Confirmatory factor analysis of spiritual leadership components in primary school administrators in Thailand

Khanchai Chottantitarasagul[1], Piangkae Poopayang[2], Sunan Siphai[3]

[1,2,3]Faculty of Education and Human Development, Chaiyaphum Rajabhat University, Thailand

Article Info	ABSTRACT
	This study aims to examine the confirmatory factor of spiritual leadership among school administrators under the jurisdiction of the Office of the Basic Education Commission in Thailand. A quantitative research methodology was employed, utilizing Structural Equation Modeling (SEM) to validate the proposed model. The research process included identifying research questions, reviewing theoretical frameworks, developing the model, conducting statistical validation, and interpreting the results. Data were collected from 705 school administrators using structured questionnaires. A confirmatory factor analysis revealed that the proposed model demonstrated an excellent fit with the empirical data. The model fit indices met all conventional thresholds: Chi-square=0.146, degrees of freedom (df)=1, p-value=0.703, Chi-square/df=0.146 (< 2), Adjusted Goodness of Fit Index (AGFI)=0.999, Comparative Fit Index (CFI)= .000, Normed Fit Index (NFI)=1.000, Residual Mean Square (RMR)=0.001, and Root Mean Square Error of Approximation (RMSEA)=0.000. Analysis of the standardized factor loadings presented that the indicator vision had the highest loading value (0.79), indicating its primary role in embodying spiritual leadership, followed by trust (0.66), Hope (0.65), and faith (0.59). All indicators had loading values above the 0.50 threshold, confirming the convergent validity of the model. These findings validate the construct of spiritual leadership as comprising 4 key dimensions and affirm the model's structural soundness for theoretical study and practical application in educational leadership. *This is an open access article under the <u>CC BY-SA</u> license.*

Corresponding Author:
Khanchai Chottantitarasa
Faculty of Education and Human Development
Chaiyaphum Rajabhat University
Thailand
Email: 2518khanchai@gmail.com

1. INTRODUCTION

The 21st century has seen the global community grappling with rapid changes in technology, economics, and social values. This necessitates continuous adaptation within educational organizations to align with the needs of learners and the global society (Fry, 2003). Hence, the role of school administrators is no longer confined to structural management or systemic administration; they are required to be "spiritual leaders" capable of generating inspiration and meaning in the work of personnel (Reave, 2005). Spiritual Leadership is a concept that integrates mind, virtues, and positive relationships within an organization to create intrinsic motivation in followers through three core components: vision, altruistic love, and faith/hope (Fry, 2005). This approach emphasizes the leader's role in balancing work-related goals with spiritual values, which is central to modern school administration. Furthermore, spiritual leadership is a management concept that integrates psychological dimensions, moral values, and positive relationships within organizations to sustainably foster intrinsic motivation among followers.

A spiritual leader focuses not only on achieving organizational objectives but also on fulfilling individuals' internal values by creating meaning and purpose in their work, which enhances commitment and job satisfaction (Fry, 2003). Spiritual leadership consists of three core components: Vision, which represents a shared desired future state that inspires personnel to recognize the value and meaning of their work. Leadership provides direction and builds commitment; and Altruistic Love, which is rooted in understanding, empathy, and respect for others. Leaders express altruistic love through kindness, forgiveness, and acceptance, cultivating an atmosphere of trust and cooperation within the organization (Fry, 2008).

Additionally, faith/hope is essential, as it reflects confidence in the goals, vision, and the positive outcomes being pursued. Faith enables followers to confront obstacles and transform challenges into opportunities for continuous development. When these three components are effectively integrated, the resulting work environment is characterized by spiritual well-being, manifesting as commitment, loyalty, and meaningful work (Fry & Cohen, 2009). Spiritual leadership is therefore regarded as an organizational guidance approach that emphasizes the "human heart" in conjunction with administrative efficiency, promoting sustainability at both individual and organizational levels. In the Thai educational context, school administrators face challenges arising from governmental policies, social shifts, and societal expectations. The adoption of Spiritual Leadership in administration, therefore, offers a viable approach to fostering internal strength and shared commitment within the organization (Srisai, 2021). This is particularly relevant in the fundamental education level, where teachers and staff often experience stress from heavy workloads and resource limitations. A leader who can ignite spiritual energy helps sustainably reinforce happiness and meaning in work.

Expansive research reveals that spiritual leadership positively impacts job satisfaction, organizational commitment, and performance (Wong & Fry, 2018; Chen & Huang, 2023). Furthermore, leaders embodying a spirit of service and valuing personnel can better cultivate trust and a collaborative environment (Benefiel et al., 2014). This aligns with Thai society's emphasis on compassion and virtues, which are central to Buddhist principles. However, despite the growing international interest in spiritual leadership, research in Thailand remains limited, particularly regarding the structural and component analysis of spiritual leadership within the context of primary schools (Tipyanet, 2013; Srirangsi et al., 2024). Previous studies have primarily focused on general conceptual descriptions, lacking empirical verification to confirm the authentic components of spiritual leadership in the Thai context.

Confirmatory factor analysis (CFA) is a statistical method of significant importance for evaluating the construct validity of latent variables, ensuring that theoretical components accurately

represent empirical data. According to Hair et al. (2019), CFA is instrumental in assessing the goodness-of-fit between a measurement model and observed data, thereby confirming construct validity and ensuring that latent variables are measured in alignment with the theoretical framework. Byrne (2016) similarly emphasizes that CFA is essential for verifying the quality of a measurement model by evaluating the appropriateness of component structures, the relationships between indicators and latent variables, and the systematic classification of components according to theoretical principles. Kline (2016) further notes that confirming components through CFA reduces bias in model interpretation and facilitates the development of reliable conceptual frameworks for diverse applications. Therefore, CFA represents a crucial statistical methodology for examining the construct validity of variables, thereby confirming whether the theoretically derived components of spiritual leadership are applicable to the context of Thai school administrators (Hair et al., 2019). This procedure will enhance confidence in the model's validity and lead to the development of an effective framework for future administrator leadership enhancement.

Developing administrators with spiritual leadership is a key strategy for improving Thai school quality. Leaders with a spiritual dimension demonstrate emotional stability, a strong moral foundation, and the ability to inspire both staff and students (Kleechaya, 2018). This leadership style fosters a culture of cooperation, trust, and shared goals, which are essential for sustainable school development. Confirmatory factor analysis of spiritual leadership is therefore crucial to ensure that components such as vision, hope/faith, and trust are valid and applicable in the Thai educational context. This aligns with Fry (2003), who developed spiritual leadership theory (SLT) and identified these components as foundational for ethical, meaningful, and intrinsically motivated leadership. Reave (2005) also noted that spiritual leadership enhances leader effectiveness through integrity, empathy, trust, and meaningful goal-setting. Benefiel et al. (2014) further found that spiritually grounded leaders promote commitment, virtue, and a positive work culture, which are vital for educational success. This research is significant both theoretically and practically, as it validates Fry's (2003) components and supports the development of a spiritual leadership model suited to Thai school administrators. The findings will provide a valuable knowledge base for cultivating virtuous, purposeful leaders who can sustainably enhance educational quality in Thailand.

2. METHOD

This research initiated the study of spiritual leadership components by thoroughly reviewing literature and research on spiritual leadership to establish a foundational understanding of the concept. The synthesis of spiritual leadership components for school administrators revealed that the theoretical framework initially comprised 38 components. For this study, however, the researcher applied a criterion focusing on high-frequency components (specifically, a frequency of 9 or more). This selection process yielded four core components: 1) vision, 2) hope, 3) faith, and 4) trust. Hereafter, the derived components were subjected to specialist review to ensure their accuracy and appropriateness within the context of educational institutions, as illustrated in Figure 1.
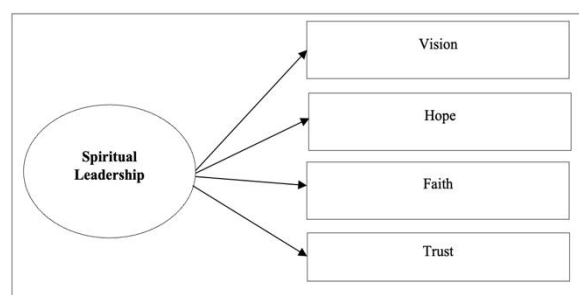
Figure 1 Measurement model of spiritual leadership among school administrators

2.1 Population and Sample

1. Population: The population for this research consisted of 28,657 school administrators under the Primary Educational Service Area Offices in Thailand during the 2023 academic year (Office of the Basic Education Commission, 2023).

2. Sample: The sample size used for the confirmatory factor analysis was 705 individuals. To determine the sample size, the researchers adopted the guideline suggesting a sample size of approximately 5 to 10 times the number of estimated parameters in the model for model development and validation (Hair et al., 2010, 2014, 2019). Given that this research had 69 parameters requiring estimation, the researcher used a ratio of 10 individuals per parameter, resulting in an initial required sample size of 690. To minimize error, the sample size was increased to 705 individuals. The sample was obtained using Multi-stage Sampling, which involved using region, province, and school size as strata. Following stratification, simple random sampling was conducted, with the school serving as the sampling unit, until the specified sample size was achieved.

2.2 Research Instrument

The research instrument was a single questionnaire comprising six sections:

1. Respondent Status: This section used a checklist format to gather demographic information, including gender, age, highest educational attainment, administrative experience, and school size.

2. Spiritual Leadership Behavior of School Administrators: This section consisted of 53 items classified under the four observed variables: vision (15 items), hope (10 items), faith (14 items), and trust (14 items).

3. Causal Factors Influencing Spiritual Leadership in School Administrators: This section encompassed a total of 38 items covering job satisfaction, organizational commitment, and productivity.

4. Latent Variable of Job Satisfaction: This section consisted of 11 items classified under the three observed variables: educational supervision, peer relationship, and happiness.

5. Latent Variable of Organizational Commitment: This section consisted of 9 items classified under the three observed variables: affective commitment, normative commitment, and continuance commitment.

6. Latent Variable of Productivity: This section consisted of 18 items classified under the four observed variables: meaning in life, working environment, feeling of belonging to the community, and organizational culture.

Questions in Parts 2–6 were single-choice questions utilizing a 5-point Likert scale.

2.3 Data Collection

The data collection can be proceeded based on the follwing steps.

1. The researcher initiated the data collection by submitting a formal request letter from Chaiyaphum Rajabhat University to the directors of the Primary Educational Service Area Offices corresponding to the schools in the sample, seeking cooperation from the school administrators to complete the questionnaire.

2. The researcher dispatched the request letter and the questionnaire to the sampled schools, also providing an online response option via QR Code.

3. The researcher personally coordinated and collected the data between November 2023 and January 2024.

4. The returned questionnaires were scored according to the established criteria for subsequent statistical analysis.

2.4 Data Analysis

Data were analyzed based on descriptive statistics and CFA results.

1. Descriptive Statistics were used for preliminary data analysis to ascertain the characteristics of the sample and the distribution of the variables. Basic statistics calculated included the mean, standard deviation, coefficient of variation, skewness, and Kurtosis for each variable.

2. Confirmatory Factor Analysis (CFA) was employed to analyze the factor structure of the causal factors influencing Spiritual Leadership among school administrators under the Primary Educational Service Area Offices in Thailand.

3. RESULT AND DISCUSSION

The results indicated that the majority of respondents were male, accounting for 377 individuals (53.5%), followed by female respondents, who comprised 328 individuals (29.9%). Regarding age, the largest group was the 51–60 year-old category, with 333 individuals (47.2%), followed by the 40–50 year-old category, with 244 individuals (34.6%), and the under-40 group, with 128 individuas (18.2%). In terms of highest educational attainment, the vast majority held a Master's degree or higher (607 individuals, 86.1%), while 98 individuals (13.9%) held lower than a Master's degree. Pertaining to administrative experience, 511 respondents (72.5%) had 1-10 years of experience, 136 individuals (19.3%) had 11–20 years, and 58 individuals (8.2%) had more than 21 years of experience. When categorized by school size, small schools accounted for 325 respondents (46.1%), medium schools for 290 respondents (41.1%), and large schools for 90 respondents (12.8%).

The CFA was performed on the 4 components of spiritual leadership in school administrators under the Primary Educational Service Area Offices in Thailand: Vision, Hope, Faith, and Trust. The results of the analysis are presented in Table 1.

Table 1 CFA for the indicators of spiritual leadership in school administrators

	Component	Element weight (b)	Standard Element Weight Values (β)	SE	Z	R^2
Spiritual Leadership	Vision	1.000	.787	.169	9.988	.431
	Hope	.876	.648	.129	14.198	.352
	Faith	.662	.593	.137	14.779	.420
	Trust	.759	.657	.179	13.663	.619

Based on Table 1, the CFA model of spiritual leadership in school administrators, which contains four components—vision, hope, faith, and trust—demonstrated an excellent fit with the empirical data. The model's fit indices met the standard criteria: the Chi-square value (χ^2) was 0.146, df = 1, p = .703, χ^2/df was 0.146 (which is less than 2), CFI was 1.000, AGFI was .999, NFI was 1.000, RMR was .001, and RMSEA was .000. These results indicate that the model achieved an optimal level of fit. When considering the standardized factor loadings, vision showed the highest value at 0.79, followed by trust at 0.66, hope at 0.65, and faith at 0.59. As all loadings exceeded the minimum acceptable threshold of 0.50, this signifies that all 4 components significantly explain spiritual leadership and possess strong construct validity. The spiritual leadership model constructed within the context of primary school administrators in Thailand is highly appropriate and can be effectively utilized as a framework for the development and evaluation of administrator leadership.

Table 2 Values used to assess the CFA of spiritual leadership in school administrators

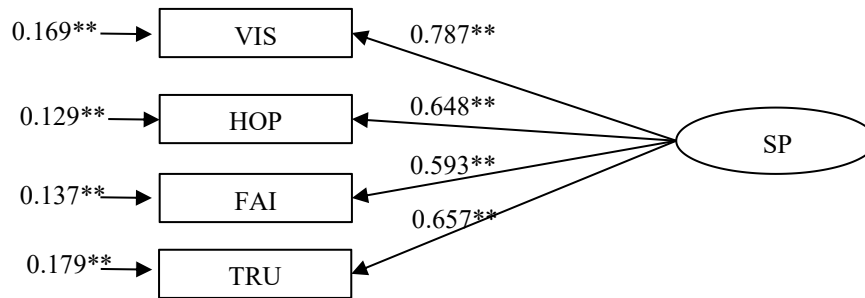| Variable	χ^2	df	χ^2/df	p-value	CFI	TLI	RMSEA
SP	.146	1	.146	.703	1.000	1.007	.000

Figure 2 Confirmatory factor analysis model of spiritual leadership in school administrators

The research findings confirm that spiritual leadership in school administrators is comprised of four core components: vision, hope, faith, and trust. These components are positively correlated and reflect a form of leadership that balances both rational and spiritual aspects. This outcome is consistent with the concepts proposed by Fry (**2003**, **2005**), who suggested that spiritual leadership is a process where the leader inspires followers through a "Meaningful Vision," connecting it with "Faith and Hope" to foster intrinsic motivation and organizational commitment.

1. The vision component demonstrated the highest factor loading (**0.79**), underscoring the critical role of having a meaningful shared goal. This shared purpose acts as an internal force that drives personnel commitment and creates shared value within the organization. This finding aligns with Reave (**2005**) and Wong & Fry (**2018**), who emphasize that vision is central to spiritual leadership as it helps establish common understanding and moral objectives among followers.

2. The trust component, which had the second-highest factor loading (**0.66**), reflects a leader-follower relationship built upon sincerity, transparency, and respect. This result is consistent with the work of Benefiel et al. (**2014**), who state that spiritual leaders must cultivate a "culture of trust" to encourage personnel to express opinions freely and collaborate in organizational development.

3. The hope component (**0.65**) signifies the power of optimism and the setting of achievable goals. A hopeful leader transmits positive energy, which motivates personnel. This aligns with Snyder's (**2002**) concept, which describes hope as a psychological mechanism that encourages individuals to believe in the pathways to success.

4. The faith component (**0.59**), although possessing the lowest factor loading, is crucial for the leader's psychological stability. Having faith in oneself, the personnel, and the organizational mission is a vital force that helps leaders maintain composure amidst challenges (Fairholm, **1998**; Chen & Huang, **2023**).

The components of spiritual leadership among school administrators—vision, hope, faith, and trust—showed a strong fit with the empirical data. Each variable had acceptable factor loadings, confirming their significance in representing spiritual leadership. This aligns with Li (2025), who noted that spiritual leadership is based on hope, faith, trust, and a clear vision, all essential for sustainable leadership.

Fry (2003) introduced the Spiritual Leadership Theory (SLT) framework, identifying vision, hope/faith, and altruistic love as key elements that inspire meaning and motivation in the workplace. Hope and faith strengthen a leader's confidence and resilience in achieving organizational goals. Reave (2005) emphasized trust as central to building virtuous relationships and fostering cooperation.

Benefiel et al. (2014) also stated that trust and a virtuous vision are critical for advancing spiritual leadership in education and public administration. Together, these findings confirm that vision, hope, faith, and trust are empirically validated constructs that significantly influence the spiritual leadership of school administrators in Thailand.

When examining the components individually, vision had the highest factor loading, indicating that a spiritual vision is the central element that most clearly reflects the meaning of spirituality. This is consistent with Daud's (2025) concept, which explains that spiritual leadership is founded on a clear vision to inspire and guide the organization toward long-term success. This also aligns with Sapta's (2021) research, which indicated that spiritual leaders often manifest their leadership through purposeful goals and by instilling faith in followers.

Meanwhile, the variables trust, hope, and faith, despite having subsequent loadings, still play significant roles in reflecting the spiritual dimension. Trust had the second-highest loading, which supports the findings of Alimudin (2017), who stated that trust is the foundation for building spiritual relationships within an organization and is what leads to interpersonal commitment. Hope and Faith had comparable loadings, demonstrating the relationship between them as a mechanism for reinforcing psychological energy and emotional fortitude. This is consistent with the positive framework of Srirang (2024), who described hope as a key mechanism driving human behavior and the ability to face life's challenges.

The findings of this study reinforce that spirituality transcends mere idealistic abstraction; it is a tangible framework that can be empirically verified and measured. This is achieved through its core components—vision, trust, hope, and faith—which collectively reflect a profound internal energy that demonstrably influences both the behavior and the quality of leadership. This perspective aligns with the work of Nguyen (2018), who argued that these spiritual elements are pivotal in shaping the trajectory of leadership. Vision, for instance, is instrumental in defining worthwhile goals and fostering inspiration. Trust serves as the bedrock for stable relationships and genuine cooperation. Hope and faith, in turn, function as internal reservoirs of support, bolstering a leader's confidence and resolve, particularly when navigating significant challenges. This also resonates with Siriattakul (2020), who explained that these spiritual components have concrete applications in enhancing organizational management competencies, cultivating virtuous leadership, and improving the quality of life for both individuals and the wider community. This is especially pertinent within educational settings, which demand leaders who can skillfully integrate this spiritual dimension with an administrative approach centered on moral objectives and holistic learner development. Ultimately, vision, trust, hope, and faith—both in oneself and in others—emerge as components validated not only by theory but by empirical evidence. They are essential for fostering high-quality leadership and provide a robust foundation for designing effective leader development programs and organizational management strategies.

4. CONCLUSION

Development of spiritual leadership found that vision is the most significant component of spiritual leadership, administrators and organizational leaders should prioritize the creation of a meaningful and valuable vision to inspire personnel within the organization. Trust demonstrated the second-highest influence, establishing an organizational culture that emphasizes transparency, fairness, and participation will reinforce trust and consequently enhance personnel commitment and motivation. Organizations should implement activities or development processes that cultivate hope and faith, such as building confidence in achieving shared goals, providing positive reinforcement, and offering psychological support. These efforts will help personnel develop resilience in the face of challenges. The research findings can serve as a conceptual framework for developing curricula related to spiritual

leadership, both in academic programs and professional training, to cultivate leaders who are balanced in both professional and spiritual dimensions.

5. ACKNOWLEDGEMENT

REFERENCES

Alimudin, A. (2017). Effect of spiritual leadership to organizational culture and employee's loyalty. *Jurnal Terapan Manajemen dan Bisnis, 3*(2), 76-86.

Benefiel, M., Fry, L. W., & Geigle, D. (2014). Spirituality and religion in the workplace: History, theory, and research. *Psychology of Religion and Spirituality, 6*(3), 175-187.

Byrne, B. M. (2016). *Structural equation modeling with AMOS: Basic concepts, applications, and programming* (3rd ed.). Routledge.

Chen, Y., & Huang, J. (2023). The relationship between spiritual leadership and job satisfaction in educational institutions. *Journal of Leadership Studies, 17*(2), 89-104.

Daud, Z., Elsaman, H. A., Mutazam, M., Sallehuddin, M. R., Haron, N., Abidin, M. A. Z., & Ahmad, R. (2025). Is trust built on spirit? Examining spiritual leadership as a multidimensional predictor of organizational trust; pragmatic evidence from Malaysian public universities. *Frontiers in Psychology*, *16*, 1617461.

Fairholm, G. W. (1998). *Perspectives on leadership: From the science of management to its spiritual heart.* Quorum Books.

Fry, L. W. (2003). Toward a theory of spiritual leadership. *The Leadership Quarterly, 14*(6), 693-727.

Fry, L. W. (2005). Toward a theory of ethical and spiritual well-being and corporate social responsibility through spiritual leadership. *Positive Psychology in Business Ethics and Corporate Responsibility, 14*(6), 47-83.

Hair, J. F., Black, W. C., Babin, B. J., & Anderson, R. E. (2010). *Multivariate data analysis* (7th ed.). Prentice Hall.

Fry, L. W. (2008). Spiritual leadership: State-of-the-art and future directions for theory, research, and practice. In J. Biberman & L. Tischler (Eds.), *Spirituality in business: Theory, practice, and future directions* (pp. 106–124). Palgrave Macmillan.

Fry, L. W., & Cohen, M. P. (2009). Spiritual leadership as a paradigm for organizational transformation and recovery from extended work hours cultures. *Journal of Business Ethics, 84*(2), 265-278.

Hair, J. F., Black, W. C., Babin, B. J., & Anderson, R. E. (2014). *Multivariate data analysis* (7th Global ed.). Pearson Education Limited.

Hair, J. F., Black, W. C., Babin, B. J., & Anderson, R. E. (2019). *Multivariate data analysis* (8th ed.). Cengage Learning.

Khlichaya, P. (2018). Leadership according to good governance principles in the context of Thai society. *Journal of Social Science Academic, 25*(2), 77-89.

Kline, R. B. (2016). *Principles and practice of structural equation modeling* (4th ed.). Guilford Press.

Li, J., Jiang, N., Li, S., Peng, X., et al. (2025). Spiritual leadership and teacher well-being in primary and secondary schools: the mediating role of teachers' trust in leaders and organizational justice. *BMC Psychology, 13*, Article 766.

Li, X. (2025). *Spiritual leadership and organizational well-being in educational contexts*. Springer.

Nguyen, P. V., Tran, K. T., Dao, K. H., & Dinh, H. P. (2018). The role of leader's spiritual leadership on organisation outcomes. *Asian Academy of Management Journal, 23*(2), 45-68.

Nguyen, T. T. (2018). Spiritual leadership and its impact on organizational development. *Journal of Management and Organization Studies, 5*(2), 45-60.

Office of the Basic Education Commission. (2023). *Report on the number of students and school administrators in basic education, academic year 2023*. Bangkok: Ministry of Education.

Reave, L. (2005). Spiritual values and practices related to leadership effectiveness. *The Leadership Quarterly, 16*(5), 655-687.

Sapta, I. K. S. (2021). *Spiritual leadership and organizational commitment*. Cogent Business & Management.

Siriattakul, P. (2020). *Spiritual leadership and well-being in educational contexts*. Bangkok: Chulalongkorn University Press.

Siriattakul, P., Namdej, P., & Wongsurawat, K. (2020). Workplace spirituality and organisation based self-esteem as mechanisms linking spiritual leadership with organisational citizenship behaviour. *Asian Administration and Management Review, 3*(2), 12-24.

Srirang, P., Koboon, B., & Somsrisuk, A. (2024). The study about the components of spiritual leadership of school administrators. *MCU Haripunchai Review, 8*(3), 61-74.

Srirangsee, P., Thongpoem, S., & Sungsin, S. (2024). A study of the components and guidelines for developing spiritual leadership in primary schools. *Journal of Educational Administration Research, 12*(3), 210-229.

Srisai, N. (2021). Spiritual leadership of school administrators. *Journal of Education, Mahasarakham Rajabhat University, 18*(1), 102-115.

Snyder, C. R. (2002). Hope theory: Rainbows in the mind. *Psychological Inquiry, 13*(4), 249-275.

Tipyanet, K. (2013). An analysis of spiritual leadership components of administrators. *Chulalongkorn University Journal of Education, 41*(2), 55-70.

Wong, K., & Fry, L. W. (2018). The role of spiritual leadership in organizational performance. *Leadership & Organization Development Journal, 39*(7), 978-994.