the true value that all believers should place on the importance of all human life.

God regards all human life as valuable and therefore, He expects all humans to share in this view of each other (Erickson, 1998). Erickson points out that a systematic review of Scripture reveals that this is especially true for those who, given their state in life, may be subject

to discrimination (i.e., race, gender, age, unborn, marital status). God did not need to create man, but He did so for His own glory (Grudem, 2020). Therefore, man is to glorify God in everything he does, including how he treats other people. Humans can fulfill their designed purpose by serving God through service to others.

Man glorifies God through the right treatment of others. Unfortunately, people miss the mark when they discount differences rather than appreciate and incorporate the unique way God has created each person. This applies directly to the relationships shared between members of a ministry team. Leaders can help their teams succeed as they learn to use differences as strengths rather than looking for ways to make everyone conform to a specific style or trait. Pastors and staff members can glorify God in their relationships with each other as they serve each other and the church with selfless motivation.

The Church

Another theme to consider from the review of theological literature is God's intended purpose for the church and how it relates to the research topic. The purposes of the gathered church are to provide a place for believers to worship God (Col 3:16), to participate in a community that ministers to each other (Eph 4:11–13), and to have a launching point to evangelize the world and provide discipleship for believers [Matt 28:19–20] (Grudem, 2004). The second purpose is relevant as the church is given the task to present every member as mature before the Lord (Col 1:28). This is accomplished through the building up of each other rather than the tearing down of others for the purpose of self-promotion and selfish gain. It is through the kindness displayed to others that believers are nurtured and discipled for the glory of God. Therefore, it is important to remember that fellowship, though beneficial to self, is for the benefit of building up the body of Christ through the selfless acts of teaching and sharing (Acts 2:42)

(Geisler, 2005). It is also through the kind acts shown toward strangers that they come to know Christ as Savior.

Those who treat others with love and respect in the works of discipleship and evangelism glorify God through their actions and display their obedience to God in worship. Believers live out the created purpose for the church as they seek the benefit of others first and foremost. This is true for all believers but relevant to this research as it is a reminder of how church staff relate to each other. God has designed many roles for believers to fulfill in the local church (i.e., Rom 12, 1 Cor 12) and He has provided practical steps for how these roles are to be administered. Likewise, God provides leaders for the church (1 Tim 3:1–13) to guide members and serve the body as these provide leadership through example and instruction (Mounce, 2000). Paul's instructions to Timothy regarding the selection of elders and overseers reflects the importance that God places on the conduct and practices of leaders as they live and work together.

Leadership

Christ served the needs of the world through His death on the cross (John 3:16). His selfless substitution paid the sin debt owed by every person in creation. Almost 2,000 years later, Robert K. Greenleaf gave name to the leadership approach now known as servant leadership (Greenleaf, 1996). This theory, resembling the sacrificial love of Christ, differs from other leadership approaches in that it places the needs of the follower above the needs of the leader. However, Christ's example is set apart from this social science theory in its eternal purpose and commitment. The development of church leaders who have leadership styles modeled after the sacrificial style of Christ will provide quality role models for other staff members and lay leaders.

God's value for humankind should be modeled in the relationships between believers. God created man to love Him and glorify His name. However, God's love for man is genuine, as evidenced by His Son's sacrifice (John 3:16). His love for man is what drives Him to show compassion for those who are hurting. Because of His love, He serves His followers with humility through His constant willingness to extend mercy and grace to sinful people. He expects humans to show the same love and care for each other. Leaders set the example of Christlikeness for others as they serve from a place of selflessness for the benefit of others. God's love, compassion, and humility are confessed throughout the Bible. Likewise, the requirement for man to display these same character traits is taught in both the Old and New Testaments. Christian leaders can exhibit servant leadership in their relationships by living out these three traits.

Love is the characteristic that should be foundational to all that a leader says and does (1 Cor 13:13). This is not worldly love, nor a love based on romance or friendship. It is the unconditional love given by God to be shared with others. As Anderson notes, "Christians are to love others despite disappointment and rejection from others. This *agape* love is a special kind of unselfish love, a religious love for others. This sacrificial love can redeem our usual selfish kind of loving" (Anderson, 2005, p. 27). This love provides believers the ability to act in an unselfish, servant-hearted way in a world filled with sin and selfishness (Boyd, 2018). God commands that people love Him (Matt 22:37) and others (Matt 5:44, 22:39). The purpose of this is to turn one's focus outward for others' benefit, not self. This makes love the main ingredient for selfless leadership because it seeks to improve others' lives.

Christ continued to display compassion in the New Testament. His natural response was to care for His sheep when He witnessed their helplessness (Matt 9:36). Wilkins (2004) noted that it was Jesus' compassion that compelled Him to minister to the needs of His followers.

Wilkins wrote, “The crowds continue to be the object of Jesus’ ministry, and the motivating force is his compassion” (Wilkins, p. 375). He provided for the people’s needs because He loved them, and His care for them was more significant than the desire to care for Himself. Believers are to express this same compassion for others because of the forgiveness Christ provided for them (Col 3:12–13). This idea runs contrary to the pattern of the world. Moo said that Christians are to do this regardless of their background because it is “our fundamental identity determined by Christ and the people of Christ to whom we belong” (Moo, 2008, 275). Living with such compassion for others requires practice, but it is a critical aspect of leading those in the fellowship of Jesus Christ.

Humility is the expression of humbleness. A person who is humble acts without arrogance. Humility has been defined as “a willingness to hold power in service of others (Dickson, 2018, p. 24). As with the previous traits, humility is a crucial characteristic of Christian leadership because the humble person lowers themselves to lift others up. Leaders must exercise this level of humility and follow the Bible’s teaching to guide them as they apply this characteristic to their relationships with others. David displayed his humility before God as he expressed praise for Him in a Psalm of Ascent:

O Lord, my heart is not lifted up; my eyes are not raised too high; I do not occupy myself with things too great and too marvelous for me. But I have calmed and quieted my soul, like a weaned child with its mother; like a weaned child is my soul within me (Ps 131:1–2, ESV).

David lived in recognition of his place before God. Even though he had been elevated to a position of authority over the nation of Israel, he governed from a place of humility before God. Allen (2002) added that David came “to realize both the value of submitting to God and the folly

of pretentious pride that tries to defy the divine will” (Allen, 2002, p. 260). David cared more about God than the power he had been given. Isaiah wrote about this same humility that would be displayed by the savior whom God would provide (Isa 52:13–53:12). Because of His compassion for His people, He offered salvation most humbly. Though the identity of the one to bring salvation was unknown at the time Isaiah wrote, Christ’s followers can read this passage and recognize that they were reading a prophecy foretelling the coming of Jesus (Goldingay, 2012). They would know that the humility of the coming Savior and that of Christ were the same.

Christian leaders provide best for the members in their churches and communities when they sacrificially serve as they lead. Their motivation should be for the glorification of God and the welfare of others when they exhibit lives of love, compassion, and humility. The ability to lead like Christ through their service to others displays their desire to honor God as Creator and their intention to seek the best for those around them. Ministry leaders effectively serve God as they selflessly minister to those they lead.

These sources were extremely relevant in the research conducted related to the relationship between staff development and unique personality characteristics. They also highlight the need for further research related to meeting the needs of others through the role one plays on the staff or team. Few resources in the review relate specifically to the relationships shared amongst executive staff members of a local church so more research will need to be conducted in this area. As set forward in this theological framework, the Bible shares much regarding the traits by which leaders are to be assessed. However, a practical means to measure their performance or ability for their development as staff members is not provided. These resources do provide general information related to the proper treatment of others, positive

examples of leadership characteristics, and proven leadership methodologies. Thus far there appears to be a gap in the literature related to scientific studies measuring or reporting on the relationship between staff personalities and the working relationships shared between Senior and Executive Pastors. Scripture provides evidence that highlights the need for honoring others in human relationships. Understanding God's intentions for creating people and for developing these people to lead the church sets the foundational purpose for this study. Further research in this area will be beneficial for staff hiring, development, and retention.

Theoretical Framework

Employee development should be a concern of every organization. The effectiveness of staff members affects the organization's ability to accomplish goals and move forward in accomplishing its mission (Warren, 2017). An employee's ability to meet the expectations of their employer while relating well with others in the organization can also impact results in the company or ministry. When leaders take the time to develop the individuals on their teams, it serves to strengthen the team. Interactions between people can influence culture and performance in all areas of life just as they can in the workplace. According to Warren, these relations are affected by the personalities of the individuals involved. The outcomes of these interactions can be positive and healthy for individuals and teams, but they can also result in negative consequences with sometimes disastrous results. It is critical to the outcomes of personal relations and organizational results to understand the relationship between employee effectiveness and human personality.

Organizations are often limited by time and information when selecting an individual to hire from a list of potential candidates. This list can be reduced through interviews and research, but a choice must be made. Behavior and performance over time is often the method by which

organizations identify the effectiveness of the individuals they hire (Dhliwayo & Coetzee, 2020). Having a means by which a relationship between job performance and personality can be predicted and measured would greatly reduce the time needed to identify an individual's possible effectiveness within a specific organizational setting. The predicted results cannot be guaranteed, but research shows that assessments are available that increase the percentage of finding individuals that will fit specific roles, teams, and organizations.

The study of psychology offers a range of study too broad for this research. Since the area of personality theory itself is large, the focus will be a selection of the most recognized personality traits observed by researchers and experts in the field. "Personality traits are the building blocks of personality, and each specific trait represents habitual patterns of thoughts, feelings, motivations, and behaviors" (Warren, 2017, p. 28). These traits work together to make up the whole of a person's personality. Therefore, this theoretical review focuses on the theories of employee development and human personality traits as identified in the literature.

Employee and Staff Development

History

Psychologists have been researching training and development for over 100 years (Bell et al., 2017). The approach and theories related to this field have changed during this time. These changes have occurred due to the transformation of organizational needs as well as the technological advances in delivering training opportunities. Research also revealed that advances in organizational and cognitive psychology have aided in the advancement of human development theory (Bell et al.).

Training methods of the early 20th century were primarily designed around a system of observation as the supervisor showed the trainee how to perform a task (Bell et al., 2017).

Leaders showed them how to perform the physical tasks for which they were expected to do. As research began during this time, articles were published detailing job manuals that were being developed to explain processes and procedures removing the need for consistent supervision during the training and development sessions. Researchers also began to study the effect of human relations training (Kraiger & Ford, 2007) and supervisory skill development (e.g., Canter, 1951; Lawshe et al., 1958). Overall, this period of training and development research focused on training delivery more than methods or circumstances influencing the effectiveness of training methodologies.

Training and Development theory continued to develop during the middle of the 20th century. Though the amount of research studies and material produced increased, the focus remained on the effects of training methods rather than on outside characteristics (i.e., personality traits, cognitive ability, or skill aptitude) and effect on training methods. This began to change in the 1970s when researchers began to apply social learning theory (Latham & Saari, 1979) to research the effects of culture and team versus independent training methods on a person's ability to learn in different training environments (Fiedler et al., 1971). The 80s and 90s saw research continue to change as focus was placed on employee motivation for development and their perception of their workplace environment and how that affected their ability to learn (Bell et al., 2017).

Current

Recent research reveals continued development opportunities offered by organizations results in decreased job turnover (Koster & Fouarge, 2011). The opportunity to develop skills and advance in development positively impacts an employee's perception of the support they believe they are receiving from their organization and encourages them to continue in their

efforts of personal development. This in turn increases job satisfaction and reduces the desire to seek more satisfying employment elsewhere.

Training and development research has continued to evolve in the 21st century as computer-based training has replaced direct human interaction in the process for many organizational roles (Dachner et al., 2021). Delivery methods continue to evolve as researchers identify new ways to conduct training through webinars, experiential learning modules, and social media platforms. Many of these methods are self-paced and encourage team members to seek further development as they identify the results of their development and identify areas of further interest. According to Dachner et al., “Future employee development research needs to evolve to think differently about how employees develop and how employers should support that development” (p. 4). These new delivery systems not only provide a new, modern way to present training options, but also promote more voluntary learning opportunities in contrast to employee training by mandate previously required in past decades.

Training continues as an important part of employee development, both for job candidates and those already employed (Laguna & Purc, 2016). The process of training enables individuals to grow in specific job-related skills as well as soft skills that are transferable across the genres of job categories. Laguna and Purc found that a person’s personality traits greatly affect their goals and motivation as related to the training process. A person’s openness and willingness to participate in experiential training greatly enhanced their desire to complete the training, but also their initial motivation to seek out and initiate the training process. Though the study also found that not all the observed traits were directly related to a person’s motivation for training, this study shows a relevant relationship between a person’s personality and their intentionality to become more effective in their job performance.

Relevance to current study

The reviewed literature is relevant to the current area of research as it highlights the importance of employee development in organizations. The researched literature provides quantifiable findings that are applicable across a variety of industry and ministry settings. The research presented in the literature also reveals the progress of different training and development methods. Finally, the literature shows that some attention has been given to researching variables outside of the methods used.

The literature also provides research in the areas of cognitive development and emotional intelligence. Literature related to human personality traits was reviewed to identify possible connections between personality and employee development. However, there is a gap in the literature related to the relationship between human personality traits and an individual's ability to develop in specific work settings and roles.

Personality Theory

Personality psychology has been a field of study since the late 19th century and resulted from research of the relationship between mental illness and resulting physical symptoms (Hogan & Sherman, 2020). It developed into three major theories of personality. The psychodynamic theory is the most prevalent (Cervone & Pervin, 2019). It presents the ideas that the adult personality is developed from childhood experiences and that social behavior is mostly controlled by the subconscious mind. The theory itself is built around the premise that all people have some level of neuroticism, the level of which can be determined by a personality assessment. The second, trait theory, began as an academic attempt to classify how human personality is structured. The premise of trait theory is that everyone has discoverable personality traits which can be identified by a personality assessment. Finally, the interpersonal theory

focuses on social interactions and how they cause ensuing interactions. The purpose of assessments under this theory is for the prediction of how people will perform in different social interactions. These developments in the study of the human personality rely on the foundational work conducted by numerous psychologist and psychiatrist in the 19th and 20th centuries.

Freud

Sigmund Freud is credited with developing psychological theories related to the conscious and unconscious mind in the late 19th and early 20th centuries (Boeree, 2017; Freud, 1990). He related the conscious mind to what people are aware of and their perceptions of thoughts and memories. The unconscious mind controls instincts and emotions. He also conducted research in the areas of defense mechanisms and childhood development theories (Demorest, 2004). Many of his theories related to a person's sexual desires and their personal drive for fulfilling these needs (Freud, 2013). Though he was at the forefront of identifying personality characteristics in his time, little of his work will be relevant to the current field of research being conducted by this researcher.

Jung

Carl Jung was a younger contemporary of Freud's and familiar with his research and theories, though he did not agree with all of Freud's theories. Jung also conducted research in the areas of the conscious and unconscious mind (Jung, 2013). This led him to create a theory involving different archetypes related to the unconscious mind. He posited that an archetype was an "unlearned tendency to experience things in a certain way" (Boeree, 2017, p. 50). He also developed a personality typology that began with extraversion and introversion and included the functions of sensing, thinking, intuiting, and feeling. His work would later be used in the development of the Myers-Briggs Type Indicator. Though much of his research that aligns with

Freud's is irrelevant to this current study, his work in the field of typology is useful for understanding personality traits and the use of the Myers-Briggs assessment.

Rogers

In the 20th century, Carl Rogers developed his theory built on the single idea he called the actualizing tendency (Boeree, 2017). He believed that all people are good and that they are driven to be the best they can. His research focused on the belief that humans are motivated to continuously develop themselves to make the most of their lives (Rogers, 1995b). If allowed to develop, he believed humans would become their real self if they received support and positive approval. Those who are affected by the demands of society and the control of others would become the ideal self, one who is not real but reflective of the ideals of others (Rogers, 1995a). Though his work in psychology does not relate directly to personality traits or types to be reviewed in this study, his work does connect with the theory of employee development and a person's motivation effectiveness in work and relationships.

Current Research

Hogan and Sherman (2020) have conducted research in the field of social interactions. Their focus has been on the relationship between interactions that occur within a group and those that take place between different groups. They found that success within a group is determined by the social skills of the individual and that success between groups is determined by a person's aptitude for leadership. Their research is based on the understanding that of the three major personality theories discussed previously, the interpersonal theory presents a more accurate view of personality. They reported that Rogers' theory "assumes that our experience in social interaction drives how we think about ourselves" rather than one's view of self-determining their social interaction (Hogan & Sherman, p.2). They also align with the observation that the first two

theories place a priority on a person's ability to understand oneself over the third theory's prioritization of interacting productively with others.

King et al. (2017) conducted research to determine the impact of personality homogeneity within organizations and occupations. They used Birkman Method assessment to identify the level of certain personality traits within members of organizations and gathered data to identify the similarity of the members of each organization and occupation grouping. The findings resulted in a lower level of similarity than predicted and identified in previous research studies. They identified that the findings may have been skewed by a lack of control with sampling basis within each study. However, they concluded that there is a predictable level of homogeneity within each organization or occupation, though the variables may be slightly higher than first assumed.

Relevance to current study

The literature reviewed for the theory of employee development was limited but provided foundational information that revealed the need for continued study in this area. Employee effectiveness affects organizational goals and missional outcomes. Retaining value-adding employees and recruiting future talent relies on an organization's ability to match development opportunities with the needs of their employees. It was assumed in the first half of the 20th century that these developmental needs were based on cognitive ability and skill aptitude (Birkman, 1995). Often these needs may be based on the unique personalities of the individuals.

The historical literature of personality theory provides a foundation on which current research and assessment can be built. Though the specific psychological beliefs and theories of the original researchers may be of little relevance to the current study, it does shed light on the development of current theories and practices. Relevant research was reviewed that provides

evidence of similar studies being conducted to show the relationship between personality traits and organizational specifics.

Need for Further Research

More research is needed in three specific areas. First, literature related to the development of ministry personnel and teams needs reviewing. Next, research related to the responsibility of church leadership and their role in the development of ministry staff should be conducted to identify the needed structure and path forward for the development of a systematic development plan. Finally, this researcher identifies the need to present literature related to specific personality assessments and how they may relate to the current research purpose.

Related Literature

The theological literature review provided a basic framework for the study of God's intention for humans to develop their potential in God's creation, to build others up according to His design for relationships, and to lead well in the church through the development of others. A review of the theoretical literature supplied an overview of the relationship between employee development and the unique nature of the human personality. This section reviews related literature in the areas of career and staff development, the church, and the development of the church staff. Leadership literature will also be reviewed as it relates to leading the development of staff members in the local church. Finally, literature related to the development of the human personality and means of assessment will be analyzed to complete the framework for this research and introduce how data will be gathered.

Career Development

Finding a fulfilling and enjoyable career is an applicable subject throughout a person's working years (Sharf, 2013). Employees and leaders need to continue the process of development within their careers to avoid burnout and retain their value to their employer. Sharf details numerous career development theories and counseling approaches that highlight the need to set goals, build relationships, and learn continuously to stay mindful of the need to remain relevant in a job market that is everchanging. Employees can become more effective in their work by developing careers they find purposeful and meaningful (Kubicek, 2023). Aligning one's purpose and career with their unique personality enables individuals to see their careers as more than work.

People are drawn to work they feel is exciting, matters to the improvement of life, and is something in which they believe (Fields, 2021). Fields joins the ranks of those who have attempted to create personality assessment to help individuals learn more about themselves. The primary focus of his work is to help people learn how they can best use their unique personality to better themselves within their jobs and careers. Though his work is interesting and applicable to this research's purpose of linking personality with career effectiveness, most of this source teaches about the nine identified personality types in a similar fashion to other researchers and adds little to the conversation.

Several research studies shed light on the relative aspects of personality in relationship to career development. Research is available that details the link between employee performance in different careers based on a personality type of proactivity (Vande Grieket et al., 2020). The researchers were able to predict a person's effectiveness in preselected career choice based on their assessed level of proactivity. A similar study revealed that those with a high level of

proactivity are likely to be promoted first but that those with lower levels were more adaptive to changes within their workplace (Jiang, 2017). This research demonstrates a relative relationship necessary for this study while revealing the need for further research and repeatable results.

Staff Development

The need has been addressed for individual improvement but reveals a related need for the development of groups and teams within organizations. Lake (2020) addresses this subject in his research regarding leadership development. He found that creating a model that promotes the continuous development of team members requires focus on three elements: culture, structure, and system. Organizations can encourage continuous development through a culture that encourages and expects the best from its members. As they are empowered, staff members and volunteers will be more likely to follow through with development if a structure that provides steady opportunities for growth is in place. Finally, having a process for training that is communicated to all participants will encourage buy-in and promote ownership within the program. This material focuses on the environment in which the individuals work rather than their specific uniqueness and how that applies to their development.

Other research aligns with this study as it looks at staff development from the point of ensuring the right people are hired for specific jobs (Collins, 2001; Smart & Street, 2008). This theory has been applied to seasonal educators (Hitch et al., 2018) and provides evidence for the benefit of development opportunities for the retention of staff (Muhumuza & Nangoli, 2019). Evidence is also available that relates accurate personal-job match results with collaboration among team members (Warren, 2017). These findings point to the need to align the right people with the correct organizational positions to enhance opportunities of individual effectiveness as

members of the staff or team. Career development is relative to both secular organizations and Christian church ministries.

Church Staff Development

Elders and leaders are accountable to oversee the health and development of the local church and are therefore responsible for providing the opportunity for the development of church staff members (Getz, 2003). They can provide certain elements of the training, but they should take care to oversee the progress and growth of the staff within their respective positions.

Specific areas of development are often the responsibility of the Senior and Executive Pastors within larger congregations (Bonem, 2005). The Senior Pastor provides the vision and direction of development, and the Executive Pastor receives direction and supervises the growth of the staff. This requires that these two church leaders maintain a healthy working relationship and communicate regularly. This approach to development also requires that leaders develop strong relationships with the staff members to ensure their ability to provide proper developmental opportunities (Lawson & Boersma, 2017). This is critical throughout the employment of each staff member to avoid overlooking any changes in development status.

Development should not be limited to staff but is also critical for those in executive roles such as the Senior and Executive Pastors (Sparkman, 2017). Elders, personnel committees, or denominational leaders can oversee the development of executive leaders. Sparkman's research shows that it is important for these leaders to develop new ministries and participate in mentoring and coaching sessions to further their personal and career development.

A review of this literature is relevant to this current study as it relates directly to working with church staff members. It relates specifically to the relationship and development

responsibilities of those in Senior and Executive pastoral roles. More research is needed to learn how job effectiveness can be measured and how it relates to personality typology and traits.

Leadership

Several references provide theories related to the leadership of organizations including churches and Christian ministries. These theories are relevant to the current research as they share common methods that are applicable to the leadership roles of a church staff. The two theories related to the author's study in this review are transformational leadership and servant leadership.

Transformational Leadership

A study completed in 2016 researched the relationship between transformational leadership, empowerment, and employee job satisfaction (Sang et al., 2016). The research revealed that transformational leadership, the style of leadership that actively provides for the development of subordinates and creates opportunities for intellectual stimulation, results in the empowerment of the employees. Employee satisfaction was proven to increase as leaders took the time to provide for the development of their employees and then gave them the authority to exercise their new skills and experience. Though it was noted that some skeptics fear the abuse of newfound authority by unworthy employees, the payoff of having employees that enjoy their work and are naturally driven to help the organization succeed outweighs any negative consequences of delinquent employees. This theory of leadership models servant leadership as it places the developmental needs of others first and is relevant to current research as it relates to proper treatment of staff members and the culture needed for their development.

Empowerment. Fletcher's work (2018) in empowerment adds to the theory of transformational leadership while connecting with the theme of culture. Though his work may

not be scholarly and written more from experience, he provides a different approach to the idea of empowerment. Dealing with the common problem of church volunteer shortage, he switched the ministry position nomenclature from volunteer to servant. They began training and allowing people to serve rather than asking people to fill a certain number of positions. The church staff then began setting the example for others to follow. As interest grew, ministry control was turned over to the servants when appropriate. Developing the values of servanthood to be observed by all is not enough. The values must be lived out for others to see then taught to them so that they can be adopted as their own (Kouzes, 2017). Developing a staff culture that allows for the development of individual staff members through empowerment requires knowing the needs of the individuals in conjunction with their unique personalities.

Staff Culture. A study conducted in medical rehabilitation clinics identified both organizational culture and teamwork as key factors to job satisfaction (Körner, et al., 2015). According to the research, teams operate more efficiently and effectively when the members of the team share common beliefs, values, and desires. Having a workplace in which leaders share the vision, mission, and strategy for the organization creates a culture that employees feel they are partnering in to accomplish goals. The employees in the study valued the ability to tie their beliefs and desires to the success of the work being completed because it enabled the individuals to experience the success and fulfillment that comes from working in a safe culture on a team of like-minded peers. This research benefits the current study as it reveals the value of having a staff culture that values relationships developed through teamwork.

Teamwork. Lencioni (2016) wrote about the three characteristics individuals need to become effective team members. First, they must be humble. This characteristic enables individuals to put their teammates first and to share success with those around them. This ability

to put the needs of the team before self enables the team to succeed as a unit. Next, individuals on a team need to be hungry. These people are eager to work hard and to the best of their abilities. They want to do their best so that the team and organization succeed. Finally, team players need to be smart. Smart team members are aware of their teammates, in tune with individual thoughts and attitudes, and willing to lead through service to meet others' needs for the team's success.

Servant Leadership

Servant leadership can be compared to transformative leadership in its goal of servicing others for their benefit (Northouse, 2018). The theme of humility was found throughout the literature in discussions concerning servant leadership. The humility required comes from the identification of one's weaknesses and from a comfort with uncertainty that allows for the development of others (Spears, 1995). Humble leaders can assess the situation to identify opportunities for development.

As noted earlier, Christ's example of servant leadership goes beyond the social science theory as defined by Greenleaf (1996). The purpose of religion, according to Greenleaf (2002), is to "bridge the separation between persons and the cosmos... and to reestablish men and women in the role of servants – healers – of society" (p. 235). Though Christ was solely responsible for bridging the gap between humans and God (Ezek 22:30; John 14:6), Christians can minister to everyone by prioritizing others. Studies have shown the positive effects of applying servant leadership in an organizational setting as well as its application to an Executive Pastor's role in the church.

The research at a rehabilitation clinic found that staff members were most satisfied when individuals worked together in service to one another to research problems and develop solutions

(Körner et al., 2015). An Executive Pastor's role is highlighted as a position requiring a servant leader (Taylor, 2015). Taylor refers to this position as the "back-stage pastor" (p. 17). This position requires that the individual comes alongside the Senior Pastor, the staff, and the congregation in a subordinate role to help all involved to get what they need to develop further in their work for God. This idea of servant leadership carries over to everyone who leads in some capacity without the authority to do so (Scroggins, 2017). Unfortunately, many leaders are unwilling to give up control to serve those they lead. This research highlights the need for leaders to serve their followers through selfless relationships.

Several studies have been conducted to identify both the different methods used in leadership development and the best method for specific situations (i.e., Haslam et al., 2017; Luria et al., 2019; Turner et al., 2018). All these studies assumed that all participants would respond to the development in similar fashions and did not attempt to focus on the personality needs of the individuals in the organization. Only Turner et al. considered a distinction between different trainers and their ability to influence participants. The premise of this study draws a distinction between the needs of various personality types and the needs of these types as it affects effectiveness with an organization.

Personality Development

Cervone and Pervin (2019) define personality as "the psychological systems that contribute to an individual's enduring and distinctive patterns of experience and behavior" (p. 4). It is a combination of a person's enduring characteristics, distinctive tendencies, and the functioning of their internal processes. The latter includes a person's personal beliefs, their emotions, and their desires. Behavioral geneticists have studied the relationships between a human's genes and their personality (Cervone & Pervin). They have found that though genes do

not directly affect a person's behavior, they do control the biological functions which result in a person's thought, feelings, and motivations. This explains the result of different personality types and traits.

Some psychologists have gone further in their identification of different types of personalities. Researchers from Jung to Nardi have conducted research to better understand and predict the workings of a person's inner life. Jung (2014) identified eight cognitive functions resulting in 16 different personality types that reflect the differences between individuals. Researchers have conducted studies to identify how the neurological makeup of the brain relates to the typology of human personality. Nardi (2011) created a map of the human brain and through EEG research identified a relationship between the different areas of the brain and the different functions and types of the personality. This research has been used to help individuals pursue their potential through an understanding of their inner motivations. Others have studied the relationship between DNA and personality. Plomin (2019) linked the building blocks of human anatomy to types and traits of personality. Studies like these show the relationship between biology and psychology and reflect the theory that personality is affected by more than external experiences and environmental situations. A person's personality is created into the physical fabric of a person's body.

Many of these sources tie the developmental process of the human personality to evolutionary theory. However, Christianity follows the teaching of the Bible that humans were created by God and not through a naturally occurring process of change over billions of years (Gen 1–2). Some researchers have demonstrated through their studies that humans have the physical ability to understand and identify spiritual realities (Newburg & Waldman, 2010). Through further research Newburg and Waldman identified a connection between God and the

processes of the human conscience. Studies showed an identifiable change in a person's brain over time as they thought about and reflected on God and His presence.

Further research in personality development reflects a combination of genetic makeup affected by heredity and life experiences as contributing factors in the unique make-up of an individual's personality (Baumert et al., 2017). They identified that developmental changes occur more rapidly in a person's childhood and slow down as they approach adulthood. This slowing occurs because of the biological impact of the physical development of the brain (Syed et al., 2020). Research has shown that the human personality does continue to change throughout a person's life though at a much slower rate (Geukes, 2018). These changes can be caused by a person's life strategies, their personal experiences, and their reflections on past experiences.

An understanding of the development of the human personality is critical to this current research as it ties directly to the purpose of understanding the relationship between a person's unique personality and effectiveness within their organization. Many factors contribute to the development of the human personality which shows that continued development and improvement is possible and that a person should not be considered inept or incapable of performing effectively by the single factor of their personality type. It is critical to this study, though, to identify the fact that God is the Creator of the person and their personality, and it is only by His design that the personality is developed.

Personality Assessments

Studies have been conducted that reflect a relationship between certain personality traits and job performance (Aarde et al., 2017). This fact is recognized by many organizations, and they have organized their employee development programs around the identification and application of individual's personality traits. A variety of personality assessments are utilized in

the identification of personality types to aid the human resources departments in hiring and training of both new and seasoned professionals (Church et al., 2016; Moyle & Hackston, 2018). This section will identify and analyze some of the assessments available and used throughout the world in a variety of settings.

Myers-Briggs Type Indicator

The Myers-Briggs Type Indicator analyzes a human's personality based on their unique observations and perceptions of the world. It also evaluates their decision-making process and how they interact with others (Cox, 2016). It is based on the theory of Carl Jung and his work with personality typology. Isabel Myers and Katharine Briggs published their first handbook in 1944 to help people understand themselves better. It has been widely used in schools and business, as well as by counselors. It is one of many assessment tools that have been used to predict job performance (Dhliwayo, 2020). The inventory assesses a person's personality through a variety of questions which aim to identify four specific types from eight preidentified cognitive behaviors. These findings can result in 1 of 64 different groupings (Gulenko, 2019). Trained practitioners can help inventory takers to understand their results related to such areas as behavior and communication style. Literature is also available to assist in the interpretation process.

DiSC

The DiSC model of human behavior utilizes another popular assessment used by organizations to assess the personalities of their members and employees. The DiSC method, like many of the popular assessments, was first developed in the early part of the 20th century (Sugerman, 2011). The model is built around two axes with opposing traits at either pole of each axis. The first axis reflects the contrary traits of "Questioning & Skeptical" and "Accepting &

Warm” and the second axis contrasts “Fast-paced & Outspoken” and “Cautious & Reflective” (Sugerman, p. 206). These axes form a cross that divides the model into four quadrants which make up the four styles of the DiSC model. The assessment analyzes the responder’s answers and scores them according to their level within each of the four styles which represent dominance, influence, submissiveness, and conscientiousness. The format is simpler than the Myers-Briggs assessment, but it also requires guidance from an instructor or other guide to understand and apply the results.

Enneagram

It is believed that the Enneagram has developed from ancient times, though an exact date or location of its creation is unknown (Gomez, 2020). It was first introduced in the United States in 1960 and has grown in popularity since that time. It has a spiritual connection, but the nature of that spirit is left up to the practitioner and user. Gomez describes the model as being formed around three centers of intelligence: the instinctual, feeling, and thinking. Each of these centers are made up of three personality types resulting in a total of nine types. Each of these types is associated with numerous traits. Specific to Christianity, some have undertaken efforts to align the assessment with the Christian faith and through church-specific application (Wilson, 2021). However, there is no one specific organization that governs the continued research and development of this model. This has resulted in criticism of the actual validity of this tool in the use of accurate assessment of human personality (Hook et al, 2021). The assessment is best reserved for those looking for a fun and trendy way to begin the process of growing to know oneself better.

Clifton Strengths Finder

The Strengths Finder assessment is a model developed from the field of positive psychology (Rath, 2007). It was developed by Don Clifton and other researchers from Gallup in an effort to identify the things that people are doing well rather than focusing on helping people correct that which has been labelled as wrong. They identified 34 strengths and a means by which they could identify these characteristics in individuals using an assessment. Research shows that this assessment can help clients search for fulfilling careers (Owens, 2019). More research is needed to identify this assessment's usefulness in identifying or increasing an employee's work effectiveness.

GiANT: 5 Voices

The GiANT assessment is one of the newest personality assessments. Jeremie Kubicek and Steve Cockram created GiANT and the assessment to provide people with a different look at themselves and help them apply the knowledge and experience gained from the assessment (Kubicek & Cockram, 2016). Their initial focus was improving communication amongst employees and within organizations. The model is developed around five voices: the nurturer, the creative, the guardian, the connector, and the pioneer. Individuals learn to communicate more effectively as they identify their voice and apply it to knowledge gained regarding the voices of others within their community. Further work has focused on levels of stress and productivity which partners well with communication style to help individuals become more effective leaders and contributors (Kubicek & Cockram, 2015; Kubicek & Cockram, 2019). Their work displays great promise as it relates to this author's field of study. However, more research is needed related to this assessment because no journal articles or research studies could be found.

The Birkman Method

Roger Birkman began developing his personality model and assessment in the 1950s (Birkman, 1995). An organizational psychologist, Birkman conducted research on the perceptions people have of themselves and of others to help corporate executives develop within their roles of leadership. He created an inventory to assess their Interests and Usual Behavior styles (Fink & Capparell, 2013). An individual's Usual Behavior style reflects how they see themselves and how others see them act throughout any given day (Birkman, 2017). This behavior represents the external part of their personality. It is the behavior that is evident and represents a person's strengths.

Birkman's (1995) research went beyond these areas to pinpoint the unique needs of an individual's personality and the possible stress responses that can occur when those needs are not met. The personality needs of an individual are not always apparent to others as this represents the internal part of their personality (Birkman, 2017). Just as people have physical needs, their personalities have needs as well. The assessment helps to identify how an individual needs to be communicated to and treated as well as the social and physical environments they need to be in to perform at their best. People experience stress when the needs of their personality are not met. People can avoid and eliminate this stress by identifying their unique needs and working to ensure that those needs are met.

Ongoing research has opened the usefulness of the assessment to be applicable to career exploration, employee development, and relational coaching (de Filippis, 2018). Certified coaches have found success in using the Birkman Method to help high school students identify possible college majors and career opportunities. Likewise, coaches also use the assessment to

assist couples in improving their relationships by guiding them through the process of understanding their unique personalities and how they compare to their counterparts.

Birkman International conducts regular, strenuous validity certification testing as noted in their technical manual (Slack et al., 2020). These tests check to ensure the highest level of repeatability and accuracy. Various white papers have been published regarding the comparison of The Birkman Method to other assessments (Birkman, 2016) and evidence is given for the superiority of Birkman in areas of validity and reliability as well as its application to career development and hiring processes. Other sources and research articles point the positive application of this assessment in the areas of job satisfaction (Earl et al., 2019; Huang et al., 2016) and student self-confidence (Maxwell et al., 2016). This research model and assessment can be a useful tool for measuring employee effectiveness and manager-subordinate relationships because of its ability to identify the Usual Behavior style and specific personality needs of individuals. It also has the potential to publish a comparative report that analyzes the similarities and differences of two or more individuals. This feature will apply directly to the relationship shared between a Senior and Executive Pastor as it compares to the nine personality components assessed using The Birkman Method.

Social Energy. The component of Social Energy identifies a person's approach to and need for social engagement (Birkman, 1995; Birkman, 2017). People who are low in Social Energy tend to be more independent and are likely to work well alone. Those on the other end of the scale are more sociable and prefer to work and socialize in larger groups.

Ministry work is highly social as it requires pastors to spend time with people for the purpose of teaching, encouraging, and meeting the spiritual needs of others. Though Executive Pastors work to ensure the operational and administrative functions of the church are completed

correctly, they must work with staff and volunteers to see that the work is completed (Taylor, 2015). They also engage with others as they teach and serve in pastoral ministries. Executive Pastors who are high in Social Energy will function best in environments that allow them to work in groups and often meet with other people. Those who lack Social Energy must be aware of their need to regain energy alone while being attentive to the need to work alongside others. They must also learn to be aware of the social needs of their Senior Pastor and other staff members. The desire to pull away and work alone must be tempered with the need to prioritize the needs of others.

Physical Energy. The component of Physical Energy identifies an individual's preferred pace for action (Birkman, 1995, 2017). People who are low in Physical Energy are more efficient in the expression of their energy and tend to plan before acting. Those who are higher in this category are more active and tend to stay busier than those who are low.

Pastors serve in roles that allow them to be both highly relational and independently intellectual (Lawson & Boersma, 2017). The work of counseling, planning, and teaching may not be as physically taxing as professions requiring manual labor, these roles may require that individuals act quickly to complete requested and required work. Pastors who are low in Physical Energy may need to delegate work requiring an immediate physical response to others who have higher levels and can respond to the needs more quickly. This will ensure the need is met quickly while helping these pastors to avoid stress.

Emotional Energy. Emotional Energy is a measure of an individual's comfort and openness to the expression of emotions (Fink, 2013; Birkman, 2017). Someone who is low in Emotional Energy is more practical in the expression of their emotions. They are more objective emotionally and may appear detached by others who observe their reactions. This is a contrast

with individuals who are more expressive with their emotions and come across as warm and sympathetic.

Church work often involves ministering to individuals with high emotional needs (Lawson & Boersma, 2017). Many people need emotional support as they encounter trials in this lost and sinful world. Staff are expected to work patiently with others and serve them as they deal with loss, grief, and pain. Executive Pastors who are high in Emotional Energy thrive in situations where emotions are freely expressed and need environments where they can share in the emotional needs of others. Those who lack Emotional Energy must remind themselves of the need to be attentive to those who are hurting emotionally. They also need to learn to recognize the emotional needs of their Senior Pastor and staff to ensure that they respond appropriately in meeting the different levels of emotional needs.

Self-Consciousness. The measurement of Self-Consciousness reflects the amount of sensitivity a person applies when communicating with others (Birkman, 1995, 2017). People who lack this personality component are more direct in their communication style and often speak from a logical perspective. People who are higher in Self-Consciousness often communicate thoughtfully as they focus on how their message will impact the feelings and needs of the other person.

Communicating facts and figures can be handled with directness and logical progression. However, pastors must often communicate in difficult situations with tact and sensitivity (Lawson & Boersma, 2017). As with Emotional Energy, Executive Pastors must be cognizant of how their behavior affects the people they encounter. Words can be damaging to individuals and relationships even when the intentions are pure. Executive Pastors who are lower in Self-Consciousness may be able to communicate directly with others who have similar needs.

However, they must be intentional in communicating with compassion and encouraging words when having difficult conversations with staff members who need to hear that they are respected and that their contributions are appreciated.

Assertiveness. Assertiveness identifies the level to which someone will speak up and offer their opinion openly (Birkman, 1995, 2017). It also serves as a measurement of a person's management style (Mason, 2015). A lack of assertiveness is evident in people who seldom speak up in meetings or other social settings. It is also apparent in leaders who are more asking in their management style. They offer options to their teams and ask for their input rather than telling them what to do. Those on the opposite end of the spectrum speak up freely and sometimes forcefully when they have ideas or opinions to share. They are also more likely to tell others what to do than to ask them to help. This is not a reflection of being controlling but of understanding the job that needs to take place and seeing the need for haste in the situation.

Executive Pastors are charged with the responsibility of leading staff members and volunteers in accomplishing many tasks and responsibilities for their churches. The leadership of individuals and teams requires a leader who understands one's leadership style and the way those individuals need to be led (Taylor, 2015). A leadership style that lacks assertiveness in giving directions and commands will work best with staff members and volunteers who need a democratic style of leadership that allows them to self-direct in the work that needs to be accomplished. Leaders that are more assertive in their management styles will serve best with teams that need direct supervision and directions that are direct and specific as to what needs to be accomplished and how it is to be completed.

Insistence. Insistence reflects an individual's approach to structure and details (Birkman, 1995, 2017). People who are highly insistent prioritize details and routine. They thrive in

environments that are process-oriented and provide a systematic process for accomplishing work. Others who have a lower level of Insistence tend to be more flexible in how they approach work and tasks.

Some of the work to be accomplished by Executive Pastors is administrative and requires leadership by those that are highly insistent in how they approach details and organization (Taylor, 2015). Those who are high in the component of Insistence will likely do well in creating and following administrative processes as they oversee financial and planning aspects of church ministry. Others who tend to be more flexible in their approach to specific procedures may need to ask other staff members or volunteers to assist in the areas of accounting, planning, and scheduling.

Incentives. The component titled Incentives identifies an individual's level of desire for receiving personal reward (Birkman, 1995, 2017). Those who fall on the lower end of this scale have a preference to share in group rewards and have a primary desire to help the group succeed. People who are driven to receive personal rewards and recognition typically score higher in this component.

Senior and Executive Pastors often have the responsibility of leading many teams, not just the church staff (Lawson & Boersma, 2017). This will require them to monitor and maintain the health of the team and work together to accomplish team missions and goals. Pastors with a low-level need of personal incentives will find it easier to promote the overall success of the team. Those who are driven by personal milestones and career advancement will need to be careful to balance personal reward with actions that serve the needs of the team.

Restlessness. A person's preference to either focus their attention or alternate their focus to a variety of things is measured by a person's level of Restlessness (Birkman, 1995, 2017).

Those with a high level of Restlessness tend to be highly responsive to change and are excited by new ideas. People on the other end of the spectrum tend to focus on solitary tasks for extended periods of time and are not easily distracted from the work on which they are focused.

As with physical energy, pastors need to be ready to respond to many different needs. They can do their best to plan out their days and weeks so that time is reserved for all that needs to be accomplished, but Senior and Executive Pastors must regularly respond to the unplanned needs of their staff and the emergency requests of the members of their congregations (Lawson & Boersma, 2017). A higher level of restlessness will help pastors respond quickly to schedule changes. Those with lower levels of restlessness will need to be aware of their stress levels as unexpected changes can produce anxiety.

Thought. The ninth and final personality component is Thought. This component evaluates a person's decision-making process and their interest in considering possible consequences when making decisions (Birkman, 1995, 2017). People who are highly reflective and spend time thinking through the possibilities of the decisions they make will often have a higher level in this category. Those who see themselves as lower in this component are very decisive and reach conclusions more quickly than those who are higher.

The general job descriptions of most Senior and Executive Pastors offer opportunities for planning and preparation (Lawson & Boersma, 2017). Both positions will benefit from pastors that register on the higher end of the Thought scale. Senior Pastors who score higher in this area will do well in roles that allow them time to process theological concepts and apply them to the lives of their congregants. Likewise, Executive Pastors who are also higher in this area will benefit by taking time to think through planning activities as they assess needs and think through consequences. For both roles, those who are on the lower end of the scale may need to enlist the

help of others to help them think through the details that need to be considered in specific areas of church management.

Rationale for Study and Gap in the Literature

The role of an Executive Pastor is a common position on the staff of many mid-size and large churches (Fletcher, 2004; Taylor & Bonem, 2015). This position can increase a Senior Pastor's productivity with staff leadership and administrative responsibilities. However, the success of the individual in this position is often determined by their personality and their relationship with their Senior Pastor (Bonem & Patterson, 2005). The Executive Pastor traditionally reports to the Senior Pastor and therefore must be comfortable to lead while being under the care and direction of a superior. Managing responsibilities in the areas of church organization and operations, the Executive Pastor must maintain a strong but submissive relationship with the Senior Pastor to implement the directional vision of the Senior Pastor effectively. Understanding the job responsibilities and expectations of the Senior Pastor helps the Executive Pastors accomplish responsibilities, but there is more to maintaining a healthy working relationship than following orders. Understanding the unique personalities of oneself and others allows for a more accurate prediction of job performance and the alignment of complimentary personalities.

Research is available in specific areas related to this current study (i.e., personality traits, career development, and personality assessments), but there is a lack of literature that compares the connection between human personality and staff relationships. Also, there are few studies detailing the research of personality traits of church staff members. Finally, no research could be located that utilized The Birkman Method personality assessment to identify the traits of Senior Pastors and compare the results of the similarities and conflicts found within these trait

comparisons. This study was conducted to provide results to fill this identified gap in the available literature.

Profile of the Current Study

The literature review highlighted the need for further research related to meeting the needs of others through the role one plays with their staff or team. There is a gap in the literature related to staff leaders' personalities and the effect personalities have on their relationships. This study focused on a comparison of the personality components of Senior and Executive Pastors. The Pastors were each asked to complete a personality assessment which provided numerical data for quantitative analysis. Though the sample size was small, analysis provided results with a high level of confidence related to the shared and different traits of each group of participants. The researcher was able to interpret the results and provide a summary showing how the participants can use the results to improve their working relationships.

CHAPTER THREE: RESEARCH METHODOLOGY

The role of the Executive Pastor became a standard position in many mid-size and large churches over the past 20 years (Fletcher, 2004). This position's responsibilities range from staff and church administration to operational oversight of church ministries. The Executive Pastor relieves the Senior Pastor's workload so that they can focus on teaching and pastoral care for the congregation. The Executive Pastor's effectiveness is often determined by their personality and the level to which they can maintain a healthy relationship with their Senior Pastor (Bonem & Patterson, 2005). Though the Executive Pastor partners with the Senior Pastor in leading the church, they normally report to the Senior Pastor and must be comfortable in serving in a subordinate role.

This chapter will present the research method design used in exploring the relationship between personality components and the relationship shared between a Senior and Executive Pastor. This research sought to identify correlations between personality attributes of Senior and Executive Pastors. The research problem, purpose statement, and questions will be reviewed, followed by the quantitative research methodology. Then the data collection and analysis processes will be laid out. Finally, a summary of the chapter will provide a review of the research methodology.

Research Design Synopsis

The Problem

The Executive Pastor acts as the intermediary for executive leadership, staff personnel, and the congregation (Bonem & Patterson, 2005). Overseeing these relationships is often stressful as conflict is inevitable. The Executive Pastor must manage all these relationships while providing leadership to the church and submitting to the Senior Pastor. A healthy relationship

must exist between the Senior and Executive Pastor as it acts as a foundation for all other relationships the Executive Pastor must maintain.

Existing literature presents many ideas related to staff and team development. Research provides evidence that positive contributions by individual team members can enhance the output of the team or organization (Lake, 2020; Muhumuza & Nangoli, 2019). The theory that leaders can further the development of personnel by encouraging them to take on leadership responsibility that falls outside of their job descriptions is also supported (Getz, 2003). This information applies directly to the development of ministry staff personnel, as well as staff development in other types of organizations.

The reviewed literature lacked material related to the relationships between executive leaders that work as partners but operate in a hierarchical system where one executive reports to the other. There was also a gap in the literature related to the effect of personality types on these relationships. Some resources suggest assessments can help leaders improve their personal job performance and develop employees according to a preidentified set of traits. Knowledge of personality traits can be utilized to help leaders improve their leadership abilities, but the literature lacks information aimed at helping leaders use knowledge of personality types to improve their relationships with others in their organizations.

Some literature is available to help leaders address and meet the emotional needs of the employees using personality assessments. However, the aim appears to be the increase of productivity rather than the betterment of the individual. Some assessments can be used to help individuals at all levels recognize their ability to lead and grow in that ability through knowledge of themselves. The Birkman Method is an assessment that stands out from the rest in its ability to help leaders recognize the specific personality needs of others. Results from the assessment can

help people improve the relationships. Research is needed to determine how an understanding of specific personality types of individuals can aid the relationship development of Senior and Executive Pastors in local church ministry.

Purpose Statement

The purpose of this quantitative correlational research was to understand if a relationship exists between the personality components of Senior and Executive Pastors. This study collected data in a quantitative form using a personality assessment. The data was then analyzed to determine if a correlation exists between the personality components of Senior and Executive Pastors.

Research Questions and Hypothesis

Research Questions

The following research questions guided the study:

RQ1. What personality components, as measured by The Birkman Method, are most prevalent in Executive Pastors among the sample group?

RQ2. What personality components, as measured by The Birkman Method, are most prevalent in Senior Pastors among the sample group?

RQ3. What relationship exists, if any, between the personality components, as measured by The Birkman Method, of Senior and Executive Pastors?

Research Hypothesis

H01: There are no most prevalent personality components, as measured by The Birkman Method, among Executive Pastors.

H02: There are no most prevalent personality components, as measured by The Birkman Method, among Senior Pastors.

H03: There is not a statistically significant relationship between the personality components, as measured by The Birkman Method, of Senior and Executive Pastors.

Research Design and Methodology

A plan was followed throughout the research process to guide this work (Creswell, 2014). The most utilized research designs are the qualitative, quantitative, and mixed methods. This researcher will utilize the quantitative research method and the quantitative correlational research design.

The purpose of this quantitative correlational research was to determine if a relationship exists between the personality components of Senior and Executive Pastors. A correlational study investigates the relationship between two or more variables and attempts to identify if changes in one variable causes a predictable change in the other variable or variables (Leedy & Ormrod, 2018). When the change in one variable causes the other variable to increase or decrease, it shows that a correlation exists. Researchers can apply statistical analysis to the data to identify the level or degree of variance found in the results of the research (Creswell, 2018). The quantitative approach was selected because it provides a means by which statistical data can be gathered and the correlation between personality components can be analyzed (Creswell, 2014). It allowed this researcher to compare the relationship of many variable types of personality components. The research compared the personality traits of Senior and Executive Pastors. The quantitative data was analyzed to identify possible relationships between the personality components of Senior and Executive Pastors.

The quantitative part of this research used an instrument to collect data in a quantitative form using a personality assessment. The instrument selected for this research was The Birkman Method created by Roger Birkman (1995). The results of this data were used to identify specific personality components of the Senior and Executive Pastors for the purposes of comparison and contrast analysis.

Population(s)

The population for this study came from Senior and Executive Pastors from Southern Baptist churches in the state of Oklahoma that had an average Sunday worship attendance of 500 individuals or more. The Senior Pastor is the Pastor who serves as the senior leader on a church staff, is responsible for preaching/teaching, and is responsible for vision creation and casting (Bonem & Patterson, 2005). The Executive Pastor is the Pastor who serves as the second in command, fulfills a subordinate leadership role to the Senior Pastor, is responsible for implementing the vision cast by the Senior Pastor, and leads in the development of the church staff and ministries (Taylor & Bonem, 2015). The participants for this research were 11 out of 24 Pastors who met the requirements of the delimitations and agreed to participate voluntarily.

Sampling Procedures

The sampling process utilized The Birkman Method personality assessment to gather quantitative data related to nine personality components. A total of 11 out of 24 Southern Baptist Senior and Executive Pastors from Oklahoma met the population criteria and agreed to voluntarily participate were assessed for this research (Leedey, 2018). The nine components of the participant's personality assessed were Social Energy, Physical Energy, Emotional Energy, Self-Consciousness, Assertiveness, Incentives, Insistence, Restlessness, and Thought (Birkman, 1995). The assessment results for Senior and Executive Pastors were statistically analyzed and compared for similarities and differences.

Limits of Generalization

This study was limited to Senior and Executive Pastors that had served together for at least two years in a Baptist church in Oklahoma that had a membership of over 500 people so the

results may not be applicable to pastors from other states or to those pastors that served in other denominations.

The results of the research will be specifically applicable to executive leadership positions within the local church. The results may be generalized so that application can be made for any supervisory relationship in ministry or secular organizations. However, as it applies to the positions of Senior and Executive Pastor, the specific results may not relate to the cultures of all organizations. Likewise, the results will not apply to staff members of churches or other organizations that do not have supervisory responsibilities.

Finally, the results of the research will only apply to the nine personality components of The Birkman Method personality. This assessment was detailed previously. Therefore, no comparison or application can be made using this research to other personality assessments.

Ethical Considerations

All participants were over the age of eighteen. Therefore, parental consent was not required.

Confidentiality was maintained throughout the process. Results from the personality assessment will not be shared without written consent. Participant names were not used in the results of the research, nor will they be used in any future publications. Assessment results are kept in a password-protected account and can only be accessed by the researcher. Employees of Birkman International that have access to data are unable to identify the participant by name or other identifying information, only by account numbers.

Instrumentation

The measuring instrument selected for this portion of the research was The Birkman Method personality assessment and was used with written consent from Birkman International

(see Appendix A). Birkman began developing his personality model and assessment in the 1950s (Birkman, 1995). An organizational psychologist, he conducted research on the perceptions people have of themselves and of others to help corporate executives develop within their roles of leadership. He created an inventory to assess their interests and Usual Behavior styles (Fink & Capparell, 2013). The assessment analyzes the responses of the participant and provides numerical data from 1 to 99 for each of the nine assessed personality components. His research went beyond these areas to pinpoint the unique needs of an individual's personality and the possible stress responses that can occur when those needs are not met. Ongoing research has opened the usefulness of the assessment to be applicable to career exploration, employee development, and relational coaching (de Filippis, 2018). These areas are directly related to the areas Senior and Executive Pastors need to focus on to be effective in their roles.

Validity

Validity in research is the range to which evidence of credibility and accuracy is proven for the data gathered (Creswell, 2014). It refers to how well the findings gathered from the research participants relate to similar individuals or groups who do not participate in the study. This research study used one instrument that has been proven valid and reliable through years of observed research and validity certification testing. This research study will not make any changes to the instrument ensuring the validity and reliability of the instrument remains intact.

Birkman conducts regular, strenuous validity certification testing as noted in their technical manual (Slack et al., 2020). These tests check to ensure the highest level of repeatability and accuracy. Various white papers have been published regarding the comparison of The Birkman Method to other assessments (Birkman, 2016a, 2016b, 2016c). Comparative research was conducted using the Clifton Strengths Finder, the Hogan Personality Inventory, and

the Myers-Briggs Type Indicator. Evidence is given for the superiority of Birkman in areas of validity and reliability as well as its application to career development and hiring processes. Other sources and research articles point to the positive application of this assessment in the areas of job satisfaction (Earl et al., 2019; Huang et al., 2016) and student self-confidence (Maxwell et al., 2016).

Reliability

The use of a measuring instrument that has been proven reliable through testing and research is critical to the advancement of scholarly research. Reliability is defined as the extent to which a data gathering measurement or instrument is free from error and the degree to which it is consistent (Galvan & Galvan, 2017). Furthermore, reliability also includes the dependability and accuracy of the instrument to measure a specific characteristic in a consistent and error-free manner (Leedy & Ormrod, 2018). Ensuring the reliability of the data gathering instrument gives credibility to the study and confidence to the researcher regarding the results of their research.

Birkman International conducts annual research to confirm the reliability of The Birkman Method (Birkman, 2019; Slack et al., 2020). The most recent results from the annual certification come from testing that took place in 2018 and 2019. First, past, and present assessment results were analyzed to check for internal consistency. Results ranged from .62 to .84 for the nine components that the assessment measures. Next, test-retest reliability was measured to verify the stability of results over time. The test was conducted by administering the assessment twice to the same participants with a 2-week gap between each occasion. Results ranged from .70 to .89 for Usual Behavior and .61 to .80 for Needs. The authors of the reliability study found that these results were consistent with reliability results for similar instruments.

Research Procedures

The Birkman Method Personality Assessment was administered via an online portal. Birkman International provided the use of the assessment pro bono. The researcher initiated the assessments for the participants using the online portal, at which time they received an email with a link to the assessment. Participants were asked to answer 298 questions. Software owned and operated by Birkman International automatically compiled the results and sent an email of completion to the researcher. The researcher then compiled the results in an Excel spreadsheet and uploaded the data to the IBM SPSS Statistics analysis tool for analysis and evaluation. This methodological design was selected to answer the following questions: What personality components, as measured by The Birkman Method, are most prevalent in Executive Pastors among the sample group, what personality components, as measured by The Birkman Method, are most prevalent in Senior Pastors among the sample group, and what relationship exists, if any, between the personality components, as measured by The Birkman Method, of Senior and Executive Pastors?

The researcher began the data gathering process by contacting the owners of the collection instrument to communicate the objective of using the instrument in a research study and to get the expressed consent of Birkman International (see Appendix A). Next, a formal request to conduct this study was submitted to Liberty University IRB. Once approval was received (see Appendix B), a request was sent via email to all Senior and Executive Pastors at Southern Baptist churches in Oklahoma that had an average Sunday morning attendance of over 500, asking for the voluntary participation. The list of potential participants was requested from (see Appendix C) and provided by the Oklahoma Baptist Convention. Senior and Executive

Pastors who agreed to participate were asked to sign a letter of consent (see Appendix D) which was sent via email.

A list of detailed instructions (see Appendix E) was sent to all participants once the signed letter of consent had been received. Participants could withdraw their participation at any time. Participants took the personality assessment online. Birkman International automatically tabulated the results and stored them in their database. The results could only be accessed by the author using a secured account and password. Birkman International encrypts the identity of the participant and the results are kept only for research and future purposes. They can be deleted from their system with a written request from the participant.

Data Analysis and Statistical Procedures

Data Analysis

Numerical data was gathered from The Birkman Method personality assessment for the purpose of studying the relationship between nine personality components of Senior and Executive Pastors (Creswell, 2014). The data was analyzed to identify how the variables relate and respond to each other. The results were presented on an Excel spreadsheet and then summarized in table format. Then the results were interpreted so that the results could be applied to future occurrences (Creswell, 2018). The researcher looked for an identifiable pattern within the responses of the participants, noting the relationship between personality components of Senior and Executive Pastors. Finally, the numerical results were communicated through written word to provide an explanation of what was or was not discovered from the research.

Statistical Procedures

The tools used for data and statistical analysis were Microsoft Excel and IBM SPSS Statistics software. Individual Birkman report results were entered into the analysis tool using

codes assigned to each assessment to ensure the confidentiality of the results. Number values of 1 to 100 were randomly selected using the RAND function in Excel for each of the 11 Pastors. These numbers were not recorded with the corresponding participant names. Results of The Birkman Method assessments were analyzed to calculate descriptive statistics (mean, standard deviation, median, minimum, maximum, and range). All statistical analysis techniques followed the methods as described by Levine (2011) and Warner (2013). Results were plotted on graphs, charts, and histograms. This provided a tool for comparing the nine personality components of the pastors involved in the study.

Chapter Summary

Executive Pastors face the difficult challenge of maintaining relationships with many people in their local congregations. Their relationship with their Senior Pastor relates directly to their job-related effectiveness as perceived by the Senior Pastor. Personality traits directly affect how people relate to one another. Understanding one's personality components in relationship to those of others can aid in maintaining effective relationships.

Personality assessments are useful in identifying traits and components of a person's personality. The information gained from Birkman can direct Senior and Executive Pastors in understanding themselves better and how they can relate more effectively with others. It should not be used to decide whether a person can or cannot do a specific job but to reveal how people with varied strengths in specific areas can work differently with others who may have different needs. Understanding their unique personality components and the components of others can help Senior and Executive Pastors grow in their careers as they learn to relate more effectively with the people they encounter in their roles.

This research was conducted to identify if a relationship exists between the personality components of Senior and Executive Pastors. Data was gathered using a quantitative correlational design through which numerical data was analyzed related to nine personality components of Senior and Executive Pastors. The results of this research are provided in the next chapter.

CHAPTER FOUR: FINDINGS

Overview

This research was conducted to fill a gap in literature related to executive church leaders and their personalities. The focus of the study was guided by three research questions designed to identify the personality components of the participants and to identify what, if any, relationship exists between the two groups of participants. This chapter describes the protocol and the measures taken for gathering research data. Next, it provides the demographic and sample data gathered and the data analysis and findings of the research. Finally, an evaluation of the research design is provided.

Research Questions

RQ1. What personality components (as measured by The Birkman Method) are most prevalent in Executive Pastors among the sample group?

RQ2. What personality components (as measured by The Birkman Method) are most prevalent in Senior Pastors among the sample group?

RQ3. What relationship exists, if any, between the personality components (as measured by The Birkman Method) of Senior and Executive Pastors?

Hypotheses

H01: There are no most prevalent personality components, as measured by The Birkman Method, among Executive Pastors.

H02: There are no most prevalent personality components, as measured by The Birkman Method, among Senior Pastors.

H03: There is not a statistically significant relationship between the personality components, as measured by The Birkman Method, of Senior and Executive Pastors.

Compilation Protocol and Measures

The purpose of this quantitative correlational research was to understand if a relationship exists between the personality components of Senior and Executive Pastors. This study collected

data in a quantitative form using a personality assessment called The Birkman Method. The plan was to complete multiple analyses in response to the three research questions, or those analyses that might have become apparent while responding to the research questions. The data set was prepared for analysis using Excel and SPSS. Minor formatting changes were made to be compatible with the analysis applications.

There were 18 dependent variables (DVs) in this analysis. The DVs were discrete numerical variables ranging from 1 to 99, measuring various personality components and informed by The Birkman Method Personality Assessment questionnaire. Each of the nine personality components is composed of two subcomponents. Needs reflects “unique needs of an individual’s personality;” and Usual reflects “usual behavior styles.” There was one categorical control factor (CF) indicating one of two roles or levels for the pastors who participated in the study.

Microsoft Excel and IBM’s SPSS version 28 (IBM, 2023) were used to perform the analysis. Because the DVs were numerical, and the single CF was categorical, the primary analytical methods were descriptive statistics (mean, standard deviation, median, minimum, maximum, and range); the one-sample Kolmogorov-Smirnov (K-S) goodness of fit test; two-sample *F* tests of variance; *t* tests of means for two groups; and analysis of variance (ANOVA). All techniques followed the procedures in Levine (2011) and Warner (2013).

The descriptive statistics comparisons and the *F* and *t* tests were performed using Excel’s data analysis module under the data menu. SPSS was used to perform the K-S test (Analyze/Nonparametric Tests/Legacy Dialogues) and ANOVA (General Linear Model/Univariate). ANOVA was performed with the numerical DVs and the CF (LVL) as the fixed factor.

Demographic and Sample Data

The researcher collected data for the study from March 3, 2023, to May 15, 2023. The Associate Executive Director of the Baptist General Convention of Oklahoma (BGCO) identified 12 Senior Pastors and 12 Executive Pastors from the BGCO as individuals who met the criteria set forth for this study. Each of the 24 Pastors were notified by an initial email (see Appendix F) with a consent form attached (see Appendix D) on March 3, 2023, and invited to participate in this study and asked to confirm their willingness to participate in the research by completing the consent form and sending it back via email. Three pastors replied with their signed consent forms. A second email (see Appendix G) was emailed on March 30, 2023, to the remaining 21 pastors. Eight pastors replied with signed consent forms, and one declined to participate. Typed letters (see Appendix H) and unsigned consent forms were mailed on April 11, 2023, to the 12 pastors who had not replied. Three pastors responded by mailing their signed consent forms back to the researcher and another emailed that they would not be participating. Voicemails were left for five of the eight remaining pastors and visits were made to the churches of the other three who had not responded on April 26, 2023. Two pastors declined to participate and six did not respond. A final email (see Appendix I) was sent to the six remaining pastors on April 27, 2023. One pastor replied with a signed consent form, and two declined to participate. Of the 24 eligible participants, 15 agreed to participate by returning their signed consent forms and 11 of those 15 participants completed the Birkman assessment. In total, 11 of the original 24 pastors who were invited to participate completed the assessment resulting in a response rate of 45.83%.

Descriptive statistics provided by the BGCO showed the demographics of the 11 participants (gender, position, and tenure). All were male pastors in the BGCO. Five of the participants were Senior Pastors and six were Executive Pastors. Eight participants (72.72%) had

6 or more years of experience in their current positions. Table 1 summarizes the demographic analysis for the number (N) and the percentage of participants.

Table 1

Participant's Demographic Data

| Demographic | Classification | N | % of Participants |
|-------------|----------------------|----|-------------------|
| Gender | (1) Male | 11 | 100.00% |
| | (2) Female | 0 | 0.00% |
| Position | (1) Senior Pastor | 5 | 45.45% |
| | (2) Executive Pastor | 6 | 54.55% |
| Tenure | (1) 2 –5 years | 3 | 27.27% |
| | (2) 6 –10 years | 3 | 27.27% |
| | (3) 11 –15 years | 1 | 9.09% |
| | (4) 16 –20 years | 3 | 27.27% |
| | (5) 21 or more years | 1 | 9.09% |

Data Analysis and Findings

The data were collected through random sampling from a pool of Southern Baptist Senior and Executive Pastors in Oklahoma. The data set was modified to be compatible with Excel and SPSS. The first modification was to convert the variables to SPSS-compatible abbreviations. The variables were coded as follows, where the letter U at the end reflects the Usual Behavior subcomponent; and the letter N at the end reflects Needs subcomponent:

- Social Energy: SEU, SEN
- Physical Energy: PEU, PEN
- Emotional Energy: EEU, EEN
- Self-Consciousness: SCU, SCN
- Assertiveness: ASU, ASN
- Insistence: ISU, ISN
- Incentives: ICU, ICN

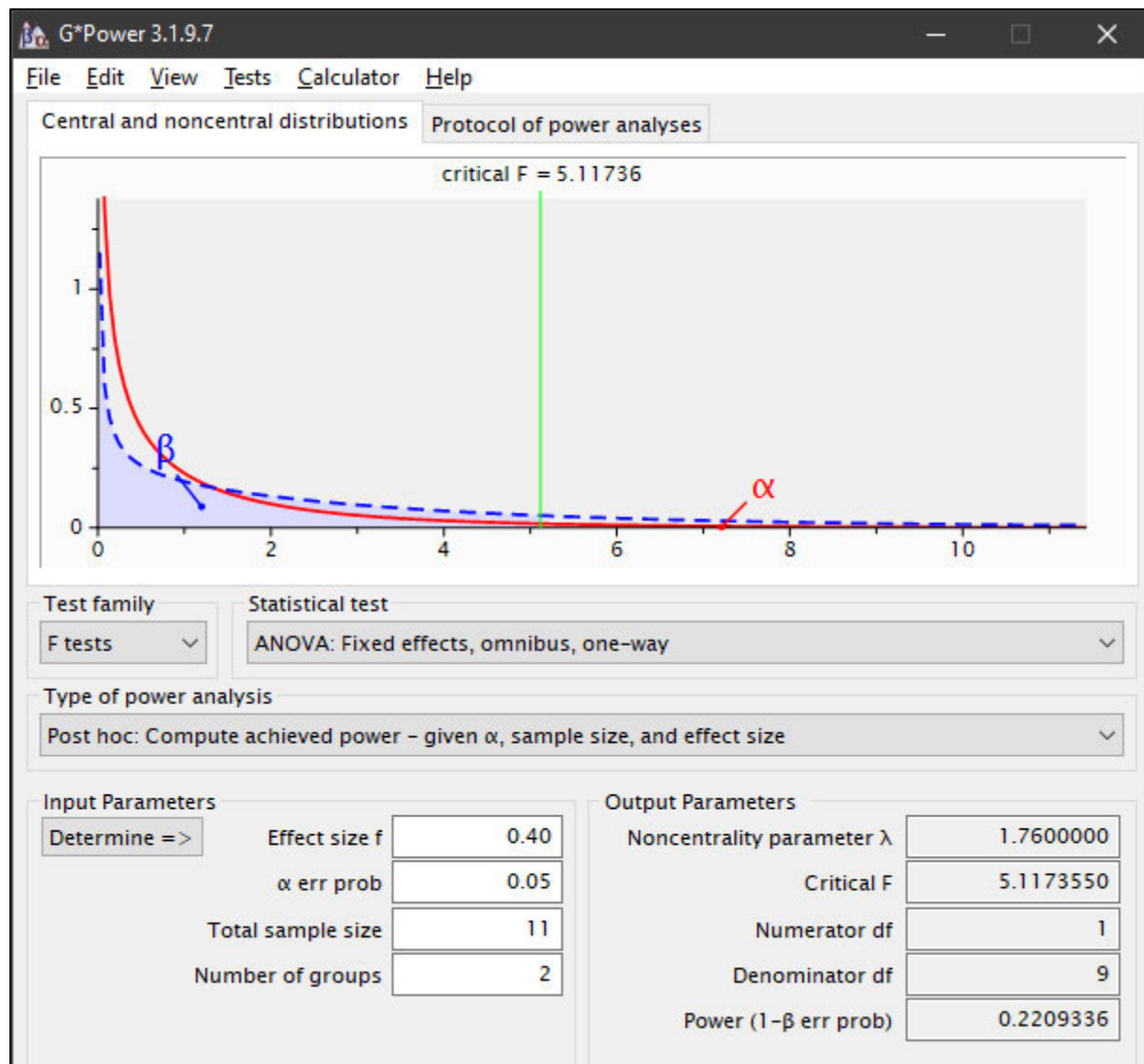
- Restlessness: RSU, RSN
- Thought: THU, THN

The pastoral roles were labelled LVL. There were two groups: Senior Pastors (SR) and Executive Pastors (EX). There were 11 participants in the sample. Five were Senior Pastors and six were Executive Pastors.

The next step was to confirm that the data set was complete with no missing or corrupt values and no outliers, from the completed questionnaires. There were no issues with the data set. Given the sample size in the data set, a post hoc power analysis was performed, shown in Figure 1, using G*Power (Faul et al., 2009) and following the recommendations for effect size and level of significance of Cohen (1988). The low sample size ($n = 11$) and statistical power ($1 - \beta = .221$) were unavoidable given research constraints. The statistical analysis proceeded using descriptive statistics comparisons, parametric hypothesis tests, and ANOVA.

Figure 1

*Post Hoc Power Analysis using G*Power*



Descriptive Statistics, Graphical Analysis, and Comparisons

Descriptive statistics analyses, graphical analysis, and comparisons were performed in Excel. These analyses were performed for all three research questions.

A mean, standard deviation, median, minimum, maximum, and range were computed for each of the two pastor roles (LVL), and for each of the 18 dependent variables (DVs). The differences between Senior and Executive Pastors for each variable, for the same descriptive statistics (i.e., mean, median, and maximum) were also computed. This analysis is summarized in Appendix J. The DVs include the 9 personality components defined by Birkman (1995) and were measured for each participant's Usual Behavior and Needs.

In addition to the forementioned statistics, nine additional variables representing the difference between the Needs subcomponent of each variable and the Usual Behavior subcomponent were created. These differences are provided in Appendix K.

Statistical Hypothesis Tests and Procedures

The following analyses were performed in support of Research Questions 1 and 2:

- Graphical analysis (Excel)
- *F* test of variance (Excel)
- K-S goodness of fit test (SPSS).

The following statistical tests were performed for Research Question 3:

- Two-sample *t* test of means (Excel)
- One-way ANOVA (SPSS)
- Wilcoxon rank sum test—a nonparametric test comparing the medians of two groups (Excel)

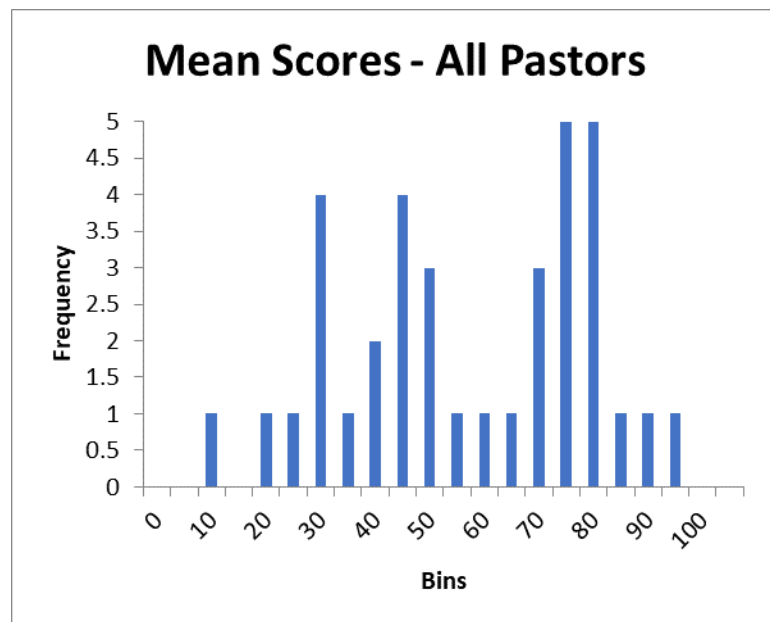
The statistical assumptions for each of the parametric tests were checked. This was followed by analysis to compare scores between the two groups (LVL: SR and EX).

Research Question 1

Research Question 1 asked, “What personality components (as measured by The Birkman Method) are most prevalent in Executive Pastors among the sample group?” The first task was using graphical analysis of the distribution of the means, medians, and maximum scores for each of the 18 personality components and subcomponents. The histograms for each of these three descriptive statistics are depicted in Figures 2, 3, and 4.

Figure 2

Histogram of Mean Scores for 18 Personality Components, All Pastors



The first objective of the graphical analysis was to determine if there was any noticeable variation in scores, or if the scores were tightly clustered around a single value. If there was truly a difference in the scores for each of the 18 dependent variables, then the graphical analysis would illustrate spread, or variation.

The second objective was to examine the probability distributions of the mean, median, and maximum scores, for all pastors and dependent variables (36 values). The intent was to

determine if the descriptive statistics visually depicted a normal (bell curve), uniform distribution (equal probability of any single value), or another distribution (Poisson or exponential).

Figure 3

Histogram of Median Scores for 18 Personality Components, All Pastors

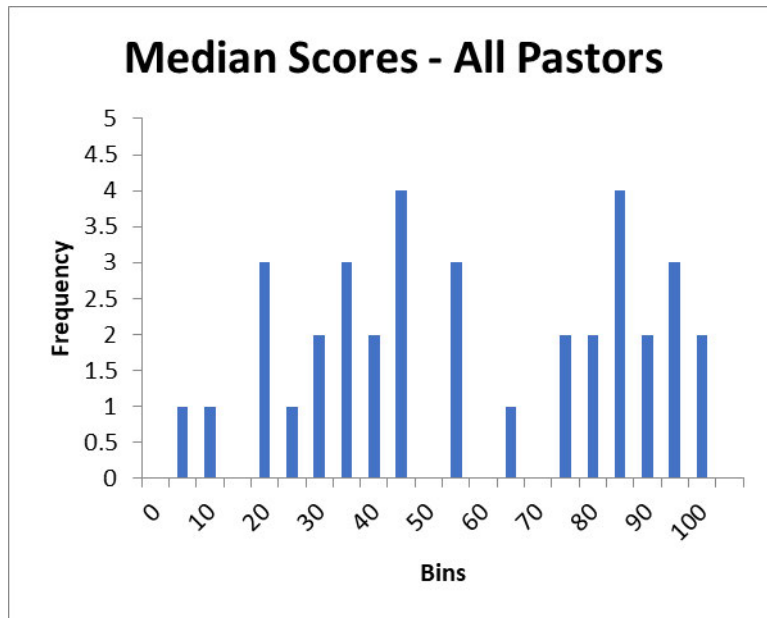
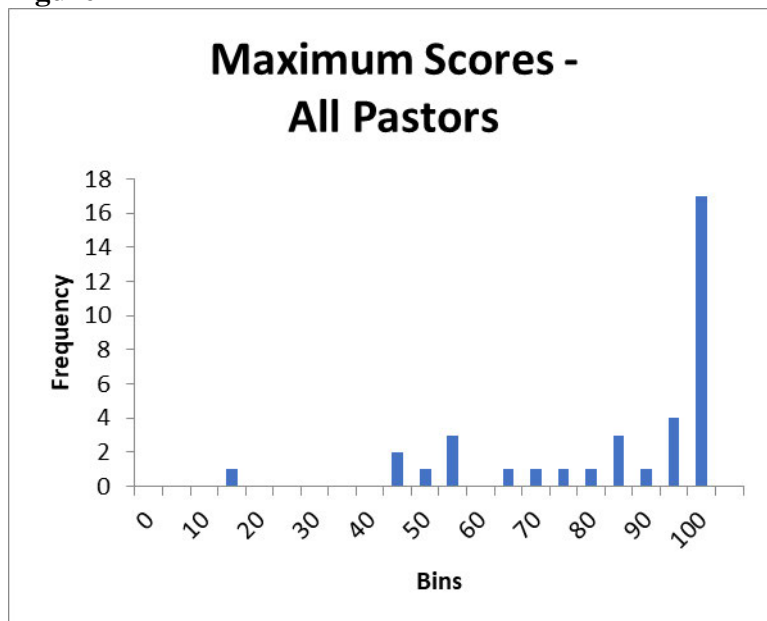


Figure 4



Histogram of Maximum Scores for 18 Personality Components, All Pastors

For means and medians, the distribution showed clearly that there was noticeable variation among the statistics, perhaps normally or uniformly distributed. By the central limit theorem, means trend toward normal distributions irrespective of the underlying probability distribution. As expected, the maximum scores were heavily skewed toward the upper limit of the scores, but with noticeable variation. The small sample size indicated the need to use caution when making conclusions based on the graphical analysis. Therefore, a statistical, nonparametric hypothesis test for each distribution was used.

A one-sample K-S goodness of fit test was performed for each of the three statistics to ascertain if there was evidence that they followed a known probability distribution with variation. SPSS test results for normal, uniform, poisson, and exponential distributions are found in Appendix L. For each test, the null hypothesis was that the distribution of values was distributed according to the theoretical probability distribution. If the p -value (Sig.) was less than a level of significance of .05, the null was rejected, and it was concluded that the values were not distributed according to the theoretical distribution. All 36 scores were used for each of the three descriptive statistics (18 personality components and two pastor levels).

For the K-S test of the normal distribution, only maximum scores resulted in a rejection of the null hypothesis. Corroborated by graphical analysis, maximum scores were not distributed normally. Relatively low p -values for means and medians, though not less than .05, indicated the tendency toward a normal distribution, but insufficient evidence to conclude affirmatively.

For the test of the uniform distribution, the same hypothesis test results occurred. The maximum scores were not distributed uniformly, and neither means nor medians were definitively distributed uniformly. Only the maximum scores were tested for the poisson distribution. The null hypothesis was rejected—the maximum scores were not distributed

according to the poisson distribution. Considering the exponential distribution, for all three statistics the null hypothesis was rejected. None of the three were distributed exponentially.

Then, an F test of variance was used for all three statistics to determine if there was statistically significant variation. The intent here was, if the variance for all three statistics was not significantly different from zero, then there would be insufficient evidence to conclude that their relative values and their ranked orders were significant and reliably different. Those variations might reflect random variation rather than a true ranked order. Each of the statistics was tested against a constant value with no variation. The null hypothesis was that there was no difference between the variance of the sample statistics and zero. If the p-value was less than the level of significance of .05, the null hypothesis was rejected, and it was concluded there was variation in the values significantly different from zero; and that the relative values and their rank orders were significant. The results of the three F tests are shown in Tables 2, 3, and 4.

Table 2

F Test of Variance for Mean Scores

| | <i>Mean</i> | <i>Constant</i> |
|---------------------|-------------|-----------------|
| Mean | 54.3 | 54.3 |
| Variance | 500.0 | 0 |
| Observations | 36 | 36 |
| df | 35 | 35 |
| F | 1.07E+30 | |
| P(F<=f) one-tail | 0 | |
| F Critical one-tail | 1.8 | |

For all three statistics, the p-value was less than .05, and the null hypothesis was rejected. It was concluded that the variation for each of the three statistics was different from zero. The differences among the values were not due to chance, and their relative values and rank orders

were meaningful. That enabled a more rigorous and reliable analysis of the descriptive statistics.

Table 3

F Test of Variance for Median Scores

| | <i>Median</i> | <i>Constant</i> |
|---------------------|---------------|-----------------|
| Mean | 55.0 | 55.0 |
| Variance | 833.7 | 0 |
| Observations | 36 | 36 |
| df | 35 | 35 |
| F | 6.42E+29 | |
| P(F<=f) one-tail | 0 | |
| F Critical one-tail | 1.8 | |

Table 4

F Test of Variance for Maximum Scores

| | <i>Maximum</i> | <i>Constant</i> |
|---------------------|----------------|-----------------|
| Mean | 82.6 | 82.6 |
| Variance | 487.4 | 0 |
| Observations | 36 | 36 |
| df | 35 | 35 |
| F | 5.87E+29 | |
| P(F<=f) one-tail | 0 | |
| F Critical one-tail | 1.8 | |

Next, a comparison of descriptive statistics was used to address Research Question 1.

Table 5 is a summary of that analysis.

Table 5*Descriptive Statistics Rank Orders for Executive Pastors*

| Mean | Rank | Median | Rank | Maximum | Rank |
|------|------|--------|------|---------|------|
| SEU | 1 | SEU | 1 | SEU | 1 |
| PEU | 2 | THN | 2 | SCN | 2 |
| THN | 3 | SCN | 3 | ISU | 3 |
| ISU | 4 | RSN | 4 | ICN | 4 |
| RSN | 5 | PEU | 5 | RSN | 5 |
| EEN | 6 | ISU | 6 | THN | 6 |
| SCN | 7 | EEN | 7 | EEN | 7 |
| ICN | 8 | RSU | 8 | PEU | 8 |
| EEU | 9 | EEU | 9 | ASU | 9 |
| ASN | 10 | ICN | 10 | ASN | 10 |
| ISN | 11 | ISN | 11 | ISN | 11 |
| RSU | 12 | ASN | 12 | THU | 12 |
| THU | 13 | SEN | 13 | EEU | 13 |
| PEN | 14 | THU | 14 | SCU | 14 |
| SEN | 15 | PEN | 15 | PEN | 15 |
| SCU | 16 | ASU | 16 | RSU | 16 |
| ASU | 17 | ICU | 17 | SEN | 17 |
| ICU | 18 | SCU | 18 | ICU | 18 |

Table 5 shows the rank order for each DV for Executive Pastors, based on mean, median, and maximum value. Table 6 shows another overall ranking that combines the rankings for mean, median, and maximum values. This provides an indication of the highest scoring personality components for Executive Pastors. The scores that resulted in these rankings were tested by graphical analysis, K-S goodness of fit tests, and F tests of variance. It was shown statistically that the variation in scores was different from zero. Therefore, the rankings and the scores that underlay the rankings can be considered reasonably reliable. These rankings are valid indications of the usual personality components and personality needs of Executive Pastors.

Table 6*Overall Ranking of Personality Components for Executive Pastors*

| Descriptive Stats: Executive Pastors | | | | | |
|--------------------------------------|------|--------|---------|----------|-------|
| DV | Mean | Median | Maximum | Avg Rank | Order |
| SEU | 78.2 | 91.0 | 99 | 1.0 | 1 |
| THN | 76.5 | 91.0 | 99 | 3.7 | 2 |
| SCN | 71.5 | 86.5 | 99 | 4.0 | 3 |
| ISU | 75.8 | 75.5 | 99 | 4.3 | 4 |
| RSN | 74.2 | 85.5 | 99 | 4.7 | 5 |
| PEU | 77.8 | 84.5 | 97 | 5.0 | 6 |
| EEN | 71.5 | 73.0 | 98 | 6.7 | 7 |
| ICN | 57.0 | 44.0 | 99 | 7.3 | 8 |
| EEU | 48.5 | 44.0 | 82 | 10.3 | 9 |
| ASN | 45.8 | 41.0 | 91 | 10.7 | 10 |
| ISN | 45.5 | 42.0 | 85 | 11.0 | 11 |
| RSU | 43.2 | 52.0 | 52 | 12.0 | 12 |
| THU | 41.0 | 32.0 | 84 | 13.0 | 13 |
| ASU | 26.3 | 16.5 | 96 | 14.0 | 14 |
| PEN | 30.7 | 25.0 | 54 | 14.7 | 15 |
| SEN | 30.0 | 32.5 | 51 | 15.0 | 16 |
| SCU | 27.2 | 9.0 | 79 | 16.0 | 17 |
| ICU | 18.0 | 16.0 | 44 | 17.7 | 18 |

For example, Social Energy (Usual Behavior style; SEU) had the highest mean, median, and maximum score among Executive Pastors. The lowest rated personality component was Incentives (Usual Behavior style, ICU).

Research Question 2

Research Question 2 asked, “What personality components (as measured by The Birkman Method) are most prevalent in Senior Pastors among the sample group?” The analyses were the same as for Research Question 1. Table 7 is a summary of the analysis.

Table 7*Descriptive Statistics Rank Orders for Senior Pastors*

| Mean | Rank | Median | Rank | Maximum | Rank |
|------|------|--------|------|---------|------|
| SEU | 1 | RSN | 1 | RSN | 1 |
| SCN | 2 | SEU | 2 | SEU | 2 |
| RSN | 3 | SCN | 3 | SCN | 3 |
| PEU | 4 | ISU | 4 | ISU | 4 |
| ICN | 5 | THN | 5 | THN | 5 |
| EEN | 6 | RSU | 6 | PEU | 6 |
| ISU | 7 | PEU | 7 | ASU | 7 |
| RSU | 8 | ICN | 8 | ICN | 8 |
| THN | 9 | EEN | 9 | EEN | 9 |
| ASN | 10 | PEN | 10 | ISN | 10 |
| ASU | 11 | ASN | 11 | ASN | 11 |
| EEU | 12 | ASU | 12 | RSU | 12 |
| PEN | 13 | EEU | 13 | SEN | 13 |
| ISN | 14 | THU | 14 | PEN | 14 |
| SEN | 15 | ISN | 15 | EEU | 15 |
| THU | 16 | SEN | 16 | THU | 16 |
| ICU | 17 | ICU | 17 | ICU | 17 |
| SCU | 18 | SCU | 18 | SCU | 18 |

Table 7 shows the rank order for each DV for Senior Pastors, based on mean, median, and maximum value. Table 8 provides an indication of the highest scored personality components for Senior Pastors. Note also that the list is color coded to depict the range from the most different negative value (SCU) to the most different positive value (RSN).

As with Research Question 1, the scores that resulted in these rankings were tested by graphical analysis, K-S goodness of fit tests, and *F* tests of variance. It was shown statistically that the variation in scores was different from zero. Therefore, the rankings and the scores that underly the rankings can be considered reasonably reliable. These rankings as well as the rankings for Research Question 1 are valid indications of which personality components are the most and least prevalent among the Senior Pastor participants.

Table 8*Overall Ranking of Personality Components for Senior Pastors*

| DV | Mean | Median | Maximum | Avg Rank | Order |
|-----|------|--------|---------|----------|-------|
| RSN | 83.4 | 99.0 | 99.0 | 1.7 | 1 |
| SEU | 94.2 | 98.0 | 99.0 | 1.7 | 2 |
| SCN | 85.6 | 94.0 | 99.0 | 2.7 | 3 |
| ISU | 67.8 | 85.0 | 99.0 | 5.0 | 4 |
| PEU | 77.8 | 76.0 | 99.0 | 5.7 | 5 |
| THN | 65.8 | 84.0 | 99.0 | 6.3 | 6 |
| ICN | 72.0 | 71.0 | 96.0 | 7.0 | 7 |
| EEN | 70.6 | 64.0 | 95.0 | 8.0 | 8 |
| RSU | 66.0 | 81.0 | 90.0 | 8.7 | 9 |
| ASU | 51.8 | 37.0 | 98.0 | 10.0 | 10 |
| ASN | 61.4 | 51.0 | 91.0 | 10.7 | 11 |
| PEN | 42.0 | 54.0 | 66.0 | 12.3 | 12 |
| ISN | 39.8 | 29.0 | 92.0 | 13.0 | 13 |
| EEU | 42.4 | 37.0 | 64.0 | 13.3 | 14 |
| SEN | 39.2 | 27.0 | 74.0 | 14.7 | 15 |
| THU | 27.2 | 32.0 | 48.0 | 15.3 | 16 |
| ICU | 22.0 | 16.0 | 44.0 | 17.0 | 17 |
| SCU | 5.4 | 3.0 | 14.0 | 18.0 | 18 |

Restlessness (Needs; RSN) and Social Energy (Usual Behavior style; SEU) had the highest mean, median, and maximum score among Senior Pastors. The lowest ranked personality component was Self-Consciousness (Usual Behavior style, SCU).

Research Question 3

Research Question 3 asked, “What relationship exists, if any, between the personality components (as measured by The Birkman Method) of Senior and Executive Pastors?” A K-S goodness of fit test and an F test of variance were performed on the mean, median, and maximum scores for all participants to respond to this research question. Comparisons and results from the analyses are summarized in Table 9.

Table 9*Analysis of the Differences Between Senior and Executive Pastors*

| DV | Descriptive Stats: Differences | | | M-W test | t-test | ANOVA | | |
|-----|--------------------------------|--------|---------|--------------|--------------|--------------|----------------|-----------|
| | Mean | Median | Maximum | p-value | p-value | p-value | partial eta sq | obs power |
| ASU | -25.5 | -20.5 | -2 | 0.190 | 0.301 | 0.292 | 0.122 | 0.171 |
| RSU | -22.8 | -29.0 | -38 | 0.238 | 0.196 | 0.146 | 0.220 | 0.296 |
| SEU | -16.0 | -7.0 | 0 | 0.706 | 0.234 | 0.258 | 0.139 | 0.191 |
| ASN | -15.6 | -10.0 | 0 | 0.498 | 0.488 | 0.506 | 0.051 | 0.095 |
| ICN | -15.0 | -27.0 | 3 | 0.450 | 0.399 | 0.412 | 0.076 | 0.120 |
| SCN | -14.1 | -7.5 | 0 | 0.797 | 0.403 | 0.427 | 0.071 | 0.116 |
| PEN | -11.3 | -29.0 | -12 | 0.481 | 0.469 | 0.449 | 0.065 | 0.110 |
| RSN | -9.2 | -13.5 | 0 | 0.489 | 0.571 | 0.582 | 0.035 | 0.081 |
| SEN | -9.2 | 5.5 | -23 | 0.645 | 0.508 | 0.500 | 0.052 | 0.097 |
| ICU | -4.0 | 0.0 | 0 | 0.983 | 0.671 | 0.664 | 0.022 | 0.069 |
| PEU | 0.0 | 8.5 | -2 | 0.835 | 0.998 | 0.998 | 0.000 | 0.050 |
| EEN | 0.9 | 9.0 | 3 | 0.848 | 0.950 | 0.951 | 0.000 | 0.050 |
| ISN | 5.7 | 13.0 | -7 | 0.753 | 0.767 | 0.758 | 0.011 | 0.059 |
| EEU | 6.1 | 7.0 | 18 | 0.835 | 0.640 | 0.654 | 0.023 | 0.070 |
| ISU | 8.0 | -9.5 | 0 | 0.961 | 0.684 | 0.664 | 0.022 | 0.069 |
| THN | 10.7 | 7.0 | 0 | 0.701 | 0.627 | 0.614 | 0.029 | 0.076 |
| THU | 13.8 | 0.0 | 36 | 0.645 | 0.371 | 0.395 | 0.081 | 0.126 |
| SCU | 21.8 | 6.0 | 65 | 0.372 | 0.184 | 0.195 | 0.179 | 0.241 |

Descriptive Statistics Comparisons

The differences in mean, median, and maximum score for each of the personality components (DVs) between Senior and Executive Pastors were computed. Those calculations are found in Appendix J.

Table 9 shows the differences. The difference was calculated as follows, using Assertiveness (usual) as an example: difference in ASU means = mean for Executive Pastor – mean for Senior Pastor. Therefore, a negative number indicates that the score for the Senior Pastor was higher than the score for the Executive Pastor. Note once again that the list is color coded to depict the range from the most different negative value (ASU) to the most different positive value (SCU).

There is some consistency among the three different descriptive statistics (mean, median, and maximum score) when ranking the differences between Senior and Executive Pastors. Therefore, an initial insight can be obtained about which personality components are most common to Senior Pastors versus which are most common to Executive Pastors.

Another way of comparing the influence of LVL on the DVs between the two pastoral levels is to show their ranked orders side by side (see Table 10).

Table 10

Side-by-Side Rankings of Scores

| Descriptive Stats: Executive Pastors | | | | | Order | Descriptive Stats: Senior Pastors | | | | |
|--------------------------------------|------|--------|---------|----------|-------|-----------------------------------|------|--------|---------|----------|
| DV | Mean | Median | Maximum | Avg Rank | | DV | Mean | Median | Maximum | Avg Rank |
| SEU | 78.2 | 91.0 | 99 | 1.0 | 1 | RSN | 83.4 | 99.0 | 99 | 1.7 |
| THN | 76.5 | 91.0 | 99 | 3.7 | 2 | SEU | 94.2 | 98.0 | 99 | 1.7 |
| SCN | 71.5 | 86.5 | 99 | 4.0 | 3 | SCN | 85.6 | 94.0 | 99 | 2.7 |
| ISU | 75.8 | 75.5 | 99 | 4.3 | 4 | ISU | 67.8 | 85.0 | 99 | 5.0 |
| RSN | 74.2 | 85.5 | 99 | 4.7 | 5 | PEU | 77.8 | 76.0 | 99 | 5.7 |
| PEU | 77.8 | 84.5 | 97 | 5.0 | 6 | THN | 65.8 | 84.0 | 99 | 6.3 |
| EEN | 71.5 | 73.0 | 98 | 6.7 | 7 | ICN | 72.0 | 71.0 | 96 | 7.0 |
| ICN | 57.0 | 44.0 | 99 | 7.3 | 8 | EEN | 70.6 | 64.0 | 95 | 8.0 |
| EEU | 48.5 | 44.0 | 82 | 10.3 | 9 | RSU | 66.0 | 81.0 | 90 | 8.7 |
| ASN | 45.8 | 41.0 | 91 | 10.7 | 10 | ASU | 51.8 | 37.0 | 98 | 10.0 |
| ISN | 45.5 | 42.0 | 85 | 11.0 | 11 | ASN | 61.4 | 51.0 | 91 | 10.7 |
| RSU | 43.2 | 52.0 | 52 | 12.0 | 12 | PEN | 42.0 | 54.0 | 66 | 12.3 |
| THU | 41.0 | 32.0 | 84 | 13.0 | 13 | ISN | 39.8 | 29.0 | 92 | 13.0 |
| ASU | 26.3 | 16.5 | 96 | 14.0 | 14 | EEU | 42.4 | 37.0 | 64 | 13.3 |
| PEN | 30.7 | 25.0 | 54 | 14.7 | 15 | SEN | 39.2 | 27.0 | 74 | 14.7 |
| SEN | 30.0 | 32.5 | 51 | 15.0 | 16 | THU | 27.2 | 32.0 | 48 | 15.3 |
| SCU | 27.2 | 9.0 | 79 | 16.0 | 17 | ICU | 22.0 | 16.0 | 44 | 17.0 |
| ICU | 18.0 | 16.0 | 44 | 17.7 | 18 | SCU | 5.4 | 3.0 | 14 | 18.0 |

The same information is depicted in Table 11. Table 11 shows each of the DVs with their importance using an aggregate ranking of mean, median, and maximum, for each of the two pastor levels. This table illustrates where the rankings were consistent.

Table 11*Side-by-Side Order*

| DV | EX Order | SR Order | Avg Order |
|-----|----------|----------|-----------|
| SEU | 1 | 2 | 1.5 |
| RSN | 5 | 1 | 3.0 |
| SCN | 3 | 3 | 3.0 |
| ISU | 4 | 4 | 4.0 |
| THN | 2 | 6 | 4.0 |
| PEU | 6 | 5 | 5.5 |
| EEN | 7 | 8 | 7.5 |
| ICN | 8 | 7 | 7.5 |
| ASN | 10 | 11 | 10.5 |
| RSU | 12 | 9 | 10.5 |
| EEU | 9 | 14 | 11.5 |
| ASU | 14 | 10 | 12.0 |
| ISN | 11 | 13 | 12.0 |
| PEN | 15 | 12 | 13.5 |
| THU | 13 | 16 | 14.5 |
| SEN | 16 | 15 | 15.5 |
| ICU | 18 | 17 | 17.5 |
| SCU | 17 | 18 | 17.5 |

Some caution needs to be applied. With a small sample size, this is only an indication of what might be the true comparison between groups of pastors. To make a more reliable inference about the population of pastors requires statistical hypothesis testing.

Hypotheses: t Test of Means

The next analysis performed was a *t* test of two groups. First, the assumptions for the two-sample *t* test were considered:

- Approximately normally distributed values for the DV
- Equal variances across groups
- Independent observations

The samples were taken from questionnaires from individual participants who were not linked in any way. That satisfies the independence assumption.

The assumption of equal variance between groups was then checked using an F test in Excel. An example is shown in Table 12. The null hypothesis was that the variances of the two groups were equal. The alternate hypothesis was unequal variances. For most of the DVs, based on p-value and a level of significance of .05, the null hypothesis was rejected, and it was concluded there was evidence that the alternate hypothesis was true, that the variances between each group were unequal. Since this was a violation of the assumption for the t test, the t test of two groups with unequal variance for all the DVs was used.

Table 12

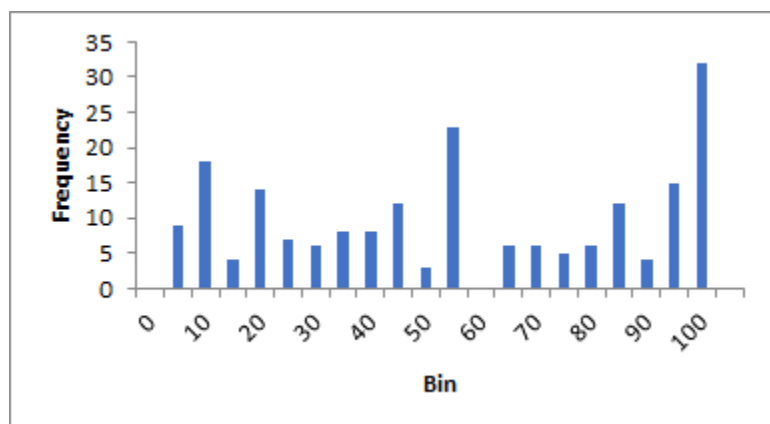
F Test of Variances for SEU

| F-Test Two-Sample for Variances | | |
|---------------------------------|-------------------|-------------------|
| SEU | | |
| | <i>Variable 1</i> | <i>Variable 2</i> |
| Mean | 94.2 | 78.16667 |
| Variance | 40.2 | 834.9667 |
| Observations | 5 | 6 |
| df | 4 | 5 |
| F | 0.048146 | |
| P(F<=f) one-tail | 0.005796 | |
| F Critical one-tail | 0.159845 | |

The final assumption was normal distribution of the values for the DVs. Several DVs and an aggregated set of values (all DVs) were checked. A histogram was used to check the appearance of normality. The distributions were similar for all DVs and have been illustrated in Figure 5.

Figure 5

Histogram of DV Values to Check Normality



It was clear that none of the samples were distributed normally. The t test is robust to departures from normality, but only when sample size is sufficient to invoke the central limit theorem. The decision was made to continue with the t tests to gain some insights into the differences between groups of pastors, with the caution that results could not be considered reliable.

A summary of the t tests and the p-values for each of the variables comparing Senior to Executive Pastors is found in Table 9. The null hypothesis was that the means of the two groups were equal. The alternate hypothesis was that the means were not equal. The p-value was used against the level of significance. It is common to use a level of significance of .05. In that case, none of the DVs demonstrated a difference between the pastoral groups. For example, SCU had the lowest p-value among the DVs (see Table 13).

Table 13*Two-Sample t Test of Means for SCU*

| t-Test: Two-Sample Assuming Unequal Variances | | |
|---|------------|------------|
| SCU | | |
| | Variable 1 | Variable 2 |
| Mean | 5.4 | 27.16667 |
| Variance | 26.3 | 1165.767 |
| Observations | 5 | 6 |
| Hypothesized Mean Difference | 0 | |
| df | 5 | |
| t Stat | -1.54085 | |
| P(T<=t) one-tail | 0.091992 | |
| t Critical one-tail | 2.015048 | |
| P(T<=t) two-tail | 0.183984 | |
| t Critical two-tail | 2.570582 | |

There is a body of opinion in scholarly literature (see, for example, Heinze & Dunkler, 2017) that cautions against very restrictive levels of significance, especially with small sample sizes. Many advocate, with caution, a more liberal level of significance, say .20, to avoid Type II statistical errors (false negatives—failure to detect a difference when one exists). In this case, given the low sample size, the p-values less than a level of significance of .20 are highlighted in dark blue in Table 9; and those whose *p*-values were below .30 are highlighted in light blue. This is not intended to make a definite conclusion of a significant difference. Instead, however, it is an indication that, combined with other evidence, there might be a difference in means between the two groups worthy of further inquiry. In this analysis, the variables SCU, RSU, SEU, and ASU worthy of consideration with other evidence. None of the other variables had p-values which would enable a reliable rejection of the null hypothesis and a conclusion of a difference in means.

ANOVA

Next, ANOVA was used in SPSS to analyze the null hypothesis that there is no difference in means between groups, with the alternate hypothesis being a difference. The statistical assumptions of ANOVA are as follows:

- The DV is a numerical variable.
- Each CF consists of two or more categorical and independent groups (levels or values).
- Independence of observations; no time-related relationship between observations.
- Homogeneity of variance for each combination of groups/levels/values.
- No influential cases: no significant outliers.
- Experimental errors (residuals) are approximately normally distributed.

The first three of these assumptions are either self-evident from the data or previously discussed; and were met.

The homogeneity of variance was shown to be a violation of the assumptions for ANOVA, consistent with the *t* test.

The values for the DVs were constrained by the range of scores in the questionnaire. Also, due to the small sample size, and the relevance of all responses for each DV, outliers were not considered to be present in the data set.

A normal probability plot of residual for the DVs was developed. The plot for ASU is shown in Figure 6 as an example. The plot shows some deviation from normality. However, ANOVA is robust to slight deviations from normality. Given the small sample size, it was decided that the violation of this assumption was not a significant issue for the analysis.

Figure 6

Normal Probability Plot of Residuals for ASU

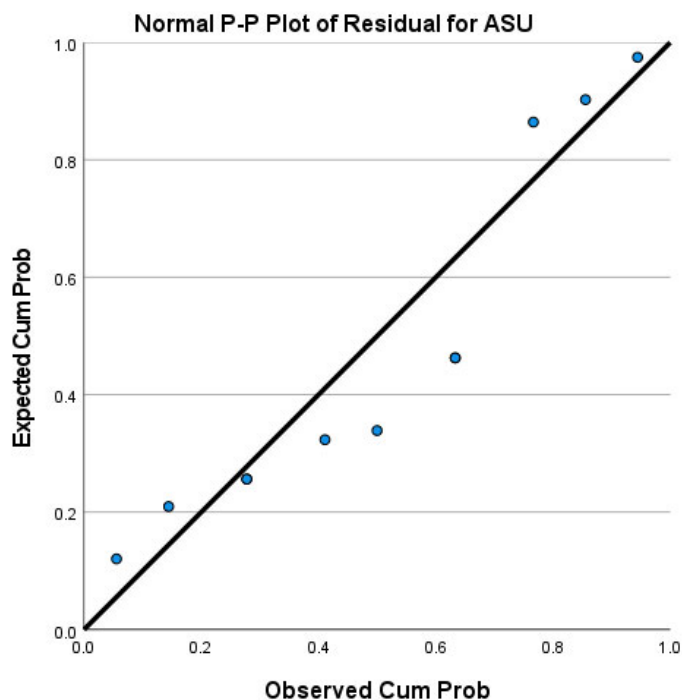


Table 9 provides a summary of the ANOVA results for each of the variables. The p-value was compared to a level of significance of .20, as with the t tests, using the same rationale. Since there is a common theoretical basis for the t test and ANOVA, the similar results are not surprising. Again, the p-values less than .20 are highlighted in dark blue; and the p-values less than .30 in light blue; for consideration in conjunction with the other evidence and further research.

Partial eta squared (η^2) is a product of ANOVA that explains the proportion of the total variance in DV that can be attributed to the CF factor (in this case, LVL). Note that the η^2 for each of the lowest four p-values are also the highest among the variables. This is additional rationale that LVL might be an influential factor—that differences between groups might exist

for ASU, RSU, SEU, and SCU. Also note the observed power of the test ($1 - \beta$; or the converse of the probability of a Type II error) which considers the measured variation in variables and the sample size, is consistent with the p-values and η^2 .

The ANOVA results should not be used in isolation to make any declarations about the influence of LVL on the DVs. However, when considered along with descriptive statistics comparisons and *t* tests, there is evidence of the possibility that LVL is influential on ASU, RSU, SEU, and SCU (consistent with previous analyses).

Non-Parametric Tests

Because of the small sample size, and the violations of assumptions for the *t* test and ANOVA (especially departures from normality), the data were analyzed using a non-parametric test known as the Wilcoxon Rank Sum Test. This test evaluates the difference between group medians and does not depend on the assumption of normality. The test was performed using Excel. A summary of the results (p-values) is found in Table 8. The null hypothesis was that the two populations are the same (equal medians); the alternate hypothesis was that they are different (unequal medians). Using a liberal level of significance of .20, only the null hypothesis for ASU was rejected (dark blue cell in the table). RSU had a p-value of .238, indicating the possibility of a relationship with LVL. These results were consistent with the *t* tests and ANOVA, though more restrictive (only two DVs showing evidence of an influence by LVL).

To summarize the response to Research Question 3, while reiterating previous cautions about making conclusions with small sample sizes and violations of statistical assumptions, there is evidence of a possible relationship between some personality components (as measured by The Birkman Method) and pastor level (Senior and Executive). The personality components for which there are indications of a possible influence by LVL were ASU, RSU, SEU, and SCU. The

statistical tests were not conclusive but based on a liberal level of significance (.20), ASU and RSU are likely to be influenced by level. SEU and SCU were added to the list of DVs worthy of further research related to pastor level.

Analysis Excursion

A final analysis was conducted to evaluate the difference between the Needs personality subcomponent of each DV (“unique needs of an individual’s personality”) and the Usual subcomponent (“Usual Behavior styles”). The difference in the two mean scores was computed for each DV (Appendix K). Note that the difference is defined by the following example:

$$SED = SEN - SEU$$

The higher the absolute number, the greater the difference between Needs and Usual Behavior. Positive values reflect a Needs subcomponent score that is higher than the Usual Behavior subcomponent for each DV. Negative values reflect a Usual Behavior subcomponent score that is higher than the Needs subcomponent for each DV.

In Table 14 are the rank orders of those differences for each pastor level. For the most part, the rankings of differences among the subcomponents of the personality components were the same between Senior and Executive Pastors. Only EED and RSD were swapped in their orders.

Table 14*Ranked Order of Differences Between Needs and Usual Behavior*

| DV | SR | RANK | DV | EX | RANK |
|-----|-------|------|-----|-------|------|
| SCD | 80.2 | 1 | SCD | 44.3 | 1 |
| ICD | 50.0 | 2 | ICD | 39.0 | 2 |
| THD | 38.6 | 3 | THD | 35.5 | 3 |
| EED | 28.2 | 4 | RSD | 31.0 | 4 |
| RSD | 17.4 | 5 | EED | 23.0 | 5 |
| ASD | 9.6 | 6 | ASD | 19.5 | 6 |
| ISD | -28.0 | 7 | ISD | -30.3 | 7 |
| PED | -35.8 | 8 | PED | -47.2 | 8 |
| SED | -55.0 | 9 | SED | -48.2 | 9 |

Evaluation of the Research Design

Strength of the Research Design

The correlational design of this quantitative research provided the best design for gathering and comparing data related to the personality components of Senior and Executive Pastors. This allowed the researcher to examine the similar and dissimilar traits of each pastoral group. Then, a comparison was able to be conducted related to the similarities and differences between the two groups.

The research design was also a strength in that it did not rely on one statistical methodology to draw conclusion. It allowed for the use of more than one technique to find commonality and some consistency. The analysis of the data was completed in a manner that revealed the story of how the personality components of the pastoral groups could be presented. First, an analysis was conducted related to the descriptive statistics. This provided insight into the personality components of the individual pastoral groups. The researcher was able to group

the results according to rank order for comparative purposes. Next, parametric (hypothesis), t-test, and ANOVA tests were employed to examine the probability and likelihood of repeatable results. Finally, the analysis concluded with non-parametric test which showed that a relationship may exist between some personality components as identified by The Birkman Method and different pastoral groups.

Weakness of the Research Design

As previously discussed, there were several limitations concerning this research design. First, the research was limited by having a small sample size. The power to detect a difference or to detect a relationship based on the total sample size of $n = 11$ was approximately 20%. At least 80% statistical power is generally recommended.

Also, regardless of the small sample size, the data did not appear normally distributed. Though the statistical tests are robust to deviations from normality, this violation of assumptions indicates the need for additional caution in making conclusions from the parametric hypothesis tests and descriptive statistics comparisons. The non-parametric tests were helpful in adding to the evidence from which conclusions might be drawn.

Finally, the two groups appeared to have different variance. Again, this is a violation of assumptions for ANOVA. However, given a larger sample of the population, this violation may be resolved. Though there were several limitations to the research design, several conclusions can be drawn from the examination of the results.

CHAPTER FIVE: CONCLUSIONS

Overview

This quantitative correlational research explored the relationship between the personality components of Senior and Executive Pastors. Comparative studies related to these ministry positions and personality components had not been undertaken, so research was conducted with the use of The Birkman Method for the purpose of filling this gap in the literature. This chapter provides the specific purpose for the research conducted as well as the three research questions that guided the researcher in gathering data. Next, the researcher's conclusions from the analysis provide information regarding the most prevalent personality components for each pastoral group and components that are most similar or reveal the largest degree of contrast. This is followed by sections detailing the implications of the results and how the results can be applied to each group. Finally, the chapter concludes with some limitations of the study and possible areas for future research related to this topic.

Research Purpose

The purpose of this quantitative correlational research was to understand the relationship between the personality components of Senior and Executive Pastors. This study will collect data in a quantitative form using a personality assessment. The data will then be analyzed to determine if a correlation exists between the personality components of Senior and Executive Pastors.

Research Questions

RQ1. What personality components (as measured by The Birkman Method) are most prevalent in Executive Pastors among the sample group?

RQ2. What personality components (as measured by The Birkman Method) are most prevalent in Senior Pastors among the sample group?

RQ3. What relationship exists, if any, between the personality components (as measured by The Birkman Method) of Senior and Executive Pastors?

Research Conclusions, Implications, and Applications

Conclusions

RQ1

According to the results of the analysis explained in Chapter 4, the null hypothesis was rejected for RQ1 based on the results of the graphical analysis, K-S goodness of fit tests, and *F* tests of variance. The data revealed that there was reasonable evidence that similarities exist among the Executive Pastors that participated in the research. This means that the level of each personality component could be measured and ranked according to the strength of each component. It can be concluded, then, that there are similarities among the highest and lowest rated personality components as revealed by The Birkman Method for Executive Pastors. The three highest scoring components among the pool of Executive Pastors were their Usual Behavior in Social Energy (SEU), their Need in Thought (THN), and their Need in Self-Consciousness (SCN). The three lowest scoring components among the pool of Executive Pastors were their Need in Social Energy (SEN), their Usual Behavior in Self-Consciousness (SCU), and the Usual Behavior in Incentives (ICU).

RQ2

According to the results of the analysis explained in Chapter 4, the null hypothesis was rejected for RQ2 based on the results of the graphical analysis, K-S goodness of fit tests, and *F* tests of variance. The data revealed that there is reasonable proof that there are similarities among the Senior Pastors that participated in the research. What this indicates is that the level of each personality component could be measured and ranked according to the strength of each component. It can be concluded, then, that there are similarities among the highest and lowest

rated personality components as revealed by The Birkman Method for Senior Pastors. The three highest scoring components among the pool of Senior Pastors were their Need in Restlessness (RSN), their Usual Behavior in Social Energy (SEU), and their Need in Self-Consciousness (SCN). The three lowest scoring components among the pool of Senior Pastors were their Usual Behavior in Thought (THU), their Usual Behavior in Incentives (ICU), and the Usual Behavior in Self-Consciousness (SCU).

RQ3

Comparing the combined results for the Senior and Executive Pastors from the analysis provided for RQ1 and RQ2 reveals some similar personality components. Both have Usual Behaviors that are high in Social Energy. They also have similar Needs for others to respond to them with high levels of Self-Consciousness. Finally, they both exhibit low levels of Usual Behavior in the areas of Self-Consciousness and Incentives.

The analysis also reveals some contrasting personality components between Executive and Senior Pastors. First, Executive Pastors have a high Need related to the Thought component, whereas Senior Pastors have a low Usual Behavior in this area. The Senior Pastors process for making decisions is different from that of Executive Pastors. The other contrast to note between the two groups is that both have high Needs for Self-Consciousness but low Usual Behavior in Self-Consciousness. Though they have similar Needs and Usual Behaviors in this component, it becomes a contrast when relating to each other. The Senior Pastor's style of communication using a low level of Self-Consciousness conflicts with the Executive Pastor's need to be communicated with a high level of Self-Consciousness, and vice versa.

Analysis provided for RQ3 shows that there are several components that show high differences in intensity. Table 9 shows that there are four components that show the greatest

variance according to descriptive statistics, and this evidence is supported by M-W test, the t-test, and the ANOVA results. This evidence reveals that Senior Pastors exhibit a notably higher level of Assertiveness, Restlessness, and Social Energy in their Usual Behavior than Executive Pastors. On the other side of the spectrum, Executive Pastors display a more intense Usual Behavior related to Self-Consciousness than Senior Pastors.

Implications

RQ1

The three highest scoring components among the pool of Executive Pastors were their Usual Behavior in Social Energy (SEU), their Need in Thought (THN), and their Need in Self-Consciousness (SCN). Social Energy describes a person's openness to being social and their preference for group interaction (Birkman, 2017). Having a high Usual score indicates that these Executive Pastors are friendly, outgoing, and usually find it easy and enjoyable to work in group settings. A high Need in Thought means that the individual Needs adequate time to think things through and make decisions, especially with complex issues. The mean for the group of Executive Pastor's in this component was 26.5 points higher than the average person's score. This implies a much higher than average need to consider all options and consequences when making complex decisions. The Executive Pastors also showed a Need for others to communicate with them with a high level of Self-Consciousness. This indicates that they need others to use tact and sensitivity when talking with them, especially in settings that involve conversations that have a difficult or stressful purpose.

The three lowest scoring components among the pool of Executive Pastors were their Need in Social Energy (SEN), their Usual Behavior in Self-Consciousness (SCU), and the Usual Behavior in Incentives (ICU). Their low Need for Social Energy indicates that they need time to

pull away from social settings to recharge (Birkman, 2017). This will enable them to rejoin the group later and comfortably contribute to the conversations and collaboration. A low Usual Behavior in Self-Consciousness reveals a person's direct and candid approach to communication. This research indicates that Executive Pastors naturally communicate in a manner that is direct and logical. Finally, a low Usual Behavior related to Incentives shows that the individual is usually trustful of others on their team or in their organization. These Executive Pastors are likely to prefer group rewards than to desire personal recognition for their work and contribution.

The analysis of the Executive Pastor's assessments reveals that there are two personality components among their highest and lowest scoring components in which there is a large gap between their Usual Behavior and their Needs (see Table 13). It is important to note that "any difference of 25 points or more is considered a wide gap between an individual's Usual Behavior and their Need in any given personality component" (Bolling, personal communication, September 7, 2018). First, there is a gap of 48.2 points between mean scores for Social Energy. Executive Pastors are usually very social and enjoy being around and working with others. However, they need to disengage from social settings to rest and recharge. Also, there is a gap of 44.3 between the mean scores for Self-Consciousness. Executive Pastors tend to communicate directly and can display candor. However, with a high Need, they need others to take their time and choose their words with sensitivity when approaching them for conversation.

RQ2

The three highest scoring components among the pool of Senior Pastors were their Need in Restlessness (RSN), their Usual Behavior in Social Energy (SEU), and their Need in Self-Consciousness (SCN). First, Restlessness is a measure of how a person prefers to focus their attention. Analysis of the assessment results reveals that Senior Pastors need an environment that

provides them the opportunity to work on a variety of tasks and frees them to break out of routine responsibilities when they desire. Next, as with Executive Pastors, Senior Pastors are comfortable working in group settings and usually find themselves socializing with others. Other people recognize this behavior and find it easy to approach them. Finally, they also share a common bond with Executive Pastors in the Need to have others communicate with them in a respectful manner. They receive constructive feedback best when it is given in a courteous way and partnered with positive feedback.

The three lowest scoring components among the pool of Senior Pastors were their Usual Behavior in Thought (THU), their Usual Behavior in Incentives (ICU), and the Usual Behavior in Self-Consciousness (SCU). A low intensity in Thought implies that an individual is decisive and reaches conclusions rather quickly in their decision-making process. Senior Pastors find it easy to see the primary points of a decision and make up their mind easily regarding the direction they would like to take. The second lowest score was for how they prefer to be rewarded and recognized. Senior Pastors are like Executive Pastors in that they usually operate with a mindset of trust for their teams and friends. They prefer long-term rewards and the recognition of the work of the entire team of personal reward. Finally, a low Usual Behavior in Self-Consciousness indicates that they tend to speak to issues directly and prefer logic over emotion in their discussions. This does not mean that Senior Pastors are rude or inconsiderate with their communication style. Rather it implies that they are straightforward with their thoughts and candor.

The analysis of the Senior Pastor's assessments reveals that there is one personality component among their highest and lowest scoring components in which there is a large gap of 25 points or more between their Usual Behavior and their Needs (see Table 13). This contrast is

between their Usual Behavior and Needs in the component of Self-Consciousness and they share this contrast with the group of Executive Pastors. There is a gap of 80.2 points between their low Usual Behavior and the high Need in this component. Their Need score is also 35.6 points higher than the average person (Birkman, 2017). Others will observe them as being usually direct in their communication style, but they need others to communicate with them in a manner that is individual in its approach and that expresses respect in its tone.

RQ3

Several implications are evident when considering the similar and contrasting personality components of Senior and Executive Pastors in the study. First, regarding the similarities between their highest ranked components, both groups see themselves as usually engaged with others and participative in groups settings. This will enable them to work together on group projects in ministry and equip them to engage the individuals and groups in their churches. They also share a need for having others communicate with sensitivity and emotional respect. Understanding this shared need helps them temper their responses when confrontation occurs. On the low side of the scale, they share a Usual Behavior in Self-Consciousness. They both can come across as direct in their communication style and may appear as abrupt and rude to others in stressful situations. They also share a Usual Behavior related to Incentives. They are likely to focus on long-term benefits for the team and church and prefer to share in group recognition rather than self-promotion.

As for contrasting personality components among their highest and lowest results, Executive Pastors have a high Need and Senior Pastors have a low Usual Behavior in the Thought component. Executive Pastors need an environment in which they can think through complex situations and weigh all consequences of the decision before making a move. Senior

Pastors, on the other hand, usually make quick decisions and spend far less time making up their mind. Senior Pastors. The other contrast to note is the difference in Self-Consciousness. Both have a high Need for Self-Consciousness but low Usual Behavior in Self-Consciousness. Though they have similar Needs and Usual Behaviors in this component, it becomes a contrast when relating to each other. One person communicates in a direct manner to the other when the other person needs to be communicated to in a manner that expresses care and respect.

Applications

RQ1

It is important for all leaders to recognize the importance of self-awareness and self-care (Bennis, 1989; Malphurs, 2003; Northouse, 2018). Pastors often try to show humility by hiding their mistakes and forgoing the fulfillment of their needs to meet the needs of others. However, pastors, like everyone else, need to take care of themselves emotionally. They need to understand themselves and their needs to maintain healthy relationships with others.

Executive Pastors can apply the results of this research in several ways. First, though their Usual Behavior is high in Social Energy, they should take time to understand what it means to have a low Need in this area. Executive Pastors have a responsibility to lead the staff and ministries of their local churches (Bonem & Patterson, 2005). This requires them to spend a large amount of time working and socializing with individuals and teams. Their Usual Behavior is a strength for them as they work well in social settings. However, they should not feel guilty about recharging in solitary settings. Taking the time for self-care in this area will give them the social recharge they need to perform well in their roles.

The other high-ranking component for Executive Pastors to be aware of is their low Usual Behavior in Self-Consciousness. They find themselves working well with others in social

settings. However, they need to be aware of their tendency to speak directly and without emotion. Their style of communication can come across as abrupt and rude by people who need them to speak in a thoughtful and supportive manner. Executive Pastors also have a high Need in this area so they should take time to consider the words and information before engaging critical conversations.

Others working with Executive Pastors will also find this information useful. First, it is helpful to recognize this group of participants usually communicate with a low level of Self-Consciousness. They may not always be aware of the emotional impact of their words and message. Family, staff members, and church volunteers who are aware of this can use this information to work towards listening for the message the Senior Pastor is attempting to communicate rather than assuming their emotional intent.

It will also be helpful to understand the Executive Pastor's need to pull away from social settings and find solitary rest. Others should not be offended when they choose to work alone. Their low Need in Social Energy paired with their High Need in Thought results in needing more time alone to make critical decisions and process information. Church board members can use this information to see the need for providing restful opportunities so that Executive Pastors can work more effectively.

Finally, staff and committee members will recognize the Executive Pastor's High Insistence Usual Behavior. They usually apply processes and procedures to their work as they are detail oriented and complete their work according to a plan. This should be recognized as a strength, but it can come across as confrontational when they insist on doing things in a specific manner.

RQ2

Senior Pastors should also recognize the importance of self-awareness and self-care. They could benefit from the application of these findings and the combined results of the assessments. Two areas of focus, High Social Energy and Low Self-Consciousness, they share with Executive Pastors. As with their counterparts, Senior Pastors should recognize that though they are normally in situations where they are socially interactive with others, they need to take time to recharge by protecting their time of solitude. It will be helpful to discuss this with those they are closest to so that they have allies to help them protect time away. They also need to take time to consider the feelings of others when having conversations that may be viewed as confrontational. Thinking through some conversations and planning what to say may help with word selection as well as showing care for others involved.

A component that may be overlooked by some Senior Pastors is their high Need in the component of Restlessness. Sermon planning, counseling sessions, and committee meetings can consume vast amounts of time. Senior Pastors have a high Need for variety and the freedom to focus their attention on multiple tasks and responsibilities. It will help reduce a great amount of stress if this Need is considered. Planning variety into their schedules will prevent them from getting locked in to any one commitment.

Senior Pastors will also benefit from having others learn from this research. First, as previously stated, they have a high need for variety in their work schedule. Placing the expectation of only working on one task or in one area will cause them stress. This stress will manifest itself as distraction and procrastination as they seek out other opportunities for their time and energy. Ministry board members should apply this Need by not pinning them down to a limited selection of responsibilities and all for a freedom to work on multiple duties.

Also, it will aid in the health of the Senior Pastor's relationships if everyone understands that though they usually communicate with a low level of Self-Consciousness, this is not how they need to be approached. They have a high need for an environment that promotes High Self-Consciousness. With such a large gap (81.2) between their Usual Behavior and Needs scores, it may be easy for others to assume that they should speak to the Senior Pastors with directness and frankness because this is how they see the pastors speak to others. However, it is best to remember their need and temper the message with sensitivity.

RQ3

The information revealing the similarities and contrasts between Senior and Executive Pastors will help them develop and enhance their relationships with each other. In turn, their individual ministry impact will be enhanced as they work together more effectively. First, they should work together to discuss how the levels of Self-Consciousness contrast with each other. Though they are both low in Usual Behavior and high in Needs, the contrast appears when one approaches the other. The Senior Pastor may communicate with the Executive Pastor directly, but this will not meet the Needs of the Executive Pastor who needs to be communicated with from a supportive position. This can be critical when one needs to confront the other or when the Senior Pastor conducts the Executive Pastor's development review. Each should approach the other with attention given to their need for sensitivity and approval (Birkman, 2017). Otherwise, the low level of Usual Behavior may come across as being harsh and the high Needs of the other may leave them feeling embarrassed and insecure.

Another way for the pair to apply the results of the study is to celebrate the fact that they are similar in their high Usual Behavior in Social Energy. They can utilize this trait by finding ways to collaborate in ministry. It will also help them in recruiting volunteers and working in a

team-based environment. Others find them naturally friendly and will be drawn to partner with them in ministry and they watch the example set by the pastoral team. When paired with their low Usual Behavior in Incentives, they will both seek the benefit of each other and their teams.

Finally, they can discuss the contrast that exists between the Senior Pastors Usual Behavior and the Executive Pastors need related to the component of Thought. Making quick decisions is a strength of the Senior Pastors. They naturally breakdown down complex decisions to their primary factors quickly enabling them to draw quick conclusions. The low Needs level of Executive Pastors indicates that they need more time to think through complicated situations before making decisions. The Executive Pastor's lengthy thought process could frustrate the Senior Pastor and cause them to become impatient. The Senior Pastor's expectation for a speedy thought process may cause the Executive Pastor to become indecisive when pressed for a response or cause them to make impulsive decisions that results in negative consequences. Taking the time to discuss and understand the Usual Behaviors and Needs of each other in the components will help them to anticipate the others thought process. It can also assist them in planning who will make specific decisions as well as how and when those decisions will be made.

Research Limitations

There were several limitations worth noting. One limitation of this research design was the small sample size. The population for this study was limited by the requirements set forth in the design. The total population resulted in there being only 24 possible participants. This limitation was increased by the fact that only 11 of the 24 participants participated in the study. This resulted in a low percentage of the possible population for the study.

Another limitation to this study is that it applies specifically to ministry positions. This limitation was unavoidable due to the narrow focus of the scope of this research. The study focused on identified roles within ministry for the purpose of filling a specific gap in literature. However, this limitation can be overcome with future research conducted with participants from secular career fields. The results of this research cannot be proven applicable to roles in secular fields without further research.

A final limitation to this study is that it applies specifically to Senior and Executive Pastors. As with the previous limitation, this was unavoidable given the scope of the research. These roles and participants were selected for research to align with the researcher's area of study in Christian leadership. It is possible that the results of this research may apply to individuals in other Christian ministry roles. However, this cannot be proven without further studies similar in nature to this research.

Further Research

There are several suggestions for conducting further research connected to personality traits and relationships between individuals that work together. First, increasing the sample size for a follow-up quantitative study of the personality components for pastors would be helpful at overcoming one of the limitations of this study. This could be completed by removing the church attendance requirement or the time a pastor must have spent in a specific position as required to participate in this research. The study could also be conducted by including other church denominations or by removing the requirement that the participants be from any denomination or geographical area. More Senior and Executive Pastors could be included in the pool of participants if one or all these requirements were removed. This would allow for a larger pool of participants and for the possibility of a more diverse group of individuals.

Another recommendation for conducting future research is to perform a qualitative study, or a mixed methods study. The lived experiences and insights from a small selection of Senior and Executive Pastors could supplement and explain the statistical outcomes of this quantitative study. Testimonies from each pastoral role could be analyzed for common experiences and compared to the results of the Birkman assessment. This approach could be altered to approach the research participants as pairs serving at the same church. The researcher could analyze the quantitative and qualitative results for the Senior and Executive Pastor from each church to identify common and contradictory personality components. The results from each church could then be combined to identify the existence of correlations. A final way this line of study could be altered is to identify if a relationship exists between the personality components of an Executive Pastor and their job performance as perceived by the Senior Pastor. A series of questions could be developed to assess the Senior Pastor's perception of the Executive Pastor's job performance. The results of this qualitative interview could then be compared to the analysis of the Executive Pastor's Birkman personality assessment.

Finally, the limitations of this study could be relieved by conducting research that applies to other roles and positions. Assessment data from participants that serve in other roles within the church could be analyzed and compared to help in the coaching and development of the entire church staff. Research could also investigate the roles within parachurch ministries. Expanding this research to secular roles in the workforce would further expand the application of this work. In all work environments, comparing the personality traits of leadership positions with those of the staff would further fill gaps in literature and add to the practical application of this area of study.

Summary

Jesus instructed His followers to love each other without condition (John 15:12–13). Paul amplified this command by teaching the selflessness of love that should be shown to others (Rom 13:8; 1 Cor 13:4–7; Col 3:14). The command to love one another applies both to church attendees and ministers. Senior and Executive Pastors need to have strong relationships with each other for the purpose of serving their churches as God directs (Bonem, 2005). Relationships can be enhanced by taking the time to understand the impact that personalities can have on how people relate and interact with each other (Birkman, 1995). This study sought to identify the personality components that Senior and Executive Pastors share and those they have that contrast with each other. Of the nine components assessed using the Birkman Method, their common level of Self-Consciousness and their contrasting levels of Thought are worth highlighting.

The Senior and Executive Pastors who participated in this research both showed a low level of Usual Behavior and a high Need for Self-Consciousness. This means that pastors from both groups communicate directly and tend to speak their minds without giving much consideration to how their message is received. It also means that they both need others to communicate indirectly with them in a way that conveys respect and consideration for the emotional impact of words. Senior and Executive Pastors may share these traits, but they may experience conflict when communicating to each other if they are not aware of the needs the other has when communicating. For example, the Senior Pastor's Usual Behavior of confronting their Executive Pastor with facts and logic when discussing personal development may leave the Executive Pastor feeling as if they are failing in their ministry responsibilities. The Senior Pastor may have the best intention for the development and work of their coworker, but if the Executive Pastor does not hear words of edification and respect, the intended impact may be

disproportional to the Senior's purpose. Each party must consider the Need of the other and evaluate how that Need compares to their Usual Behavior of speaking with a low level of consciousness regarding the impact of their words.

The other component worth mentioning for the two groups is Thought. Data revealed that Senior Pastors show a low level of Usual Behavior related to Thought which means they tend to make quick decisions. They are good at seeing the basic facts and needs of a situation. They can use this information to make fast decisions so that they can move on to the next decision, discussion, or task requiring their attention. This can be a good trait in specific situations that do not require large amounts of time. However, Executive Pastors have a high Need in this area. This means that they need time to make decisions, especially those decisions regarding complex situations. Requiring Executive Pastors to make rushed decisions without giving them the time they feel that they need to think through the details and consequence of a decision can be stressful for them. The Senior Pastor may be able to decide quickly that it is time to begin a major building project based on a minimum of facts. However, the Executive Pastor is going to need time to gather data, think through the details, and consider the consequences to a variety of scenarios. Based on this research, Senior Pastors need to understand that allowing Executive Pastors to have the time they need to make decisions could be critical to the health of their working relationship.

It is the sincere desire of this researcher that all would see those whom they share relationships with as more important than themselves. Just as God is to be the central focus for those who have a relationship with Him, believers should view others as the purpose for why they are in relationship with each other. It is through this practice that all can truly serve others from a place of unconditional love and selflessness. This can be accomplished as people take the

time to understand how others best need to be served based on the unique personalities that God has created within everyone. May God bless every pastor as they seek to serve Him through their relationships with each other.

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APPENDIX A

Request and Permission to Use the Birkman Method Signature Assessment and Publish Results

9/8/2022

██████████, PhD
Birkman International, Inc.

Dear Dr. ██████████

I am a doctoral student from Liberty University writing my dissertation titled *Staff Relationships: Personality Type and the Relationship Shared Between Senior and Executive Pastors*, under the direction of my dissertation committee chaired by Dr. ██████████, EdD, who can be reached at ██████████.

I would like your permission to use The Birkman Method Signature Assessment in my research study. I would like to use and print the report under the following conditions:

- I will use the instrument only for my research study and will not sell or use it with any compensated or curriculum development activities.
- I will include the copyright statement on all copies of the instrument.
- I will send a copy of my completed research study to your attention upon completion of the study.

If these are acceptable terms and conditions, please indicate so by replying to me through e-mail: sconrad15@liberty.edu.

Sincerely,

C. Sean Conrad
PhD Candidate
Liberty University

Hi Sean,

Yes, thank you! And sorry, we are creating a new process for requests such as yours.

That said, you can certainly use Birkman in your dissertation work and we appreciate your interest in doing so! I am hoping to get you an answer on a potential discounted rate by next week at the latest. Hopefully that timing will work out okay.

Thanks for your patience!

████████

████████████████████

Learning & Development Manager



Birkman International, Inc.

████████████████████

████████████████

████████████████

Wed, Sep 20,
8:55 PM

[REDACTED]
to me, [REDACTED]

Sean, good news! Our research team has approved publishing as is.

Please let me know if you have questions. Good luck to you!

Best,

[REDACTED]

[REDACTED]
Director of Client Operations



[REDACTED] | birkman.com
Birkman International, Inc. | [REDACTED]

APPENDIX B

IRB Approval Letter

LIBERTY UNIVERSITY
INSTITUTIONAL REVIEW BOARD

February 7, 2023

Sean Conrad
[REDACTED]

Re: IRB Exemption - IRB-FY22–23–738 Church Staff Relationships: The Connection Between Personality Type and the Relationship Shared between Senior and Executive Pastors

Dear Sean Conrad, [REDACTED],

The Liberty University Institutional Review Board (IRB) has reviewed your application in accordance with the Office for Human Research Protections (OHRP) and Food and Drug Administration (FDA) regulations and finds your study to be exempt from further IRB review. This means you may begin your research with the data safeguarding methods mentioned in your approved application, and no further IRB oversight is required.

Your study falls under the following exemption category, which identifies specific situations in which human participants research is exempt from the policy set forth in 45 CFR 46:104(d):

Category 2.(iii). Research that only includes interactions involving educational tests (cognitive, diagnostic, aptitude, achievement), survey procedures, interview procedures, or observation of public behavior (including visual or auditory recording) if at least one of the following criteria is met:

The information obtained is recorded by the investigator in such a manner that the identity of the human subjects can readily be ascertained, directly or through identifiers linked to the subjects, and an IRB conducts a limited IRB review to make the determination required by §46.111(a)(7).

Your stamped consent form(s) and final versions of your study documents can be found under the Attachments tab within the Submission Details section of your study on Cayuse IRB. Your stamped consent form(s) should be copied and used to gain the consent of your research participants. If you plan to provide your consent information electronically, the contents of the attached consent document(s) should be made available without alteration.

Please note that this exemption only applies to your current research application, and any modifications to your protocol must be reported to the Liberty University IRB for verification of continued exemption status. You may report these changes by completing a modification submission through your Cayuse IRB account.

If you have any questions about this exemption or need assistance in determining whether possible modifications to your protocol would change your exemption status, please email us at irb@liberty.edu.

Sincerely,

██████████, MA, CIP

Administrative Chair of Institutional Research

Research Ethics Office

APPENDIX C

Request for Participant List

December 11th, 2022

██████████
Associate Executive Director
Church Relations
Oklahoma Baptists
██████████
██████████

Dear ██████,

As a doctoral student in the John W. Rawlings School of Divinity at Liberty University, I am conducting research as part of the requirements for a Ph.D. in Christian Leadership. The title of my research project is *Church Staff Relationships: The Connection between Personality Type and the Relationship Shared between Senior and Executive Pastors* and the purpose of my research is to identify if a correlation exists between the personality types of Senior and Executive Pastors and if so, how might this correlation affect their relationships.

I am writing to request your permission to utilize your membership list to recruit participants for my research. Participants will be asked to complete a personality assessment called The Birkman Method. The results of the assessments will be used to determine if a correlation exists between the personality types of Senior and Executive Pastors. The Senior Pastor is the pastor who serves as the senior leader on a church staff, is responsible for preaching/teaching, and is responsible for vision creation and casting. The Executive Pastor is the pastor who serves as the second in command, fulfills a subordinate leadership role to the senior pastor, is responsible for implementing the vision cast by the Senior Pastor, and leads in the development of the church staff and ministries. Participants will be presented with informed consent information prior to participating. Taking part in this study is completely voluntary, and participants are welcome to discontinue participation at any time.

Thank you for considering my request. If you choose to grant permission, please respond by email to sconrad15@liberty.edu. A permission letter document is attached for your convenience.

Sincerely,

Sean Conrad
Ph.D. Candidate

12/14/2022

Sean Conrad
PhD Candidate
Liberty University

Dear Sean:

After careful review of your research proposal entitled *Church Staff Relationships: The Connection between Personality Type and the Relationship Shared between Senior and Executive Pastors*, we have decided to grant you permission to access our membership list and invite them to participate in your study.

Check the following boxes, as applicable:

We will provide our membership list to Sean Conrad, and Sean may use the list to contact our members to invite them to participate in his research study.

Sincerely,

[REDACTED]
Associate Executive Director
Church Relations
Oklahoma Baptists

[REDACTED]
[REDACTED]
[REDACTED]



APPENDIX D

Consent Form

Consent

Title of the Project: Church Staff Relationships: The Connection between Personality Type and the Relationship Shared between Senior and Executive Pastors

Principal Investigator: Sean Conrad, Ph.D. Candidate, John W. Rawlings School of Divinity, Liberty University

Invitation to be Part of a Research Study

You are invited to participate in a research study. To participate, you must be 18 years old or older, you must be a Senior or Executive Pastor from a Southern Baptist church in the state of Oklahoma that has an average Sunday worship attendance of 500 individuals or more, and you must have served in your current role for at least 2 years. The Senior Pastor is the Pastor who serves as the senior leader on a church staff, is responsible for preaching/teaching, and is responsible for vision creation and casting. The Executive Pastor is the Pastor who serves as the second in command, fulfills a subordinate leadership role to the Senior Pastor, is responsible for implementing the vision cast by the senior pastor, and leads in the development of the church staff and ministries. Taking part in this research project is voluntary.

Please take time to read this entire form and ask questions before deciding whether to take part in this research.

What is the study about and why is it being done?

The purpose of the study is to understand how correlations in personality types play a role in the working relationships of individual church staff members, specifically for the roles of Senior and Executive Pastors.

What will happen if you take part in this study?

If you agree to be in this study, I will ask you to do the following:

1. Complete a personality assessment called The Birkman Method. A link to the assessment will be emailed to you that will allow participants to take the assessment online. It should take approximately 30 to 45 minutes to complete.

How could you or others benefit from this study?

The direct benefits participants should expect to receive from taking part in this study include:

1. A report of the results from the assessment will be emailed to the participant free of charge (a \$500 value).
2. Participants can also receive a free one-to-one debrief for an explanation of their results if they choose.

Benefits to society include:

1. This study will add to the literature related to the development of organizational staffs and teams, specifically to those organizations that are related to the church and Christian ministry.
2. Further, this research will be significant for those who work together in executive leadership positions in a hierarchical reporting structure where one executive reports directly to another executive on the leadership team.
3. This research will apply directly to individuals who have struggled in their relationships with others in the past and have been affected negatively by the consequences of damaged relationships in the workplace and on church or ministry staff.
4. Finally, this research will also help ministry and church leadership teams make better hiring decisions by helping to identify new hires and leaders that can work effectively with leaders and staff members already in place.

What risks might you experience from being in this study?

The expected risks from participating in this study are minimal, which means they are equal to the risks you would encounter in everyday life.

How will personal information be protected?

The records of this study will be kept private. Published reports will not include any information that will make it possible to identify a subject. Research records will be stored securely, and only the researcher will have access to the records.

- Participant responses will be kept confidential by replacing names with codes.
- Assessment results are kept in a password-protected Birkman account and can only be accessed by the researcher. Employees of Birkman who have access to data are unable to identify the participant by name or other identifying information, only by account numbers.
- The researcher will store data on a password-protected computer. Only the researcher will have access to the data. The researcher will delete their copy of the data from the computer after three years.

Is study participation voluntary?

Participation in this study is voluntary. Your decision whether to participate will not affect your current or future relations with Liberty University. If you decide to participate, you are free to not answer any question or withdraw at any time without affecting those relationships.

What should you do if you decide to withdraw from the study?

If you choose to withdraw from the study, please contact the researcher at the email address/phone number included in the next paragraph. Should you choose to withdraw, data collected from you will be destroyed immediately and will not be included in this study.

Whom do you contact if you have questions or concerns about the study?

The researcher conducting this study is Sean Conrad. You may ask any questions you have now. If you have questions later, **you are encouraged** to contact him at [REDACTED] or

sconrad15@liberty.edu. You may also contact the researcher's faculty sponsor, Dr. Jesse Adkinson, at [REDACTED].

Whom do you contact if you have questions about your rights as a research participant?

If you have any questions or concerns regarding this study and would like to talk to someone other than the researcher, **you are encouraged** to contact the IRB. Our physical address is Institutional Review Board, 1971 University Blvd., Green Hall Ste. 2845, Lynchburg, VA, 24515; our phone number is 434 –592 –5530, and our email address is irb@liberty.edu.

Disclaimer: The Institutional Review Board (IRB) is tasked with ensuring that human subjects research will be conducted in an ethical manner as defined and required by federal regulations. The topics covered and viewpoints expressed or alluded to by student and faculty researchers are those of the researchers and do not necessarily reflect the official policies or positions of Liberty University.

Your Consent

By signing this document, you are agreeing to be in this study. Make sure you understand what the study is about before you sign. You will be given a copy of this document for your records. The researcher will keep a copy with the study records. If you have any questions about the study after you sign this document, you can contact the study team using the information provided above.

I have read and understood the above information. I have asked questions and have received answers. I consent to participate in the study.

Printed Subject Name

Signature & Date

APPENDIX E

Participants Instructions

Pastor XXX XXXX,

Thank you for your willingness to assist with this research. You will be receiving an email from Birkman International shortly after receiving this email. If it does not arrive in your Inbox this morning, you may need to check your Junk or Spam folder. The email will include a link to the assessment and some simple instructions which state the following:

“Please follow the instructions included with each segment of the assessment. Select the answer that best applies to you. Choosing your first impulse, even when you feel both answers do or do not apply, will provide the most accurate results. Please complete the assessment in one session, which should take 30 to 45 minutes. Thank you!”

I will be notified once you have completed the assessment and will send you a report of the results. If you would like to meet via Zoom to review the report, please reply to this email or call me at [REDACTED].

My goal is to have all results compiled by May 15, 2023. I know that you are extremely busy. If it looks like you will not be able to complete the assessment by this date, please let me know so that I can adjust my schedule.

Thanks again, and may God bless you as you continue to serve Him and His people,

Sean Conrad

APPENDIX F

First Participant Request Email

Dear Participant:

As a doctoral student in the School of Divinity at Liberty University, I am conducting research as part of the requirements for a Ph.D. in Christian Leadership. The purpose of my research is to identify if a correlation exists between the personality traits of Senior Pastors and Executive Pastors, and I am writing to invite eligible participants to join my study.

Participants must be 18 years of age or older and Senior or Executive Pastors from Southern Baptist churches in the state of Oklahoma that have an average Sunday worship attendance of 500 individuals or more. The Senior Pastor is the pastor who serves as the senior leader on a church staff, is responsible for preaching/teaching, and is responsible for vision creation and casting. The Executive Pastor is the pastor who serves as the second in command, fulfills a subordinate leadership role to the Senior Pastor, is responsible for implementing the vision cast by the Senior Pastor, and leads in the development of the church staff and ministries. Participants must have served in their current roles and churches for at least 2 years. Participants, if willing, will be asked to complete a personality assessment called The Birkman Method. A link to the assessment will be emailed that will allow participants to take the assessment online. It should take approximately 30 to 45 minutes to complete. A report of the results will be emailed to the participant free of charge (a \$500 value). Participants can also receive a free one-to-one debrief for an explanation of their results if they choose. Names and other identifying information will be requested as part of this study, but the information will remain confidential.

To participate, please reply to this email indicating your willingness to participate.

A consent document will be emailed to you once you agree to participate. The consent document contains additional information about my research. If you choose to participate, you will need to sign the consent document by typing your name and the date and return it to me via email. Once the consent form has been signed and returned, a link to the assessment will be sent to you.

If you have any questions, please do not hesitate to contact me.

Sincerely,

Sean Conrad
Ph.D. Candidate
Liberty University
[REDACTED]
sconrad@liberty.edu

APPENDIX G

Second Participant Request Email

Dear Participant:

As a doctoral student in the School of Divinity at Liberty University, I am conducting research as part of the requirements for a Ph.D. in Christian Leadership. Last week, an email was sent to you inviting you to participate in a research study. This follow-up email is being sent to remind you to respond if you would like to participate and have not already done so.

Participants must be 18 years of age or older and Senior or Executive Pastors from Southern Baptist churches in the state of Oklahoma that have an average Sunday worship attendance of 500 individuals or more. The Senior Pastor is the pastor who serves as the senior leader on a church staff, is responsible for preaching/teaching, and is responsible for vision creation and casting. The Executive Pastor is the pastor who serves as the second in command, fulfills a subordinate leadership role to the Senior Pastor, is responsible for implementing the vision cast by the Senior Pastor, and leads in the development of the church staff and ministries. Participants must have served in their current roles and churches for at least 2 years. Participants, if willing, will be asked to complete a personality assessment called The Birkman Method. A link to the assessment will be emailed that will allow participants to take the assessment online. It should take approximately 30 to 45 minutes to complete. A report of the results will be emailed to the participant free of charge (a \$500 value). Participants can also receive a free one-to-one debrief for an explanation of their results if they choose. Names and other identifying information will be requested as part of this study, but the information will remain confidential.

To participate, please reply to this email indicating your willingness to participate.

A consent document will be emailed to you once you agree to participate. The consent document contains additional information about my research. If you choose to participate, you will need to sign the consent document by typing your name and the date and return it to me via email. Once the consent form has been signed and returned, a link to the assessment will be sent to you.

If you have any questions, please do not hesitate to contact me.

Sincerely,

Sean Conrad
Ph.D. Candidate
Liberty University
[REDACTED]
sconrad@liberty.edu

APPENDIX H

Written Participant Request Letter

[REDACTED]
[REDACTED]

April 8, 2023

Participant
Title
Address 1
Address 2

Dear Participant:

As a doctoral student in the School of Divinity at Liberty University, I am conducting research as part of the requirements for a Ph.D. in Christian Leadership. Last month, an email was sent to you inviting you to participate in a research study. This follow-up letter is being sent to remind you to respond if you would like to participate and have not already done so. Please respond by April 30th if you are willing to participate.

Participants must be 18 years of age or older and Senior or Executive Pastors from Southern Baptist churches in the state of Oklahoma that have an average Sunday worship attendance of 500 individuals or more. The Senior Pastor is the pastor who serves as the senior leader on a church staff, is responsible for preaching/teaching, and is responsible for vision creation and casting. The Executive Pastor is the pastor who serves as the second in command, fulfills a subordinate leadership role to the Senior Pastor, is responsible for implementing the vision cast by the Senior Pastor, and leads in the development of the church staff and ministries. Participants must have served in their current roles and churches for at least 2 years. Participants, if willing, will be asked to complete a personality assessment called The Birkman Method. A link to the assessment will be emailed that will allow participants to take the assessment online. It should take approximately 30 to 45 minutes to complete. A report of the results will be emailed to the participant free of charge (a \$500 value). Participants can also receive a free one-to-one debrief for an explanation of their results if they choose. Names and other identifying information will be requested as part of this study, but the information will remain confidential.

To participate, please review and complete the attached consent document. The consent document contains additional information about my research. If you choose to participate, you will need to sign the consent document and return it to me using the included envelope. Once the consent form has been signed and returned, a link to the assessment will be sent to you. If you have any questions, please do not hesitate to contact me.

Sincerely,

Sean Conrad

Ph.D. Candidate
Liberty University
[REDACTED]
sconrad@liberty.edu

APPENDIX I

Final Participant Request Email

Participant,

Thank you for agreeing to participate in my research. To date, the total participation rate is 37.5%. As communicated earlier, the only commitment is to complete an online assessment which requires 30 to 45 minutes on average. I will send you the link to the assessment once I receive your signed consent form. I have attached the consent form to this email.

I had hoped to have all assessments completed by May 15th, but I can extend the deadline to May 19th if necessary. Please let me know if you will be unable to participate.

In Christ,

Sean Conrad


APPENDIX J

Figure J1

Summary of Data and Descriptive Statistics

| REF | LVL | SEU | SEN | PEU | PEN | EEU | EEN | SCU | SCN | ASU | ASN | ISU | ISN | ICU | ICN | RSU | RSN | THU | THN |
|---|-----|-------|------|------|-------|------|------|------|-------|-------|-------|-------|------|------|-------|-------|-------|------|------|
| 91 | SR | 84 | 74 | 76 | 66 | 37 | 64 | 14 | 62 | 37 | 37 | 97 | 92 | 8 | 44 | 17 | 52 | 32 | 6 |
| 8 | SR | 92 | 27 | 41 | 66 | 51 | 51 | 1 | 79 | 23 | 91 | 85 | 55 | 16 | 53 | 90 | 99 | 32 | 84 |
| 21 | SR | 98 | 17 | 97 | 54 | 23 | 51 | 3 | 94 | 10 | 51 | 99 | 29 | 8 | 71 | 52 | 68 | 6 | 48 |
| 70 | SR | 98 | 27 | 76 | 12 | 64 | 92 | 6 | 99 | 98 | 37 | 16 | 7 | 44 | 96 | 81 | 99 | 48 | 99 |
| 79 | SR | 99 | 51 | 99 | 12 | 37 | 95 | 3 | 94 | 91 | 91 | 42 | 16 | 34 | 96 | 90 | 99 | 18 | 92 |
| MEAN | | 94.2 | 39.2 | 77.8 | 42.0 | 42.4 | 70.6 | 5.4 | 85.6 | 51.8 | 61.4 | 67.8 | 39.8 | 22.0 | 72.0 | 66.0 | 83.4 | 27.2 | 65.8 |
| SD | | 6.3 | 23.1 | 23.3 | 27.8 | 15.6 | 21.6 | 5.1 | 15.2 | 40.2 | 27.6 | 37.0 | 34.3 | 16.2 | 24.0 | 31.5 | 22.1 | 15.9 | 38.8 |
| MED | | 98.0 | 27.0 | 76.0 | 54.0 | 37.0 | 64.0 | 3.0 | 94.0 | 37.0 | 51.0 | 85.0 | 29.0 | 16.0 | 71.0 | 81.0 | 99.0 | 32.0 | 84.0 |
| MIN | | 84 | 17 | 41 | 12 | 23 | 51 | 1 | 62 | 10 | 37 | 16 | 7 | 8 | 44 | 17 | 52 | 6 | 6 |
| MAX | | 99.0 | 74.0 | 99.0 | 66.0 | 64.0 | 95.0 | 14.0 | 99.0 | 98.0 | 91.0 | 99.0 | 92.0 | 44.0 | 96.0 | 90.0 | 99.0 | 48.0 | 99.0 |
| RANGE | | 15 | 57 | 58 | 54 | 41 | 44 | 13 | 37 | 88 | 54 | 83 | 85 | 36 | 52 | 73 | 47 | 42 | 93 |
| REF | LVL | SEU | SEN | PEU | PEN | EEU | EEN | SCU | SCN | ASU | ASN | ISU | ISN | ICU | ICN | RSU | RSN | THU | THN |
| 50 | EX | 62 | 51 | 93 | 54 | 23 | 37 | 1 | 44 | 3 | 1 | 85 | 85 | 16 | 25 | 52 | 81 | 18 | 32 |
| 69 | EX | 98 | 38 | 97 | 54 | 37 | 64 | 9 | 14 | 10 | 10 | 66 | 42 | 8 | 44 | 34 | 17 | 32 | 48 |
| 66 | EX | 84 | 4 | 76 | 6 | 51 | 97 | 9 | 79 | 23 | 91 | 99 | 7 | 16 | 99 | 52 | 90 | 6 | 98 |
| 57 | EX | 99 | 27 | 54 | 20 | 82 | 98 | 79 | 99 | 23 | 91 | 66 | 42 | 44 | 96 | 52 | 99 | 84 | 99 |
| 3 | EX | 99 | 9 | 93 | 20 | 23 | 51 | 3 | 94 | 3 | 72 | 42 | 42 | 8 | 44 | 17 | 90 | 32 | 84 |
| 11 | EX | 27 | 51 | 54 | 30 | 75 | 82 | 62 | 99 | 96 | 10 | 97 | 55 | 16 | 34 | 52 | 68 | 74 | 98 |
| MEAN | | 78.2 | 30.0 | 77.8 | 30.7 | 48.5 | 71.5 | 27.2 | 71.5 | 26.3 | 45.8 | 75.8 | 45.5 | 18.0 | 57.0 | 43.2 | 74.2 | 41.0 | 76.5 |
| SD | | 28.9 | 20.4 | 19.8 | 19.6 | 25.5 | 25.0 | 34.1 | 35.0 | 35.3 | 43.2 | 21.9 | 25.2 | 13.3 | 32.2 | 14.7 | 29.9 | 31.2 | 29.3 |
| MED | | 91.0 | 32.5 | 84.5 | 25.0 | 44.0 | 73.0 | 9.0 | 86.5 | 16.5 | 41.0 | 75.5 | 42.0 | 16.0 | 44.0 | 52.0 | 85.5 | 32.0 | 91.0 |
| MIN | | 27 | 4 | 54 | 6 | 23 | 37 | 1 | 14 | 3 | 1 | 42 | 7 | 8 | 25 | 17 | 17 | 6 | 32 |
| MAX | | 99 | 51 | 97 | 54 | 82 | 98 | 79 | 99 | 96 | 91 | 99 | 85 | 44 | 99 | 52 | 99 | 84 | 99 |
| RANGE | | 72 | 47 | 43 | 48 | 59 | 61 | 78 | 85 | 93 | 90 | 57 | 78 | 36 | 74 | 35 | 82 | 78 | 67 |
| MEAN DIFF | | -16.0 | -9.2 | 0.0 | -11.3 | 6.1 | 0.9 | 21.8 | -14.1 | -25.5 | -15.6 | 8.0 | 5.7 | -4.0 | -15.0 | -22.8 | -9.2 | 13.8 | 10.7 |
| SD DIFF | | 22.6 | -2.8 | -3.5 | -8.2 | 9.9 | 3.4 | 29.0 | 19.9 | -4.9 | 15.6 | -15.0 | -9.2 | -2.9 | 8.2 | -16.8 | 7.8 | 15.2 | -9.5 |
| MED DIFF | | -7.0 | 5.5 | 8.5 | -29.0 | 7.0 | 9.0 | 6.0 | -7.5 | -20.5 | -10.0 | -9.5 | 13.0 | 0.0 | -27.0 | -29.0 | -13.5 | 0.0 | 7.0 |
| MIN DIFF | | (57) | (13) | 13 | (6) | 0 | (14) | 0 | (48) | (7) | (36) | 26 | 0 | 0 | (19) | 0 | (35) | 0 | 26 |
| MAX DIFF | | 0 | (23) | (2) | (12) | 18 | 3 | 65 | 0 | (2) | 0 | 0 | (7) | 0 | 3 | (38) | 0 | 36 | 0 |
| RANGE DIFF | | 57 | (10) | (15) | (6) | 18 | 17 | 65 | 48 | 5 | 36 | (26) | (7) | 0 | 22 | (38) | 35 | 36 | (26) |
| ***Note: DIFF = value for EX – value for SR => positive value means EX > SR; (negative value) means EX < SR | | | | | | | | | | | | | | | | | | | |
| ***Note: colors in cells reflect lowest value to 50th percentile value to highest value | | | | | | | | | | | | | | | | | | | |

The descriptive statistics (mean, median, maximum, and differences between them) are color coded according to their ranked order based on magnitude. A value of green would be the maximum, yellow would be the middle value, and orange would be the minimum (in most cases, lowest negative value).

APPENDIX K**Figure K1**

Summary of Differences in Means for Each Variable

| | LVL | SED | PED | EED | SCD | ASD | ISD | ICD | RSD | THD |
|------|-----|-------|-------|------|------|------|-------|------|------|------|
| MEAN | SR | -55.0 | -35.8 | 28.2 | 80.2 | 9.6 | -28.0 | 50.0 | 17.4 | 38.6 |
| MEAN | EX | -48.2 | -47.2 | 23.0 | 44.3 | 19.5 | -30.3 | 39.0 | 31.0 | 35.5 |

APPENDIX L

Table L1

Test of a Normal Distribution

| One-Sample Kolmogorov-Smirnov Test | | | | | |
|--|-------------------------|-------------|----------|----------|------|
| | | Mean | Median | Maximum | |
| N | | 36 | 36 | 36 | |
| Normal Parameters ^{a,b} | Mean | 54.2528 | 54.9722 | 82.5833 | |
| | Std. Deviation | 22.35959 | 28.87385 | 22.07698 | |
| Most Extreme Differences | Absolute | .142 | .127 | .243 | |
| | Positive | .092 | .120 | .229 | |
| | Negative | -.142 | -.127 | -.243 | |
| Test Statistic | | .142 | .127 | .243 | |
| Asymp. Sig. (2-tailed) ^c | | .065 | .150 | <.001 | |
| Monte Carlo Sig. (2-tailed) ^d | Sig. | .060 | .136 | .000 | |
| | 99% Confidence Interval | Lower Bound | .054 | .127 | .000 |
| | | Upper Bound | .066 | .145 | .000 |

a. Test distribution is Normal.
b. Calculated from data.
c. Lilliefors Significance Correction.
d. Lilliefors' method based on 10000 Monte Carlo samples with starting seed 876491272.

Table L2*Test of Uniform Distribution*

| One-Sample Kolmogorov-Smirnov Test 2 | | | | | |
|---|-------------------------|-------------------|-------------------|-------------------|------|
| | | Mean | Median | Maximum | |
| N | | 36 | 36 | 36 | |
| Uniform Parameters ^{a,b} | Minimum | 0 | 0 | 0 | |
| | Maximum | 99 | 99 | 99 | |
| Most Extreme Differences | Absolute | .182 | .134 | .523 | |
| | Positive | .127 | .028 | .000 | |
| | Negative | -.182 | -.134 | -.523 | |
| Kolmogorov-Smirnov Z | | 1.094 | .803 | 3.136 | |
| Asymp. Sig. (2-tailed) | | .182 | .539 | .000 | |
| Monte Carlo Sig. (2-tailed) | Sig. | .159 ^c | .499 ^c | .000 ^c | |
| | 99% Confidence Interval | Lower Bound | .150 | .486 | .000 |
| | | Upper Bound | .169 | .511 | .000 |

a. Test distribution is Uniform.

b. User-Specified

c. Based on 10000 sampled tables with starting seed 876491272.

Table L3*Test of Poisson Distribution*

| One-Sample Kolmogorov-Smirnov Test 3 | | | | |
|---|-------------------------|-----------------|-----------------|-------------------|
| | | Mean | Median | Maximum |
| N | | 36 ^c | 36 ^d | 36 |
| Poisson Parameter ^{a,b} | Mean | 1 | 1 | 1 |
| Most Extreme Differences | Absolute | | | 1.000 |
| | Positive | | | .000 |
| | Negative | | | -1.000 |
| Kolmogorov-Smirnov Z | | | | 6.000 |
| Asymp. Sig. (2-tailed) | | | | .000 |
| Monte Carlo Sig. (2-tailed) | Sig. | | | .000 ^e |
| | 99% Confidence Interval | Lower Bound | | .000 |
| | | Upper Bound | | |

a. Test distribution is Poisson.

b. User-Specified

c. Poisson variables are non-negative integers. The value 5.40 occurs in the data. One-Sample Kolmogorov-Smirnov Test cannot be performed.

d. Poisson variables are non-negative integers. The value 16.50 occurs in the data. One-Sample Kolmogorov-Smirnov Test cannot be performed.

e. Based on 10000 sampled tables with starting seed 876491272.

Table L4*Test of Exponential Distribution*

| One-Sample Kolmogorov-Smirnov Test 4 | | | | | |
|---|-------------------------|-------------|---------|---------|------|
| | | Mean | Median | Maximum | |
| N | | 36 | 36 | 36 | |
| Exponential parameter. ^{a,b} | Mean | 54.2528 | 54.9722 | 82.5833 | |
| Most Extreme Differences | Absolute | .301 | .227 | .385 | |
| | Positive | .179 | .165 | .302 | |
| | Negative | -.301 | -.227 | -.385 | |
| Test Statistic | | .301 | .227 | .385 | |
| Monte Carlo Sig. (2-tailed) ^c | Sig. | .000 | .005 | .000 | |
| | 99% Confidence Interval | Lower Bound | .000 | .003 | .000 |
| | | Upper Bound | .000 | .006 | .000 |

a. Test Distribution is Exponential.

b. Calculated from data.

c. Lilliefors' method based on 10000 Monte Carlo samples with starting seed 876491272.