Gender-based Differences in Leadership Style: An Empirical Analysis

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ABSTRACT

This research investigates the differences in leadership styles among males and females of tertiary educational institutions in Cambodia and Malaysia. The study used a questionnaire as a measuring instrument and hypotheses testing to perform a one-sample t-test and a paired t-test. The sampling design used was convenience sampling. This research is relatively novel as it involved respondents from educational institutions in two Southeast Asian countries. This research found that females have a people-oriented leadership style and have a higher perception of their leadership abilities. In addition, it found that males have neither a task-oriented nor a people-oriented leadership style. The study suggests that women should be given the helm to manage these concerns in light of recent geopolitical uncertainties and workplace issues.

Keywords: Leadership approaches; People-oriented and task-oriented leadership style; Cambodia; Malaysia; One-sample t-test; Paired t-test

INTRODUCTION

In the current turbulent times, where the world is in constant turmoil, recession is looming everywhere, and inflation is rearing its ugly head, coupled with geopolitical tensions worldwide, leadership has again gained importance to address these troubling events. Leadership has also gained prominence due to internal issues affecting employees post-COVID-19, transitioning from work-from-home to a physical workplace, and increasing problems concerning employee gender, diversity, equity, and inclusion (Kteily & Finkel, 2022). Hence, this study starts the momentum to revisit leadership, albeit more modestly, by examining gender differences in leadership styles.

There are differences in leadership styles between males and females (Eagly & Carli, 2003). Conflict occurs within and without an organization; an appropriate leadership style is needed to address such disputes. Most, if not all, world leaders in these current geopolitical conflicts are men and issues still need to be addressed. Hence, this study investigates leadership styles among males and females.

The study reveals that females have a more people-oriented leadership style and have a higher perception of their leadership style than males. With this people-oriented leadership orientation and higher perception

of their leadership abilities, perhaps greater certainty and solutions to these uncertain times can arise inside and outside an organization. Therefore, it is time for women to take centre-stage from the board room to the United Nations and beyond.

LITERATURE REVIEW

This section will review the different tenets of traditional leadership in sequence, starting from traits leadership, followed by behavioral approaches, and subsequently by contingency approaches. Other offshoots of transformational and transactional leadership approaches will then be reviewed. This will be followed by contemporary approaches to leadership, such as Level 5 leadership, servant leadership, and authentic leadership. Finally, this section will posit hypotheses on leadership differences among genders.

Several definitions of leadership have been proposed based on individual traits, leader behavior, interaction patterns, role relationships, follower perceptions, influence over followers, influence on task goals, and influence on organizational culture. Most definitions of leadership involve an influence process (Yukl, 1989). Hence, leadership can be defined as the ability to influence people toward attaining goals (Daft, 2016).

Trait leadership theories evolved from the "great man" theories, which were highly controversial as

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they asserted that leadership qualities were inherited, especially by people from the upper class (Kirkpatrick & Locke, 1991). The term "trait" is used broadly here to refer to people's general characteristics, including capacities, motives, or behavior patterns. Trait theories did not make assumptions about whether leadership traits were inherited or acquired. They asserted that leaders' characteristics are different from those of non-leaders. However, traits alone are insufficient for successful business leadership—they are only a precondition.

Leaders with the requisite traits must take specific actions to succeed (e.g., formulating a vision, role modeling, and setting goals). Possessing the appropriate characteristics makes it more likely that such actions will be taken and successful (Kirkpatrick & Locke, 1991). Traits matter, according to Kirkpatrick and Locke (1991).

Early research on leadership behavior focused on two general, broadly defined behavior categories best described as relations-oriented and task-oriented (Yukl et al., 2002). Examples include consideration and initiating structure, concern for people, and concern for production in the managerial grid model (Blake & Mouton, 1982). Early research on leadership behavior was conducted by the Ohio State University and the University of Michigan (Daft, 2016). Ohio State University researchers identified two significant behaviors. They called them consideration and initiating structure (Schriesheim & Bird, 1979). Consideration falls in the category of people-oriented behavior and is the extent to which the leader is mindful of subordinates, respects their ideas and feelings, and establishes mutual trust while initiating structure is the extent to which the leader is task-oriented and directs subordinate work activities toward goal attainment (Daft, 2016).

The contingency approaches to leadership explore how the organizational situation influences leader effectiveness. One of the earliest leadership approaches that examine situational factors is the work of Tannenbaum and Schmidt (1973). The authors articulated that several types of leadership approaches fall into a continuum. On one end is the boss-centred leadership, and on the other end of the continuum is the subordinate-centred leadership and other myriad approaches of leadership that lie in between. In boss-centered leadership, the manager makes the decision and announces it. In contrast, in subordinate-centred leadership, the manager permits the subordinates to function within the limits the

superior defines. Exactly what approach of leadership style is adopted will depend upon three factors- forces in the manager, forces in the subordinates, and forces in the situation (Tannenbaum & Schmidt, 1973). The forces in the manager will encompass issues like their value system, their confidence in subordinates, their leadership inclinations, and their feelings of security in an uncertain situation. Forces in the subordinates will include issues like subordinates' needs for independence, readiness to assume responsibilities, tolerance for ambiguity, interest in the problem, understanding and identity with the organization's goals, and if they have the necessary knowledge and experience. Finally, forces in the situation will include the type of organization, group effectiveness, the nature of the problem, and time pressures.

According to Bass (1990), there are two types of leadership: transactional and transformational. Transactional leaders contract the exchange of rewards for effort, promise rewards for good performance, and recognize accomplishments. Transactional leaders also practice management by exception; they watch and search for deviations from rules and standards and take corrective actions. They may abdicate responsibilities and avoid making decisions. On the other hand, transformational leaders are charismatic – they provide vision and a sense of mission, instill pride, and gain respect and trust. Transformational leaders also inspire others; these leaders inspire and excite their employees with the idea that they may be able to accomplish great things with extra effort. Further, transformational leaders are individually considerate; they pay close attention to differences among their employees and act as mentors to those who need help to grow and develop. The intellectual stimulation of employees is another factor in transformational leadership. Intellectually stimulating leaders are willing and able to show their employees new ways of looking at old problems, teach them to see difficulties as problems to be solved and emphasize rational solutions.

In addition to the trait theories, behavioral approaches, and contingency approaches to leadership, more recent developments have led to theories like Level 5 leadership, servant leadership, and authentic leadership. Level 5 leadership refers to the highest level of a hierarchy of executive capabilities. Level 5 leaders build enduring greatness through a paradoxical combination of personal humility and professional will (Collins, 2001).

Another contemporary approach to leadership is

servant leadership. Servant leadership occurs when leaders assume the position of servant in their relationships with fellow workers (Russell & Stone, 2002). Another popular concept in leadership today is authentic leadership, which refers to individuals who understand themselves, espouse and act consistent with higher-order ethical values, and empower and inspire others with their openness and authenticity (Daft, 2016).

GENDER-BASED LEADERSHIP AND HYPOTHESES DEVELOPMENT

The above approaches to leadership have their merits, and most of them have become seminal works. Nonetheless, depending on the perspective of gender, none have articulated it to such a granular level. While trait theories look at the traits of individuals who can become good leaders, they do not dissect them to the level of gender differences. Similarly, both behavioral and contingency approaches to leadership examine the leader's behavior and situational position to choose the right leadership style. They, too, do not granulate it to the gender level. In addition, neither transformational nor transactional leadership styles nor the more recent contemporary approaches have emphasized leadership levels from the gender perspective. Thus, there is a gap in these leadership approaches from the gender angle. This study takes a small step in attempting to fill this void.

Recently, research has indicated that women's leadership style is typically different from most men's (Eagly & Carli, 2003). Studies have shown that women, more than men, manifested relatively interpersonally oriented and democratic styles, and men, more than women, manifested relatively task-oriented and autocratic styles (Eagly & Carli, 2003). In addition, compared with male leaders, female leaders were more transformational than transactional (Eagly & Carli, 2003).

Although a solid moral case can be made for putting aside stereotypical prejudices and choosing leaders based on their capabilities and talents rather than membership of a particular demographic group, nonetheless, around the 1990s, efforts began to be made to make a case to organizations that increasing the diversity of their talent pools was not only necessary based on demographic projections but favorable to them in terms of competitive advantage and organizational performance (Eagly & Carli, 2003). This so-called "business case" for diversity continues to be discussed today as researchers attempt to understand the economic value of diversity. Companies that can hire and maintain a diverse workforce are expected to outperform those that do not (Dezso & Ross, 2012; Glass & Cook, 2018; Krishnan & Park, 2005; Offermann & Foley, 2020). A particular focus of this business case revolves around the effects of increasing the proportion of women in management and senior leadership roles. Although the momentum for women in leadership roles has begun, not much research has been done in this area compared to the earlier leadership approaches.

The USA has become the epicentre of diversity, equity, and inclusivity (DEI) in leadership, where many employees of color feel some form of discrimination against them, proper or otherwise. With the murder of George Floyd in 2020, many employees of Facebook staged a virtual walkout, temporarily logging off work and leaving an out-of-office message explaining why (Kteily & Finkel, 2022). Two months later, more than 200 employees at Pinterest reacted similarly in solidarity with three former co-workers who had accused the company of racial and gender discrimination (Kteily & Finkel, 2022). Although DEI covers a broader spectrum than mere gender, nonetheless, gender is also part of the diversity equation that can help to alleviate some of the workplace issues surrounding DEI, and women leaders may be at the forefront in DEI to address any imbalances.

Paradoxically, other relatively recent findings show that the presence of women leadership does not impact the protection of females. More specifically, Johnston and Houston (2016) assembled a panel data set from 43 police force areas in England and Wales. They found that the presence of women police officers at the upper echelon did not reduce gender-based violence. As data for more than one year were available for each of the 43 areas, they could assemble a panel dataset to construct panel-based models. This has the considerable attraction of estimating the effect of unobserved area-level characteristics and better assessing its findings.

Another empirical study in the healthcare sector showed that although more than 75 percent of people engaged and working in global health are women, this proportion of women needs to be reflected at the top levels of leadership (Dhatt et al., 2017). The Lancet Commission on Women and Health (Dhatt et al., 2017) revealed that women contribute around US$3 trillion to global health care. However, nearly half of this [2.35 percent of global gross domestic product

(GDP)] is unpaid. The vast contribution of women and the integral role they play as a large part of the healthcare labor force should be more appreciated and recognized. In a study on the financial value of women's contributions to the health system in 2010 (Dhatt et al., 2017), which included the analysis of 32 countries and 52 percent of the world's population, it was estimated that the financial value of women's contributions in the health system in 2010 was 2.35 percent of global GDP for unpaid work (domestic care for family members, officially compensated in a select few countries) and 2.47 percent of GDP for paid work – the equivalent of US$3.052 trillion (Dhatt et al., 2017). Inequity is widespread, especially at the highest levels of management and leadership; for instance, in 2015, only 27 percent of Ministers of Health were women. In 2014, only 24 percent of directors of global health centers at the top 50 US medical schools were women. At the 68th World Health Assembly in May 2015, the World Health Organization (Dhatt et al., 2017), only 23 percent of member state delegations had a woman in the role of chief delegate. There are also significant discrepancies with the numbers at the top leadership positions in global health-funding agencies (including the Global Fund to fight AIDS, TB, and Malaria, the World Bank, and UNAIDS). In Cambodia, women constitute only 20 percent of those in senior roles in the Ministry of Health (Dhatt et al., 2017).

In a study done by the Reuters Institute (Eddy et al., 2023) on the gender breakdown of top editors in a strategic sample of 240 major online and offline news outlets in 12 different markets across five continents, only 22 percent of the 180 top editors across the 240 brands covered are women, even though, on average, 40 percent of journalists in the 12 markets are women. In addition, the authors also found out that among the 38 new top editors appointed across the brands covered, 26 percent are women. In all 12 markets, most top editors are men, including in countries where women outnumber men among working journalists. Thus, women must be represented more in top journalistic positions. According to Eddy et al. (2023), these are partly attributed to masculine-dominant newsroom culture.

In another empirical study done by Flabbi et al. (2019) using data from 'Company Accounts Data Service' and includes balance-sheet information for a sample of about 40,000 firms between 1982 and 1997 in Italy, female leadership had a positive effect on female wages at the top of the wage distribution and a negative impact at the bottom of the wage distribution. The authors also found that the interaction between female CEOs and the share of female workers employed has a large and statistically significant impact on firm performance. A female CEO taking over a male-managed firm with at least 25 percent women in the workforce increases sales per employee by 3.25 percent. Companies with a substantial female presence will likely benefit from assigning women to leadership positions. A partial-equilibrium counterfactual experiment based on the authors' point estimates shows that if female CEOs led all the firms with at least 20 percent of female workers, their sales per worker would increase by about 14.1 percent. As such, there are potentially high costs associated with the under-representation of women at the top of corporate hierarchies (Flabbi et al., 2019).

Given the mixed reviews on gender-based leadership, this study intends to examine gender-based leadership further, albeit more conservatively, to identify gender differences in leadership styles. This research aims to determine whether women are more people-oriented than men and ascertain men's and women's perceptions of their leadership abilities.

Specifically, based on the above, this research posits the following hypotheses:

H1: Females have a more people-oriented leadership style than their male counterparts.

H2: Males have a more task-oriented leadership style than their female counterparts.

H3: Females perceive their leadership abilities better than males, given a similar environment.

RESEARCH METHODOLOGY AND DESIGN

This study used a quantitative research method involving hypothesis testing. Since it focused on students, the unit of analysis chosen was individuals, namely students from different educational institutions. As in most field studies, this research deployed a cross-sectional survey due to the time, effort, and cost constraints of collecting data over several periods.

The instrument used to gather data in this research was two questionnaires. The study uses an interval scale, Likert scale, to measure the variables of interest. A five-point Likert scale was selected for hypothesis three, as Elmore and Beggs (1975) have shown that an increase in the number of points does not statistically improve the reliability of the measuring instrument. In addition, validity will be

more difficult on a higher point scale (Viswanathan et al., 2004). This research, therefore, used a two-point Likert scale for the first and second hypotheses and a five-point Likert scale for the third hypothesis.

For the first and second hypotheses, a 2-point Likert scale was used, made up of two options: "Mostly True" and "Mostly False."

The questionnaire for the first and second hypotheses is from Daft (2016). The questionnaire tests respondents' leadership style, whether people-oriented or task-oriented. Subsequently, this questionnaire was used to describe the leadership of the respondents, using Hershey and Blanchard's situational model (Daft, 2016). Here, this questionnaire was used to test whether respondents are either people-oriented or task-oriented and to ascertain whether females are more people-oriented and males are more task-oriented or whether there is no difference among genders. This questionnaire adopts a simple approach to gauge leadership style; that is, the response from respondents is dichotomous, comprising "Mostly True" and "Mostly False" options. This questionnaire is used as the author is reputable and was previously tested in other academic studies (Daft & Marcic, 2023; Daft & Lengel, 1998).

The questionnaire for the third hypothesis used a novel method: the assistance of Open AI's ChatGPT, which used its artificial intelligence to comb through all the relevant literature as of 2021. Academia is encouraged to use large language models (LLM) like that used in ChatGPT (Mollick & Mollick, 2023). y Cano et al. (2023) have also encouraged using ChatGPT in academia. Therefore, this research undertakes the first step in incorporating LLM in this study. Nonetheless, all these questionnaires were validated and assessed for reliability.

This questionnaire involved students from CamEd Business School, Cambodia, and two other educational institutions in Malaysia, namely, Taylor's University and Crescendo International College. For CamEd Business School, permission was first obtained from the President, and the questionnaire was directly distributed to students using Google Forms. In Malaysia, the author requested permission from the respective principals, and after permission was granted, the questionnaire was also distributed via Google Forms. These countries were chosen purposively as they are where the author has access to educational institutions. The survey was entirely voluntary, and, in addition, the questionnaire did not request for name, address, and contact number. Hence, there were no ethical issues. However, the respondents' gender was needed to carry out the research. This hypothesis testing used a univariate t-test and paired t-test parametric testing.

RESULTS AND ANALYSIS OF DATA

For the first questionnaire to test hypotheses one and two, 69 responses were received, of which 21 were male respondents and 48 were female respondents. There were also three spoiled responses. Since data has to be checked for completeness and consistency, the data collected had to be cleansed (Hair et al., 2003; Cavana et al., 2001). The respondents who had spoiled responses were removed from the analysis. The raw data from Google Forms was automatically transferred to Google Sheets and then to MS Excel for computations. For the second questionnaire to test hypothesis three, there were 56 responses, of which 38 were female and 18 were male. There was no missing data.

Inferential statistics

Content validity was done through a review of panel experts from CamEd and literature reviews. The feedback from the panel experts was considered, and certain words were either modified or deleted to ensure that the questionnaire contents were appropriate.

Reliability concerns the consistency of the research findings. To ensure reliability, the scale had more than the minimum number of three items (12 items for the first questionnaire and ten items for the second questionnaire) (Hair et al., 2003). The items of the questionnaire are envisaged to be positively correlated as no reverse coding and negative wording were applied (Hair et al., 2003).

This research first performed a one-sample t-test on hypotheses one and two. Two points were given for each of the "Mostly True" and one point for each of the "Most False" responses for both male and female respondents. According to Daft (2016), the sum of points for odd-numbered questions will help ascertain the degree of people-orientation leadership and the sum of the points for even-numbered questions for task-orientation leadership. Hence, this research first added up the sum of odd-numbered and even-numbered questions for both males and females. According to Daft (2016), a score of 10 or higher for the people-orientation score (the sum of odd-numbered questions) suggests a person is high

on people's behavior. A score of 10 or higher for the task-orientation score (the sum of even-numbered questions) indicates a person is high on-task.

Table 1 shows the individual total score and average sum of male and female respondents for odd-numbered and even-numbered questions and their standard deviations.

Table 1: Individual Total Score and Average Sum of Respondents for both Odd-Numbered and Even-Numbered Questions

Male	Sum of odd number	Sum of even number	Female	Sum of odd number	Sum of even number
1	10	9	1	11	12
2	9	9	2	9	10
3	10	10	3	11	11
4	11	12	4	12	11
5	10	10	5	12	12
6	8	11	6	8	11
7	10	12	7	12	7
8	10	12	8	9	12
9	8	12	9	11	11
10	12	9	10	11	9
11	11	12	11	11	11
12	12	12	12	10	12
13	12	9	13	12	9
14	12	10	14	11	8
15	10	10	15	12	9
16	8	11	16	11	6
17	10	11	17	10	10
18	10	11	18	9	11
19	10	11	19	11	11
20	12	10	20	10	11
21	12	6	21	9	10
Average	10.33	10.43	22	11	10
Standard deviation	1.35	1.50	23	12	11
			24	10	11
			25	10	11
			26	9	9
			27	12	11
			28	7	11
			29	10	10
			30	8	11
			31	10	11
			32	10	10
			33	12	11
			34	11	10
			35	11	9
			36	11	11
			37	12	6
			38	12	9
			39	10	11
			40	10	10
			41	12	8
			42	12	9
			43	12	11
			44	10	11
			Average	10.59	10.14
			Standard deviation	1.28	1.46

Source: Author

The first hypothesis states that females have a more people-oriented leadership style than their male counterparts. Therefore, females are supposed to attain an average score of 10 or higher for odd-numbered questions (people-orientation leadership).

Hence, for the first hypothesis,

H0: $\mu \leq 10$ (the mean total score for people-oriented leadership)

H1: $\mu > 10$ (the mean score for people-oriented leadership)

Using the sample data size of n = 44 (number of female respondents) and degrees of freedom (df) of 43, the t-critical value of a one-tailed at α = 0.05 is 1.681.

The t-test value for one sample is:

t-test = $(\bar{x} - \mu)/(s/\sqrt{n})$, where $\bar{x}$ is the total mean score, s is the standard deviation of the total score distribution, and n is the number of respondents (i.e., 44).

t-test = (10.59-10)/(1.28/sqrt(44)) = 3.056. Since the t-test is greater than t-critical, the study rejects H0. Therefore, based on the sample data, the decision is to accept H1, that is, to accept the first hypothesis, that females are high in people-oriented leadership.

Nonetheless, a one-sample t-test is also done for male respondents to identify whether they are high or otherwise in people-oriented leadership. Using the same hypothesis,

H0: $\mu \leq 10$ (the mean total score for people-oriented leadership)

H1: $\mu > 10$ (the mean score for people-oriented leadership)

With n = 21 (number of male respondents), df = 20, α = 0.05, the t-critical value of a one-tailed test is 1.725. The t-test value is (10.33 − 10)/(1.35/sqrt(21)) = 1.120. Since the t-test is less than t-critical, H0 is not rejected. Hence, based on the sample data, the leadership style of male respondents is not people-oriented.

The second hypothesis states that males have a more task-oriented leadership style than their female counterparts. Therefore, males should attain an average score of 10 or higher for even-numbered questions (task-orientation leadership).

For the second hypothesis,

H0:   μ ≤ 10 (the mean total score for task-oriented leadership style)

H1:   μ > 10 (the mean total score for task-oriented leadership style)

With n = 21 (number of male respondents), df = 20, α = 0.05, the t-critical value of a one-tailed test is 1.725. The t-test value is (10.43 − 10)/(1.50/sqrt (21)) = 1.314. This, too, is less than t-critical, and therefore, H0 is not rejected. As such, based on the sample of male respondents collected, their leadership style is not task-oriented.

A one-sample t-test is also done for female respondents to identify whether they are high or otherwise in task-oriented leadership. Using the same hypothesis,

H0:   μ ≤ 10 (the mean total score for task-oriented leadership)

H1:   μ > 10 (the mean score for task-oriented leadership)

With n = 44 (number of female respondents), df = 43, α = 0.05, the t-critical value of a one-tailed test is 1.681. The t-test value is (10.14 − 10)/(1.46/sqrt (44)) = 0.636. Since the t-test is less than t-critical, H0 is not rejected. Hence, based on the sample data, the leadership style of female respondents is not task-oriented.

The first hypothesis is accepted based on the above: Females have a more people-oriented leadership style than their male counterparts and do not exhibit a task-oriented leadership style. However, the second hypothesis is rejected. From the sample data, males do not exhibit a people-oriented or task-oriented leadership style.

The third hypothesis states that females better perceive their leadership abilities, given a similar environment. Here, a paired-sample t-test was carried out between males and females. The third hypothesis makes use of items from the second questionnaire. The values were added to find the total score. The values of the individual scores for the ten items in the questionnaire and the total are shown for the 18 male respondents in Table 2, and the individual scores, as well as the total for the 38 female respondents, are shown in Table 3. The female total scores are arranged in descending order from the largest to smallest as only 18 of the 38 female respondents were used to carry out a paired t-test since there were only 18 male respondents. The 18 largest total scores of female respondents are compared with the 18 male respondents. Table 4 shows these values.

Table 2: Individual Scores of Items and Their Total

male count											Total
1	3	4	4	5	4	4	4	5	5	3	41
2	4	3	4	3	4	1	4	4	5	4	36
3	4	4	4	4	4	4	4	4	4	4	40
4	5	4	5	5	4	5	5	3	5	5	46
5	4	4	4	4	4	4	4	4	4	4	40
6	3	5	4	4	5	5	3	4	3	4	41
7	3	4	5	5	5	5	5	5	5	5	47
8	4	4	4	4	4	4	4	4	4	4	40
9	4	5	5	3	5	5	4	5	5	5	46
10	5	5	5	5	5	5	5	3	5	5	48
11	3	4	5	2	3	4	5	3	3	2	34
12	4	4	5	4	5	5	5	5	5	5	47
13	4	5	4	3	4	3	4	4	5	3	39
14	4	4	4	4	4	4	4	4	4	4	40
15	3	4	4	4	4	4	4	4	4	3	38
16	3	5	4	4	4	4	4	4	4	4	40
17	2	4	2	2	4	4	4	4	2	2	30
18	2	4	5	4	4	4	2	4	4	4	37

Source: Author.

Table 3: Individual Scores and Total Scores Arranged in Descending Order

Female count											Total
12	5	5	5	5	5	5	5	5	5	5	50
13	5	5	5	5	5	5	5	5	5	5	50
7	5	5	5	5	5	5	4	5	5	5	49
1	3	5	4	4	5	5	5	4	5	5	45
4	4	5	5	4	5	5	5	4	4	4	45
5	4	5	5	3	5	5	5	5	4	4	45
36	4	5	4	5	5	5	4	4	5	4	45

15	4	5	4	5	5	5	3	4	5	4	44
19	5	4	5	4	5	5	4	4	4	4	44
27	4	4	4	5	4	4	5	5	4	5	44
20	4	4	5	4	4	5	4	4	4	4	42
35	4	4	5	4	5	4	3	4	5	4	42
24	4	5	3	3	5	5	4	3	5	4	41
34	4	4	4	4	5	4	3	4	5	4	41
37	4	4	4	4	4	4	3	5	5	4	41
6	3	4	4	3	5	4	4	4	5	4	40
8	3	4	4	4	4	4	4	4	5	4	40
10	4	4	5	4	4	4	4	4	4	3	40
14	4	4	4	4	4	4	4	4	4	4	40
17	2	5	5	4	5	5	3	3	5	3	40
21	4	4	4	3	4	4	4	5	5	3	40
22	3	4	5	3	4	5	4	4	5	3	40
32	3	5	4	4	4	4	4	4	4	4	40
9	5	3	4	5	5	4	4	2	4	3	39
25	4	4	3	4	4	5	4	4	3	4	39
29	4	3	5	3	4	4	4	5	4	3	39
38	3	5	4	4	5	4	4	3	3	3	39
3	3	4	5	4	3	5	2	3	5	3	37
28	3	4	4	4	4	4	4	3	4	3	37
30	4	4	4	3	3	4	4	4	4	3	37
33	3	4	4	3	5	4	3	4	4	3	37
2	5	2	4	4	2	4	4	4	4	3	36
16	2	5	4	2	4	5	3	2	5	4	36
18	3	3	3	4	4	4	4	4	3	4	36
11	3	4	4	3	4	3	3	4	3	4	35
31	2	5	4	3	4	4	3	3	4	3	35
26	3	3	4	4	3	4	2	2	3	3	31
23	2	4	4	4	2	2	3	1	4	4	30

Source: Author.

Table 4: Differences between Male and Female Perceptions of Their Leadership Abilities

Male	Female	Difference (D = female - male)	D-average	(D-average)^2
41	50	9	5.78	33.38
36	50	14	10.78	116.16
40	49	9	5.78	33.38
46	45	-1	-4.22	17.83
40	45	5	1.78	3.16
41	45	4	0.78	0.60
47	45	-2	-5.22	27.27
40	44	4	0.78	0.60
46	44	-2	-5.22	27.27
48	44	-4	-7.22	52.16
34	42	8	4.78	22.83
47	42	-5	-8.22	67.60
39	41	2	-1.22	1.49
40	41	1	-2.22	4.94
38	41	3	-0.22	0.05
40	40	0	-3.22	10.38
30	40	10	6.78	45.94
37	40	3	-0.22	0.05
Sum		58	0.00	465.11
Average	3.22			
Standard deviation				5.23

Source: Own computation.

For the third hypothesis,

H0:   μD ≤ 0 (there is no difference between male and female perception of leadership)

H1:   μD > 0 (females have a higher perception of their leadership as compared to males)

Since there are 18 paired respondents involved, df = 18 − 1 = 17. With α = 0.05, the t-critical value of a one-tailed test is 1.740.

The paired t-test is = (average of difference)/(s_D ÷ sqrt (n)) = 3.22/(5.23/sqrt(18)) = 2.612. Since the t-test is greater than t-critical, H0 is rejected. Based on the sample data, females have a higher perception of their leadership than their male counterparts. Hence, hypothesis three is accepted.

CONCLUSIONS AND IMPLICATIONS

This study indicates that females have more people-oriented leadership and a higher perception of their leadership abilities than males. This is consistent with the works of Eagly and Carli (2003). Surprisingly, this research indicates that males do not have task-oriented or people-oriented leadership. Before this research looks at its limitations, these findings might give insight into the importance of diversity, especially regarding gender.

With so much turbulence occurring in terms of geopolitical tensions, economic uncertainty, and a host of workplace issues, it is essential to have someone who is people-oriented to ameliorate these issues. Women may become the forefront of actors to address these trying times. Therefore, a "business case" for having an increasing proportion of women in management and senior leadership roles is a good suggestion (Dezso & Ross, 2012; Glass & Cook, 2018; Krishnan & Park, 2005; Offermann & Foley, 2020).

Hence, countries like Norway and others have introduced formal laws requiring female representation on corporate boards (Nielsen & Huse, 2010). Nielsen and Huse (2010) also found that women on boards can help reduce conflict. By extending this on a broader scale, perhaps the tensions, uncertainties, and workplace issues can be better mitigated by women whose people-oriented leadership style tends to be more appropriate in these circumstances.

Many companies are beginning to realize the importance of women in senior management roles, and firms like General Motors, Walgreens Boots Alliance Inc., Oracle Corporation, Citigroup Inc., AMD, and Accenture, among others, have women CEOs (Catalyst, 2023). In addition, in the past, there has been an increase in the number of women who are both CEO and Chairman in firms like IBM, PepsiCo, and Du Pont (Dunn et al., 2013).

The implications for organizations and government are that women should be given more opportunities in organizations and board roles, as done in Norway (Nielsen & Huse, 2010). Corporations should remove policies that permit the "glass ceiling" and "glass cliff" effect. The government of a country should also ensure more qualified representation of women in its agencies. Spain's government plans to pass a gender parity law so that corporate boards and government agencies must have 40 percent women (Orihuela & Bloomberg, 2023). At the end of November 2022, the European Union agreed to impose gender quotas to ensure women occupy at least 40 percent of seats on the boards of large companies by 2026 (YLE News, 2022).

This research, like all research, has its limitations. Using non-probability sampling as convenience sampling would make this research not generalizable (Cooper & Schindler, 2003; Cavana et al., 2001; Hair et al., 2003). Also, as a non-probability sampling, sampling frame, and size issues were not considered crucial. The sample data for males in this study may have sampling bias, as it indicated that males do not have task-oriented leadership or people-oriented one. This cannot be generalized. In addition, caution must be practiced to perform the necessary statistical interpretation, as significant testing may not tell how large the effect is and whether it is valid.

Furthermore, because this was a cross-sectional study with limited time, only content validity was done on the questionnaire items. A more comprehensive validity may be needed. In addition, only a very simple form of reliability assessment could be done.

This study carried out a one-sample t-test and a paired t-test. Other more advanced statistical testing could have been contemplated. Nonetheless, this research provides a pathway for other researchers to expand further.

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