Chapter 4

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# Chapter 4: Research Findings and Data Analysis Results

For leaders to lead ethically, a characteristic of good leadership, there is a need to cultivate a personal spirituality foundational to various leadership models, including the transformational leadership model (Faddis, 2020; Mabey et al., 2017). Spirituality has not been a focal point of the leadership discussion (Makka, 2019). The development of morals and values, a key factor of spirituality, can be influenced by a specific set of beliefs, sacred writing, ethics, or God, encompassing the overall idea of religion (Paul Victor & Treschuk, 2020).

The personal development of morals and values influences ethical practices important to transformational leadership (Driscoll et al., 2019). Integrity is essential to be a moral leader (Laajalahti, 2018). For TLs to lead ethically, they must develop integrity (Mabey et al., 2017). The problem is a lack of understanding of the relationship between church leaders’ spiritual formation and transformational leadership practices. This study was designed to investigate the potential relationship between church leaders' spiritual formation and transformational leadership practices.

Data collection and deviations from the original plan are summarized. Participant demographics are presented, and data collection results from the Leadership Practices Inventory (LPI) and the Spiritual Transformational Inventory 2.0 (STI 2.0) are detailed. Assumption testing results are provided. Descriptive statistics were used to analyze the data results from the LPI and STI 2.0. Results are presented, examined, and interpreted given the research question and hypotheses.

# Data Collection

#  The target population for the study was Church leaders from Sandia Baptist Church located in Albuquerque, New Mexico. The minimum sample size was 31 participants. To protect against attrition, the first 37 leaders were selected through convenience sampling to ensure a strong representation of the population. A recruitment letter and a participation consent form were emailed by the Sandia Baptist leadership team to Sandia Baptist Church leaders. The first 37 leaders to return the signed consent form were selected for the study. A thank-you letter was sent to each leader.

**LPI Online Survey**

 After 37 signed consent forms were received, an email with the LPI online survey link was sent to each participant on October 29, 2024. Survey data was collected from October 29 through December 1, 2024. Notification was received of each participant’s completion of the survey. Data was available for preparation after the completion of the 37 surveys. Each survey was reviewed, and 100% of the questions were completed.

**STI 2.0 Online Survey**

 The 37 participants who received the LPI survey were also emailed a link to the STI 2.0 survey, which was emailed to participants on November 1, 2024. The holiday season delayed the timing for the completion of the surveys. Furthermore, one participant was delayed in completing the survey due to technical difficulties because of email. When instructions were given to correctly clarify the process to complete the online survey, all surveys were received on December 10, 2024. Each survey was reviewed, and 100% of the questions were completed.

 Three demographic questions concerning church ministry leadership roles, years of ministry leadership service, and level of ministry education were collected through the participation consent form. Four participants were asked to clarify their responses to ensure the accuracy of the information received. Each participant verbally clarified their answers, ensuring the accurate recording of each participant’s demographic information.

**Data Cleaning**

Data was collected and reviewed for errors to ensure accuracy. All participants LPI and STI 2.0 surveys were reviewed to ensure every question was answered. No missing variables were found. Data was downloaded into Excel spreadsheets and imported into SPSS. All data was reviewed for accuracy. Demographic information was collected and reviewed to ensure each question was answered appropriately.

# Data Analysis and Results

## LPI and STI 2.0 survey data were downloaded into Excel spreadsheets and imported into the statistical software program SPSS for analysis. The data and values were complete, eliminating any input of missing values or data exclusion. Demographic information was reviewed, and frequency distribution was recorded.

## Research Question and Hypotheses

The purpose statement was developed by recognizing that a problem exists regarding a lack of understanding of the relationship between a church leader’s spiritual formation and transformational leadership practices. To support the purpose of the study, the research question and hypotheses were developed from the purpose statement. Quantitative correlational statistics were used to accomplish the purpose of the study by testing the following research question:

Research Question: What is the relationship between a church leader’s self-assessed spiritual formation and self-assessed transformational leadership practices?

Ho: No statistically significant relationship exists between the self-assessed spiritual formation and self-assessed transformational leadership practices among Sandia Baptist Church leaders in Albuquerque, New Mexico.

Ha: A statistically significant relationship exists between the self-assessed spiritual formation and self-assessed transformational leadership practices among Sandia Baptist.

The Church is instrumental to spiritual formation taking place (Holder-Lonsdale, chapter 14, 2005). For Church leaders to lead transformationally, they must be in the process of spiritual formation and being transformed themselves (Lewis, 2019). Responses to Demographic Question 1 revealed each participant’s involvement in a church leadership role vital to the study's target population (see Table 1). Furthermore, responses to Question 1 reveal that 70% of participants serve in a church's non-ordained (Pastor or Deacon) leadership role. Responses to Demographic Question 2 revealed that 54% of participants have served in a ministry leadership role between 11 and 40 years. Responses to Demographic Question 3 indicate that 78% of the participants have had no earned ministerial education.

Table 1

## *Sandia Church Leadership Demographics*

 Demographic Variable *f* %

Church Leadership Role

 Pastor 2 5.4

 Deacon 9 24.3

 Student/Children Connections leader 12 32.4

 Adult Connections leader 11 29.7

 Finance Committee member 3 8.1

 Total 37 100.0

Years in a Ministry Leadership role

 < 5 7 18.9

 6-10 6 16.2

 11-25 11 29.7

 26-40 9 24.3

 > 40 4 10.8

 Total 37 100.0

Highest level of ministerial education earned

 No ministerial education 29 78.4

 2 years of ministry education 2 5.4

 School of Ministry 1 2.7

 Masters or equivalent 5 13.5

 Total 37 100.0

Kolmogorov-Smirnov and Shapiro-Wilk tests were used to test LPI composite scores for normality. The Kolmogorov-Smirnov test for normal distribution performed on the LPI composite scores indicates a significance value (alpha) greater than .05, signifying a normal data distribution (see Table 2). The Shapiro-Wilk test for normal distribution performed on the LPI composite scores indicates a significance value (alpha) greater than .05, signifying a normal data distribution (see Table 2).

Table 2

*Tests of Normality for the LPI Composite Scores*

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 Kolmogorov-Smirnova Shapiro-Wilk

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 Composite score Statistic *df* Sig. Statistic *df* Sig.

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LPI composite scores .259 37 .200\* .907 37 .450

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*Note*: An alpha level greater than .05 indicates a normal distribution.

\* This is a lower bound of the true significance.

 a  Lilliefors Significance Correction

Kolmogorov-Smirnov and Shapiro-Wilk tests were used to test STI 2.0 composite scores for normality. The Kolmogorov-Smirnov test for normal distribution performed on the STI 2.0 composite scores indicates a significance value (alpha) greater than .05, signifying a normal distribution of the data (see Table 3). The Shapiro-Wilk test for normal distribution performed on the LPI composite scores indicates a significance value (alpha) greater than .05, signifying a normal distribution of the data (see Table 3).

Table 3

*Tests of Normality for the STI Composite Scores*

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 Kolmogorov-Smirnova Shapiro-Wilk

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 Composite score Statistic *df* Sig. Statistic *df* Sig.

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STI composite scores .201 37 .200\* .979 37 .929

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 *Note*: An alpha level greater than .05 indicates a normal distribution.

\* This is a lower bound of the true significance.

a Lilliefors Significance Correction

**LPI Online System Analyses**

 Data from the LPI online survey, including the five LPI domains: model the way, inspire a shared vision, challenge the process, enable others to act, and encourage the heart, was entered into an Excel spreadsheet. The domain scores were imported into SPSS and an online Shapiro-Wilk statistical calculator for further analyses. The LPI survey's composite (mean) scores were calculated for the transformational leadership practices variable. Descriptive statistics, the mean, and standard deviation were calculated for the LPI (see Table 4).

**STI Online System Analyses**

 Data from the STI 2.0 online survey was entered into an Excel spreadsheet, including the five LPI domains: connecting to God, connecting to self and others, connecting to spiritual community, connecting to spiritual practice, and connecting to God’s kingdom. The domain scores were imported into SPSS for further analysis. The composite (mean) scores for the STI 2.0 survey were calculated for the transformational leadership practices variable. Descriptive statistics, the mean, and standard deviation were calculated for the STI 2.0 (see Table 4).

Table 4

*Descriptive Statistics of the LPI Composite Scores and STI 2.0 Composite Scores*

 Composite Score *M SD N*

LPI composite score 45.22 3.31 37

STI 2.0 composite score 4.87 .27 37

**Analysis Process of SPSS**

 Data from the LPI and STI 2.0 were downloaded into Excel spreadsheets and imported into the statistical software SPSS. The imported composite scores were calculated using participants’ LPI and STI 2.0 composite scores. SPSS spreadsheets were created with the imported composite scores. Descriptive statistics were calculated using the LPI and STI 2.0 domain composite scores. The composite scores were calculated using SPSS for the spirituality and transformational leadership practices variables. Bivariate correlation analyses were conducted for a one-tailed significance test to test the hypotheses.

 The analysis regarding the correlation between participants’ spirituality and transformational leadership practices is presented in the following tables. Table 5 summarizes the correlational analyses of the LPI and STI 2.0 domain composite scores. Table 6 presents Pearson’s r and the one-tailed significance of the correlation between the LPI and STI 2.0 composite scores.

Table 5





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## Table 6

## \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

##  LPI composite score

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## Pearson correlation STI 2.0 composite score .415

## Sig. (1-tailed) STI 2.0 composite score .244

 *Note: Alpha level of .05; n = 37; r = .415; p = .244. No significant correlation (1-tailed).*

The analysis of the research question indicates a medium positive effect (r = .415; p = .244) between Church Leaders’ self-assessed transformational leadership practices and self-assessed spirituality. However, the significance (1-tailed) score was greater than the alpha level at .05. Therefore, the statistical information did not provide evidence of a significant correlation between Church Leaders self-assessed transformational leadership practices and self-assessed spirituality. The null hypothesis failed to be rejected.

**Reliability and Validity**

Sampling for the study consisted of 37 church leaders from Sandia Baptist Church located in Albuquerque, New Mexico. Internal validity for the study was protected by providing an appropriate sample size for a Pearson’s r correlation test based upon the calculation utilizing G\*Power. An additional 6 participants were added to the sample size, strengthening the population ratio and guarding against attrition. Convenience sampling was used to generate 37 participants from the population of 46 church leaders, providing a robust sample of the population. Construct validity minimized external and internal threats to research validity by establishing correct methods of measurement (Middleton, 2023).The sample adequately reflected the population, protecting against external validity threats (Bhandari, 2023a).

Cronbach’s alpha established the internal consistency and scale reliability for the LPI and STI 2.0. A Cronbach alpha score established strong internal reliability for the LPI scale mean of .88, greater than the accepted reliability coefficient of .70 (Goforth, 2015; Posner, 2016). The Cronbach’s alpha score for the STI 2.0 of .87 established the internal reliability of the scale mean greater than the accepted coefficient of .70 (Goforth, 2015; Hall, 2015).

# Chapter Summary

 To answer the research question and hypotheses, the LPI and STI 2.0 instrument data was collected and analyzed for the quantitative correlational study. The composite scores of the spirituality and transformational leadership practice were collected and tested using correlational statistical analysis. The sample of Church leaders from Sandia Baptist Church spirituality and transformational leadership practices were correlated to determine if a significant relationship exists.

 The study sample consisted of 37 Sandia Baptist Church leaders from Albuquerque, New Mexico. No statistical evidence of a significant positive correlation between church leader’s spirituality and transformational leadership practices was identified from the data. The research findings, interpretation of the research findings, limitations, recommendations for leadership, spirituality, and society, leadership within the Church, Pastoral leadership, recommendations for future research, and a conclusion are outlined in Chapter 5.