

Title:

Gender Leadership Styles in Higher Education: A Transformational Leadership Study

Abstract

The purpose of this quantitative study was to compare gender leadership styles and characteristics in higher education: measuring the effects of those leadership styles on student perceptions. The participants were full and part-time undergraduate and graduate students currently enrolled in a higher education institution. A closed structured five point Likert-type scaling instrument was created based upon the work in transformational leadership, of Burns (1978) and Bass (1994). The instrument went through a three-phase validation process for reliability and validity, using the Cronbach's alpha (α) statistical technique. The study results showed a statistically significant degree of transformational leadership reflected in female and male leaders within the university by study participants. Study results also showed no statistically significant difference in participant perceptions of transformational leadership by leader gender. These findings can help educational leaders understand the importance of transformational leadership style and how paramount it is to the success of the institution and student body.

Comment [U1]: The abstract could benefit from a more explicit mention of the specific context (e.g., the type of higher education institution, geographical location if relevant) and the implications of the findings. Adding a sentence on potential future research directions or practical applications of the results could also strengthen the abstract.

Keywords: leadership, transformational leadership, gender, gender leadership, and higher education

1. **Introduction**

Organizational leadership is a driving force that creates a culture that has a lasting impact on the organization's performance and employee morale. Leadership determines the success or failure of the organization. Furthermore, gender diversity must exist within organizational leadership because it gives the overall organization a competitive advantage within its market and drives success. Gender refers to the socially constructed roles, behaviors, and identities of female, male, and gender-diverse people (Heidari et al., 2016, p.1). Furthermore, gender also influences how people perceive themselves and each other, how they interact, and the distribution of power and resources in society (Heidari et al., 2016, p.1).

Ebrahimi et al. (2017) emphasized the gender of leaders in educational organizations is important. According to Montgomery and Cowens (2020), there is a possibility that a leader's gender may also be important in understanding how audiences respond to the success or failure of the organization. Evidence from several studies also suggests that male and female leaders possess different leadership styles and characteristics (Braun et al., 2012; Denise, 2020; Rovira-Asenjo, 2017; Violanti & Jurczak, 2011; Zbihlejova et al., 2018). All organizations need effective leaders of both genders, including higher education institutions.

There are common leadership roles in higher education. They include the university president, president cabinet members, deans, assistant deans, associate deans, directors, assistant

Comment [U2]: The introduction could be more concise. Some of the information about gender and leadership characteristics could be moved to the literature review section. Additionally, the introduction could benefit from a clearer statement of the research gap being addressed, which would help to justify the study's significance more explicitly.

directors, and teachers. The teacher, in the educational process, plans, organizes, and controls the students' activity and consequently appears in the position of the leader (Drobot & Rosu, 2012). While the focus of previous research studies found that transformational leadership has a positive impact on specific educational results, including leaders' effectiveness, teachers' overall job satisfaction, and students' studying progress (Eyal & Roth, 2011; Leithwood & Sun, 2012; Menon, 2014), transformational leadership is known for creating a culture that promotes inspiration and motivation to others with a growth mindset. Other researchers have examined how higher education leaders can adopt appropriate leadership styles, which can affect the organizational culture (Nazim & Mahmood, 2018).

Male and female leaders (in addition to their leadership styles) in higher education are extremely critical to its organizational culture. Each gender leadership style influences followers differently. Various leadership tasks can be run by different people who influence what and how groups do things, as well as how group members relate to one another (Wikaningrum & Udin, 2018). Leaders should develop a relationship with their employees, and employees should trust their leaders to operate effectively. According to Power (2013), developing effective relationships, and identifying the right people for critical roles within an organization requires an understanding of how followers interact with each other, and with organizational leaders in their daily routines.

The experience domains shared by leaders and employees are usually built over time through daily interactions in the workplace (Salmi et al., 2021). These domains include emotional contagion (Hatfield et al., 1994, as cited by Salmi et al. 2021) and cognitive contagion (Barsade, 2002, as cited by Salmi et al., 2021). Emotional contagion is a process that occurs in groups whereby the emotions expressed by one individual are seized by another (Bono & Ilies,

2006, as cited by Salmi et al., 2021). Cognitive contagion occurs more at the conscious level (Barsade, 2002, as cited by Salmi et al., 2021): a process where communicating and sharing knowledge and beliefs about an event affect the development of similar experiences among other people (Degoe, 2000, as cited by Salmi et al., 2021). Moreover, the behavior, loyalty of the leader, and the way employees perceive their superior supports them, also plays a very important role in obtaining the desired outcomes of work (Nazim & Mahmood, 2018). According to Braun et al. (2012), followers' loyalty is a consequence of a leadership style that fosters followers' identification with, and solidarity to the leader.

As such, examining leadership styles in this context, specifically in terms of gender, is warranted. This study explored a deeper understanding of the intersections of gender leadership styles and how variations or similarities influence university students' perceptions and relationships.

1.1 Questions and Hypotheses

This quantitative study aimed to compare male and female leadership styles and characteristics in higher education and measure the effects of the male and female leadership styles and characteristics on student perceptions. Leaders make decisions regarding an organization's process, and employees, and they create a culture that promotes unity or conflict.

The following research questions guided this quantitative study:

R1: To what degree do college students perceive their female leaders as exhibiting transformational leadership in their professional practice?

R2: To what degree do college students perceive their male leaders as exhibiting transformational leadership in their professional practice?

R3: Is there a statistically significant difference in the degree to which female and male leaders are perceived as exhibiting transformational leadership in their professional practices?

H₁: There will be a statistically significant degree of transformational leadership reflected in the leadership styles of female educational leaders.

H₂: There will be a statistically significant degree of transformational leadership reflected in the leadership styles of male educational leaders.

H₀: There will be no statistically significant difference in the perceived extent of transformational leadership reflected in the leadership styles favoring female educational leaders.

2. Review of the Literature

The purpose of this literature review was to examine leadership styles and characteristics in higher education, including gender leadership styles and characteristics and how these variables jointly influence college student perceptions in this context. The view of the literature begins with a broad overview of common leadership styles, including those most prevalent in higher education. This discussion is followed by the research on gender leadership styles and characteristics. The review concludes with the importance of college student perceptions.

2.1 Leadership in Higher Education

According to Dalati (2016), research on leadership in higher education requires further investigation. Higher education leadership is paramount to the success or failure of a university. According to Filho et al. (2020), universities need leaders to create strategic action plans that align with the vision of the future and connect critical areas. This includes involving stakeholders through coaching processes, inspiring people, and making communities stronger by managing and supporting any challenges and demands the institution may face.

Comment [U3]: The research questions and hypotheses are well-formulated, but the null hypothesis (H0) could be rephrased for clarity. Instead of "There will be no statistically significant difference in the perceived extent of transformational leadership reflected in the leadership styles favoring female educational leaders," it could be rephrased as "There will be no statistically significant difference in the perceived extent of transformational leadership between male and female educational leaders."

Comment [U4]: literature review could benefit from more critical analysis. While it summarizes existing research well, it could delve deeper into the inconsistencies or gaps in the literature. Additionally, linking the literature review more directly to the study's research questions and hypotheses would help to strengthen the theoretical framework.

The roles and responsibilities of leaders in higher education institutions can vary. A large body of research suggests that academic leaders motivate, inspire, and guide the instructors in the way of reaching students (Siddique, et al., 2011, as cited by Karadag, 2017); and covers the duties and operations of appointed leaders (Marshall et al., 2000, as cited by Karadag, 2017). The overall responsibility of university leaders is to influence followers to fulfill organizational goals. It is also vital that universities and higher education leaders build a structure for sustainable leadership that will enable institutions to remain relevant and competitive.

2.2 Gender Leadership Styles

Gender leadership styles vary, and it impacts the follower's perception of male and female leaders. Yukl (2002), as cited in Zbihlejova et al., (2018), posited that there are gender differences in how males and females lead. Both male and female leaders bring different styles to leadership positions that will aid institutions of higher learning in maintaining organizational success. However, literature about transformational leadership has illustrated that women are more transformational than men, considering that the characteristics of a transformational leadership style are related to feminine gender characteristics (Vinkenburg et al., 2011, as cited by Netshitangani, 2018).

2.3 Gender Characteristics

Gender characteristics play a major factor in the academic workplace. Evidence suggests that there are varying expectations regarding leadership characteristics for men and women. According to Saint-Michel (2018), men are expected to display agentic characteristics, such as assertiveness, striving for achievement, and competitiveness. Typical female leaders possess communal characteristics such as caring, understanding, sensitivity, and compassion (Braun et al., 2012). Some theorists have argued that women in leadership positions tend to adapt their

behavior to the norms and culture of the organization, whereas men like to wield power over others (Brower et al., 2019).

Other researchers have examined how male and female characteristics can vary as leaders grow and evolve. Gender characteristics can vary by particular tasks and situations (Nielsen and Husen, 2010, as cited by Zbihlejova et al., 2018).

Other researchers believe men and women are more alike than different. For example, Hyde (2005), as cited by Brower et al. (2019), stated that males and females are similar on most, but not all psychological variables. Similarly, Seitchik (2020) conducted a study on gender and its relationship to leadership and discovered that there are many more similarities than differences between genders.

2.4 *Gender Stereotypes*

Previous research has examined the various leadership styles and characteristics male and female leaders acquire, and how they contribute to followers' perception and performance. Gender leadership perceptions will impact leaders' reputations in a way such that men and women can become misunderstood and mislabeled. According to Christman and McClellan (2012), women must work to become more like those in positions of power; men must avoid being perceived as feminine. As male and female leaders influence their organizations, employees develop their perception of the leader. Employee perception can be seen as a gender stereotype, which penalizes gender variations.

Gender stereotypes, both descriptively and prescriptively, may play an important role in how men and women, and male and female leaders are evaluated (Denise, 2020). According to Rovira-Asenjo et al. (2017), women and men are perceived differently in the context of leadership. Prior studies have shown in comparison to women, men are to some extent more

physically arrogant and aggressive in their behavior; whereas, women more openly express their feelings and emotions (Chesler, 2001; Simmons, 2002, as cited by Ebrahimi et al., 2017). In particular, female stereotypes are strongly related to traits such as being likable, sensitive, and supportive of others (Montgomery & Cowen, 2020); whereas male stereotypes are associated with being independent and goal-oriented (Zbihlejova et al. 2018).

Research suggests that if male and female leaders fail to uphold these expectations, it could lead to negative reactions from followers (Rudman & Glick, 2001, as cited by Denise, 2020). For example, researchers have also found that due to developed perceptions and stereotypes, women struggle with advancing into leadership positions (Brower et al., 2019; Martinez-Leon et al., 2020). For example, Browers et al. (2019) conducted a study and found that gendered-based attributional ambiguity may present a barrier to women advancing to leadership positions in academia.

Evidence from the body of research on how leadership styles and characteristics for female and male is mixed (Netshitangani, 2018; Saint-Michel, 2018; Zbihlejova et al, 2018). While researchers have found that gender leadership styles and characteristics can vary, others have found that male and female leaders are more similar than they are different (Bem, 1981, as cited by Brower et al., 2019; Christman and McClellan, 2012; Hyde, 2005, as cited by Brower et al., 2019; Seitchik, 2020). As such, male and female leaders must be cognizant of how they lead employees and how they shape the institution of higher learning.

2.5 *Student Perception*

Student perceptions are important in helping leaders acknowledge how their students/followers perceive them. When leaders acknowledge how their followers perceive them, this allows leaders to modify or change their leadership styles and characteristics to become

effective leaders and meet the needs of their followers. Hur (2008) posited that effective leaders adapt their styles of behavior to meet the needs of their followers as well as the task environment. If, as indicated by Yukl (2002), leadership is about "...intentional influence that is exerted by one person over other people to guide, structure, and facilitate activities and relationships in a group or organization" (p.2), then leaders should know how and why their behavior is perceived the way it is to act effectively (as cited by Schyns& Sanders, 2007).

Evidence from this body of work suggests that students develop a perception of faculty members who are also perceived as their leaders. In examining student perceptions, researchers have found commonalities in how perceptions are developed. Specifically, depending on the student's perceptions, leaders can better acknowledge what leadership styles and characteristics can be used to perform efficiently and effectively.

2.6 Summary

According to Khan et al. (2020), many of the leadership studies have largely focused on administrative and managerial positions inside corporate and industrial settings. The examination of the significance of leadership within universities cannot be overlooked. While researchers have used various methods to explore leadership styles in higher education, additional research is needed to provide a deeper understanding of the intersections of gender leadership styles and how college students perceive male and female leaders. For example, we know that gender leaders possess very different leadership styles and characteristics, which contributes to the development and sustainability of quality organization. However, a specific gap that remains in the literature is how male and female higher education leaders use their current leadership styles and characteristics to influence their followers in ways that will create an organization conducive to success.

Because higher education institutions differ, each needs its own assessment to understand its current position due how its leaders contribute to its overall organizational success. Furthermore, leaders will need to understand which characteristic and style promotes high employee engagement and morale, knowledge sharing, and innovativeness to operate a successful institution.

3. **Theoretical Framework**

The theoretical framework for this study was guided by the leader-member exchange theory (LMX) and the full range leadership theory (FRL); and how the theories impact the relationship between leadership and followers. LMX offers insight into how high-quality leader-follower relationships mediate and act as an antecedent to transformative behaviors within organizations (Powers, 2013, p.282). FRL has shown substantial validity in predicting several leadership outcomes including leader performance and effectiveness ratings, in addition to follower satisfaction and motivation (Judge & Piccolo, 2004; Sashkin, 2004, as cited in Romascanu et al., 2017).

3.1 *Leadership-Member Exchange Theory*

LMX theory focuses on the relationship (which may be affected by personal characteristics) between leaders and followers (Graen&Ulh-Bien, 1996; Truckenbrodt, 2000, as cited in Powers, 2013). The theory rests firmly on the assumption that leaders influence employees in their group through the quality of relationships they develop with them (Erdogan & Bauer, 2015). Radstaak and Hennes (2017) conducted a study to examine the associations between LMX, job crafting, and work engagement. The findings of this study showed high-quality relationships with supervisors and were unique in examining the association between LMX and job crafting (Radstaak&Hennes, 2017).

Comment [U5]: Depth of Explanation: While the theories are introduced, a deeper exploration of how these theories specifically apply to the research questions could enhance the framework. For example, more detailed examples or case studies could illustrate how LMX and FRL have been applied in similar contexts.
Connection to Research: The connection between the theories and the specific research questions or hypotheses could be more explicitly stated. How do LMX and FRL directly influence the variables being studied (e.g., student perceptions of leadership)?

3.2 *Full Range Leadership Theory*

According to Bass and Avolio (1994), the FRL theory comprises nine factors reflecting three broad classes of behavior: focusing on transformational leadership, there are five distinct factors: 1) idealized influence – attributed, 2) idealized influence – behavior, 3) inspirational motivation, 4) intellectual stimulation, and 5) individualized consideration. Erdel and Takkac (2020) conducted a study using the FRL framework to determine the relationship between an instructor's leadership styles and the outcomes of leader effectiveness. The findings of this study revealed that instructors with leadership characteristics appeared to be more effective leaders, and students were more satisfied with their teaching (Erdel&Takkac, 2020).

Based on the findings in both studies, researchers discovered that developing a foundational relationship between leadership and followers is critical; while it is equally important for leadership to exemplify the necessary leadership styles to be effective leaders. LMX and FRL theories framed this research as they provided direction to study leadership styles as well as the relationship between leaders and followers – focusing on the follower's perception. LMX and FRL set the tone for impartiality and allowed me to remain neutral to the data gathered and analyzed.

4. Methodology

A quantitative, non-experimental research design was used for this study (Edmonds & Kennedy, 2017). A survey research methodological approach was selected for its advantages in versatility scalability, ability to generate a considerable amount of data from multiple sources on a given topic, and statistical power. (Jones et. al., 2013). According to Creswell & Guetterman (2019), the cross-sectional survey design can examine current attitudes, beliefs, opinions, or

practices – which are also ways in which individuals think about issues, whereas practices are their actual behaviors.

4.1 Variables

This study used two independent variables and one dependent variable. The independent variables were male transformational leadership styles and female transformational leadership styles. The dependent variable was student perceptions. Based on my findings, I can make recommendations that can instruct leaders across the field of higher education on the importance of developing healthy relationships with their followers; recognizing when and how to use various leadership styles in appropriate situations, demonstrating how their leadership styles form their follower's perceptions, and the impact it has on the follower's performance.

4.2 Study Population and Sample Selection

Full-time and part-time undergraduate and graduate students who are currently enrolled in a higher education institution represented the overarching operational definition of the study's sample of participants. The participants could not have any personal relationship with current university instructors. The desired sample size for the study was approximately 150 participants. However, the sample size may have varied depending on the size of the university selected. Eligible study participants were accessed using the nonprobability sampling approach, specifically through convenience and purposive sampling techniques.

4.3 Research Instrumentation

Based upon the work of transformational leadership of Burns (1978) and Bass (1994), a closed structured 5-point Likert-type scaling instrument was created and used to collect data for the independent and dependent variables being studied. According to Joshi et al. (2015), the Likert scale was devised to measure "attitude" in a scientifically accepted and validated manner

Comment [U6]: Depth of Explanation: While the theories are introduced, a deeper exploration of how these theories specifically apply to the research questions could enhance the framework. For example, more detailed examples or case studies could illustrate how LMX and FRL have been applied in similar contexts.

Connection to Research: The connection between the theories and the specific research questions or hypotheses could be more explicitly stated. How do LMX and FRL directly influence the variables being studied (e.g., student perceptions of leadership)?

Comment [U7]: The language used in the section is generally formal, but certain phrases could be revised to better align with academic writing standards. The use of personal pronouns like "I" and "we" should be avoided to maintain objectivity and formality.

Comment [U8]: Elaborate of sample size determination could create more concise and clarity to understand for the readers

in 1932. Joshi et al. (2015) further state that an attitude can be defined as preferential ways of behaving/reacting in a specific circumstance rooted in a relatively enduring organization of beliefs and ideas acquired through social interactions.

Because the study instrument was created, a three-phase validation process was utilized to validate the study's research instrument. In the first phase, the content validity judgment phase, themes associated with the four dimensions of transformational leadership, as defined by Burns (1978) and Bass (1994) represented the foundation of subsequent survey item construction. In the second phase of the instrument validation process, the survey was administered as a "pilot" study representation of the research instrument to a representative sample of 15 to 20 study participants. Responses to the items were assessed for internal reliability purposes using Cronbach's alpha (α) statistical technique (Field. 2018).

An alpha level of at least .60 to .70 was sought. Item analysis would have been conducted if the alpha level fell below the anticipated minimal threshold of .60 to .70. In the third and final phase of the research instrument validation process, the final version of the instrument was formally administered to the entire sample of study participants. The internal reliability of study participant responses to the final version of the research instrument was assessed statistically using Cronbach's alpha (α) technique.

4.4 Data Collection Procedures

A meeting was scheduled to meet with the university president at their earliest convenience to introduce the study and explain the importance and the impact it had on the overall university. During the presentation, the gap in the literature was presented, and how this study could fill that gap if permitted to use the population at the university. This meeting enabled the university president to see there was a need for the study. During the meeting, an in-depth

explanation of the importance of ethics and confidentiality, and how it would be enforced in the study was also presented. The goal was to ensure that the university president understood and agreed that no names of the participants and the university would be mentioned throughout the study.

Comment [U9]: The use of personal pronouns like "I" and "we" should be avoided to maintain objectivity and formality. Example: Instead of "A meeting was scheduled to meet with the university president," consider using "A meeting was scheduled with the university president."

A "one size fits all" incentive approach was proposed to the university president. The approach encouraged and motivated students to participate in the study. The incentive included entering participants' names in a drawing to win a \$25 gift card. After gaining the trust of the university president, a request to meet with the university's marketing and communication department was made to make certain that all students who fit under the study criteria received the survey link via email: it allowed the survey to be available for the students between five to seven days.

Comment [U10]: The inclusion of a "one size fits all" incentive approach in the form of a \$25 gift card drawing raises concerns about research ethics and potential bias. Ethical Concerns: Providing incentives, especially monetary ones, can coerce participation and may introduce bias. Participants might join the study for the incentive rather than genuine interest in the research topic. This can compromise the validity of the data collected.

4.5 Data Analysis Procedures

Descriptive and inferential statistical techniques were employed for analytic purposes. In instances of statistical significance testing purposes, the probability level of $p \leq .05$ represented the threshold value for statistical significance of study findings. Study data was collected, initially recorded, and coded through an Excel spreadsheet format. The subsequent analysis of study data was conducted using the 28th version of IBM's Statistical Package for the Social Sciences (SPSS).

Comment [U11]: Phrases like "After gaining the trust of the university president" could be rephrased to maintain an academic tone. Consider, "Following the approval of the university president," which maintains the formality and precision expected in research articles

5. Findings

5.1 Demographic Information

Table 1 contains a summary of finding for the descriptive statistical evaluation of the study's demographic variables of leader gender, education level of study participant (undergraduate; graduate), and class designations of undergraduate study participants using frequencies (n) and percentages (%):

Comment [U12]: Additional Demographics: Consider including more demographic variables like age, ethnicity, or academic major, which could provide more insight into the diversity of the study participants.

Table 1*Descriptive Statistics Summary Table: Demographic Information*

Variable	<i>n</i>	%	Cumulative %
Educational Category			
Undergraduate	115	87.79	87.79
Graduate	16	12.21	100.00
Missing	0	0.00	100.00
Undergraduate Category			
Freshman	54	41.22	41.22
Sophomore	24	18.32	59.54
Junior	24	18.32	77.86
Senior	13	9.92	87.79
Graduate Level	16	12.21	100.00
Leader Gender			
Female	79	60.31	60.31
Male	52	39.69	100.00
Missing	0	0.00	100.00

5.2 *Descriptive Statistics: Select Response Set Survey Items*

Three specific response set survey items were identified for preliminary descriptive statistical analysis. The study's select response set data were specifically addressed using frequencies (*n*), measures of central tendency (mean scores), variability (minimum/maximum; standard deviations), standard errors of the mean (SE_M), and data normality (skew; kurtosis).

Table 2 contains a summary of finding for: 1) the descriptive statistical evaluation of the study's response set variables of satisfaction with the leadership approach of the leader, 2) leader ability to motivate study participant to optimum academic performance, and 3) the overall mean score for perceptions of transformational leadership by gender of study participant leader.

Table 2

Comment [U13]: Contextual Explanation: It would be beneficial to provide a brief explanation or interpretation of the skewness and kurtosis values, especially for readers who may not be familiar with these concepts. Justification of Item Selection: The rationale behind selecting these three specific survey items for detailed analysis could be elaborated.

Descriptive Statistics Summary Table: Perceptions of Leadership Approach, Leader ability to Motivate Optimum Academic Performance, and Overall Transformational Leadership Mean Score by Gender of Leader

Leader Gender	<i>M</i>	<i>SD</i>	<i>n</i>	<i>SE_M</i>	Min	Max	Skew	Kurtosis
Female								
Satisfaction (Leader Approach)	4.30	0.77	79	0.09	2.00	5.00	-1.08	1.00
Motivation (Acad. Performance)	4.29	0.79	79	0.09	2.00	5.00	-0.88	0.13
Transformational Mean	4.18	0.63	78	0.07	2.76	5.00	-0.32	-0.85
Male								
Satisfaction (Leader Approach)	4.15	0.94	52	0.13	1.00	5.00	-1.18	1.30
Motivation (Acad. Performance)	4.15	0.87	52	0.12	1.00	5.00	-1.20	1.95
Transformational Mean	4.13	0.67	51	0.09	2.14	5.00	-0.41	-0.01

Table 3 contains a summary of finding for:1) the descriptive statistical evaluation of the study's response set variables of satisfaction with the leadership approach of the leader, 2) leader ability to motivate study participant to optimum academic performance, and 3) the overall mean score for perceptions of transformational leadership by educational classification (undergraduate; graduate) of study participant leader.

Table 3

Descriptive Statistics Summary Table: Perceptions of Leadership Approach, Leader ability to Motivate Optimum Academic Performance, and Overall Transformational Leadership Means Score by Educational Classification

Educational Classification	<i>M</i>	<i>SD</i>	<i>n</i>	<i>SE_M</i>	Min	Max	Skew	Kurtosis
Undergraduate								
Satisfaction (Leader Approach)	4.26	0.82	115	0.08	1.00	5.00	-1.19	1.70
Motivation (Acad. Performance)	4.23	0.82	115	0.08	1.00	5.00	-1.03	1.18
Transformational Mean	4.16	0.61	113	0.06	2.76	5.00	-0.19	-0.86
Graduate								
Satisfaction (Leader Approach)	4.12	1.02	16	0.26	2.00	5.00	-1.02	-0.002
Motivation (Acad. Performance)	4.25	0.86	16	0.21	2.00	5.00	-1.15	1.01

Transformational Mean	4.19	0.87	16	0.22	2.14	5.00	-0.84	-0.13
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Missing Data

The extent of the study's data missingness was evaluated using the descriptive statistical techniques of frequencies (n) and percentages (%). The randomness of missing data within the survey's response sets was addressed using the Little's MCAR statistical technique. As a result, the extent of data missingness was minimal at 0.11% ($n = 3$). Data missingness was, moreover, sufficiently random in nature (MCAR χ^2 (39) – 17.74; $p = .99$).

Internal Reliability

The internal reliability of study participant response to survey items on the research instrument was assessed using the Cronbach's alpha (α) statistical technique (Field, 2018). Applying the conventions of alpha interpretation proposed by George and Mallery (2020), the resultant level of internal reliability achieved in the study for data associated with female leaders was considered excellent at $\alpha = .97$ (see Table 4), and excellent for data associated with male leaders at $\alpha = .98$ (see Table 5).

Table 4 contains a summary of finding for the internal reliability of study participant response to survey items on the research instrument associated with female leaders.

Table 4

Internal Reliability Summary Table: Perceptions of Transformational Leadership for Female Leaders

Scale	# of Items	α	Lower Bound	Upper Bound
Transformational Leadership	21	.97	.96	.98

Note. The lower and upper bounds of Cronbach's α were calculated using a 95.00% confidence interval.

Table 5

Internal Reliability Summary Table: Perceptions of Transformational Leadership for Male

Leaders

Scale	# of Items	α	Lower Bound	Upper Bound
Transformational Leadership	21	.98	.98	.99

Note. The lower and upper bounds of Cronbach's α were calculated using a 95.00% confidence interval.

5.3 Findings by Research Question

The study's three research questions and hypotheses were addressed using descriptive and inferential statistical techniques. The probability level of $p \leq .05$ represented the threshold probability level for findings to be considered as statistically significant. Effect sizes achieved in the analyses were interpreted using the conventions of interpretation provided by Sawilowsky (2009). The following represents the reporting of study finding for the three research questions and hypotheses:

R1: To what degree do college students perceive their female leaders as exhibiting transformational leadership in their professional practice?

A one sample t test was used to assess the statistical significance of study participant perceptions of female leader extent of transformational leadership in their professional roles within the university. The assumption of normality was evaluated through the inspection of the dependent variable's skew and kurtosis values. Using the conventions of data normality using skew and kurtosis values proposed by George and Mallery (2020), the skew value of -0.32 and

kurtosis value of -0.85 were well-within the parameters of ± 2.0 (skewness) and ± 7.0 (kurtosis), thereby satisfying of the assumption of normality.

Study participants' mean perceptions of female leader transformational leadership in their professional role within the university of 4.18 (SD = 0.63) was statistically significant ($t_{(77)} = 16.59$; $p < .001$). The magnitude of effect for study participant perceptions of female leader transformational leadership in their professional roles within the university was considered very large ($d = 1.88$). Table 6 contains a summary of finding for study participant perceptions of female leader transformational leadership in their professional roles within the university.

Table 6

Summary Table: Study participant Perceptions of Female Leader Extent of Transformational Leadership in Their Professional Role within the University

Variable	<i>M</i>	<i>SD</i>	μ	<i>t</i>	<i>p</i>	<i>d</i>
Transformational Mean	4.18	0.63	3	16.59	< .001	1.88

Note. Degrees of Freedom for the *t*-statistic = 77. *d* represents Cohen's *d*.

H₁: There will be a statistically significant degree of transformational leadership reflected in female leader within the university by study participants.

Considering the statistically significant finding in research question one for perceptions of transformational leadership in female leaders in the study, the alternative hypothesis was retained.

R2: To what degree do college students perceive their male leaders as exhibiting transformational leadership in their professional practice?

A one sample *t* test was used to assess the statistical significance of study participant perceptions of male leader extent of transformational leadership in their professional roles within

the university. The assumption of normality was evaluated through the inspection of the dependent variable's skew and kurtosis values. Using the conventions of data normality using skew and kurtosis values proposed by George and Mallery (2020), the skew value of -0.41 and kurtosis value of -0.01 were well-within the parameters of $-/+2.0$ (skewness) and $-/+7.0$ (kurtosis), thereby satisfying of the assumption of normality.

Study participants mean perceptions of male leader transformational leadership in their professional role within the university of 4.18 ($SD = 0.63$) was statistically significant ($t_{(50)} = 12.17$; $p < .001$). The magnitude of effect for study participant perceptions of male leader transformational leadership in their professionally roles within the university was considered very large ($d = 1.70$). Table 7 contains a summary of finding for study participant perceptions of male leader transformational leadership in their professionally roles within the university.

Table 7

Summary Table: Study participant Perceptions of Male Leader Extent of Transformational Leadership in Their Professional Roles within the University

Variable	<i>M</i>	<i>SD</i>	μ	<i>t</i>	<i>p</i>	<i>d</i>
Transformational Mean	4.13	0.67	3	12.17	< .001	1.70

Note. Degrees of Freedom for the *t*-statistic = 50. *d* represents Cohen's *d*.

H₂: There will be a statistically significant degree of transformational leadership reflected in male leader within the university by study participants.

Considering the statistically significant finding in research question two for perceptions of transformational leadership in male leaders in the study, the alternative hypothesis was retained.

R3: Is there a statistically significant difference in the degree to which female and male leaders are perceived as exhibiting transformational leadership in their professional practices?

The *t* test of independent means was used to assess the statistical significance of mean difference in perceptions of transformational leadership by gender of leader. Levene's test was conducted to assess whether the variance of means was equal between the categories of leadergender. As a result, the Levene's test was non-statistically significant ($F(1, 127) = 0.09, p = .77$), thereby satisfying the assumption of homogeneity of variances. The assumption of normality for the dependent variable of transformation leadership for both female and male leaders were well-within the conventions of normality using skew and kurtosis values proposed by George and Mallery (2020), thereby satisfying the assumption of normality.

The mean score difference of 0.05 favoring perceptions of transformational leadership reflected in female leaders was non-statistically significant ($t_{(127)} = 0.42, p = .68$). The magnitude of effect in the difference in perceptions of transformational leadership favoring female leaders was considered trivial at $d = .07$. Table 8 contains a summary of finding for the comparison of perceptions of leader transformational leadership with respective professional role at the university by gender of leader.

Table 8

Summary Table Comparison: Perceptions of Transformational Leadership by LeaderGender

Variable	Female		Male		<i>t</i>	<i>p</i>	<i>d</i>
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>			
Mean	4.18	0.63	4.13	0.67	0.42	.68	0.07

Note. N = 129. Degrees of Freedom for the *t*-statistic = 127. *d* represents Cohen's *d*.

H_0 : There will be no statistically significant difference in study participant perceptions of transformational leadership by leader gender.

Considering the non-statistically significant finding for perceptions of transformational leadership by gender of leader, the null hypothesis in research question three was retained.

5.4 Ancillary Analysis: Interaction Effect for Leader Gender & Educational Category

A 2 x 2 Factorial ANOVA was conducted to evaluate the main effects for leader gender and educational category of study participant and the possible interaction effect for both leader gender and educational category of study participant. The interaction effect for leader gender and educational category was statistically significant ($F(1, 125) = 3.94, p = .04(9), \eta^2_p = 0.03$), indicating there were significant differences for mean for each factor level combination of leader gender and educational category interaction term. The main effect for leader gender was non-statistically significant ($F(1, 125) = 1.37, p = .25$), indicating there were no significant differences of mean by leader gender levels. The main effect for educational category was non-statistically significant ($F(1, 125) = 0.01, p = .93$), indicating there were no significant differences of mean by educational category levels. The means and standard deviations of the 2 x 2 Factorial ANOVA analysis are presented in Table 9 and Table 10.

Table 9

Summary Table: Perceptions of Transformational Leadership by Leader Gender and Educational Category

Model	SS	df	F	p	η^2_p
LeaderGender	0.56	1	1.37	.25	0.01
Educational Category	0.003	1	0.01	.93	0.00
LeaderGender x Educational Category	1.61	1	3.94	.049*	0.03
Residuals	51.00	125			

* $p < .05$

Table 10

Mean, Standard Deviation, and Sample Size for Transformational Mean by Leader Gender and Educational Category

Categories	<i>M</i>	<i>SD</i>	<i>n</i>
Female Leader: Undergraduate Student	4.21	0.62	71
Male Leader: Undergraduate Student	4.07	0.58	42
Female Leader: Graduate Student	3.88	0.69	7
Male Leader: Graduate Student	4.43	0.96	9

5.5 Summary

Exceptional levels of survey completion rate and internal reliability were reflected in the study's preliminary analyses. In research questions one and two, study participant perceptions of transformational leadership were statistically significant for both female and male leaders, with the response effect manifesting at a slightly higher level for female leaders. The mean difference value for perceptions of transformational leadership by gender of leader was non statistically significant with a concomitant trivial magnitude of effect in the difference in research question three. An additional follow-up, ancillary analysis using study participant gender and educational level was conducted, resulting in a statistically significant interaction effect between study participant gender and educational level for perceptions of transformational leadership.

6 Discussion

The study was conducted at a four-year higher education institution. The demographics of the participants included in the study were student gender: male (39.69%) and female (60.31%), educational: undergraduate (87.79) and graduate students (12.21%), and their class designations: freshmen (41.22%), sophomore (18.32%), junior (18.32%), and senior (9.92%). There were three

Comment [U14]: Graphical Representation: Consider including a graphical representation (e.g., interaction plots) of the interaction effects to make the results more intuitive

Comment [U15]: Use vocabulary instead of only percentage while explaining the results like; one third of respondent

Comment [U16]: Depth of Discussion: The discussion could delve deeper into why the findings differ or align with previous studies. For example, why does this study suggest no significant gender difference in transformational leadership, contrary to some existing literature? The implications of the findings could be more specific. For example, how might these findings influence leadership development programs in higher education?

survey items identified for the descriptive statistical analysis for both leadership genders, male and female. These factors were representations of how satisfied students were with their leader's leadership approach, gender's ability to motivate students to excel in academic performance, and the overall mean score for perceptions of transformational leadership by gender.

Focusing on transformational leadership style, the research findings suggested that both male and female leaders display transformational leadership style and there is no significant difference between both genders. However, Vinkenburg et al. (2011) as cited by Netshitangani, (2018), suggested that women are more transformational than men, in addition to also implying that the transformational leadership style is related to feminine characteristics. This study has suggested otherwise and has proven that both genders can acquire and employ this leadership style.

7 Implications for Professional Practices

As students matriculate through college, the expectation is to earn a degree and become successful professionals in their respective fields. While this is the expectation, leaders should cultivate and promote an environment that contributes to student development and success. To ensure that transformational leadership is widespread and continues, individual development plans should be implemented within the organization that will enable leaders to enhance their transformational leadership skills. Various professional development courses can be offered in different formats (i.e., online, face-to-face, and self-paced) to ensure leaders are constantly evolving, growing, adapting to enhance student engagement, and contributing to student success.

Leaders should pursue professional leader-student relationships aligned with the four dimensions of transformational leadership as defined by Burns (1978) and Bass (1994): idealized influence, inspirational motivation, intellectual stimulation, and individualized consideration.

The goal of this leader-student relationship will be for gender leaders to develop, shape, and inspire students while using the relationship to develop themselves. Implementing transformational leadership behavior from this study could potentially create an environment where students will feel safe and learn from their leadership. As a result, students' success and engagement could also potentially increase, as well as student retention and enrollment rates.

Lastly, policies that promote and foster the use of transformational leadership practices within and across institutional departments and campus-wide could hold much promise for creating environments to support students and faculty, alike. For example, ensuring that institutional strategic plans, metrics, and policies are reflective of dimensions of transformational leadership (for example, intellectual stimulation). That is, institutions should be able to demonstrate how the policies, procedures, and practices promote intellectual stimulation among students and faculty.

7.1 Limitation

The transformational leadership style based upon the work of Burns (1978) and Bass (1994) represented the only prominent leadership style of focus for the study. The use of a quantitative approach, although a strength of the study, represented a limitation in its flexibility of data collection. Moreover, the use of non-probability sampling restricted the generalization of subsequent study findings.

8 Conclusion

The findings of this research are valuable in the field of higher education and other fields. These findings can help higher education leaders understand the relevance and importance of the transformational leadership style and how it can potentially affect student engagement, enrollment, and other institutional factors. Not only are these findings valuable to the field of

higher education, but they are also transferrable to other fields. For example, this study revealed that leadership styles contribute to developing a follower's perception. These findings support Wikaningrum and Yuniawan's (2018) position stating that leadership affects the employee's perception on the leadership styles of their leaders.

Comment [U17]: Summary of Key Findings: Summarize the key findings and their implications without introducing new information.
Research Contributions: Highlight the contributions of the research to the field and how it fills the identified gap.
Avoid Repetition: Ensure the conclusion does not merely repeat the abstract or discussion, but provides a succinct wrap-up.

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