

Women Leadership during Crisis: How the COVID-19 Pandemic Revealed Leadership Effectiveness of Women Leaders in the UAE

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Abstract

COVID-19 constitutes one of the major crises that managers have had to face in recent times. Managing businesses during a crisis requires effective Leadership guided by specific behaviors and mindsets. Research by Harvard Business Review recently claimed that women leaders outperformed men leaders on most leadership attributes during the pandemic (Post et al., 2019). However, not enough studies show how leadership styles are portrayed between men and women during the pandemic. This study explores the differences between women's and men's leadership practices during the COVID-19 pandemic in the UAE context. In this research, we explore employees' perceptions of the Leadership styles their leaders demonstrated during COVID-19 within different organizations in the UAE. Four meta-categories were tested to differentiate men's and women's leadership behaviors during the pandemic crisis. Specifically, the task-oriented, relations-oriented, change-oriented, and external categories of leadership practices are assessed among the respondents. T-tests are used to determine the differences in managerial practices between men and women during the COVID-19 pandemic in the UAE context. Moreover, ANOVA, correlation analysis, and multiple regression analysis are used to compare women and men leader behaviors and their relation to leadership effectiveness based on the meta-categories of leadership practices. Results showed significant differences in leadership behaviors between men and women. Women demonstrated higher task-oriented management practices than men during the COVID-19 pandemic.

Keywords: Women Leadership; COVID-19; Managerial Practices Survey; Women's Empowerment; Leadership Effectiveness; United Arab Emirates.

1. Introduction

Leadership is an essential element of any organization. Leaders are responsible for directing the actions and goals of their team members and motivating them toward achieving a common objective. Past research counts substantial effort in leadership theory development, explanation, and classifications of leadership styles. For instance, leadership literature reveals various leadership styles that leaders can employ (e.g. autocratic, democratic, transformational, laissez-faire, and transformational leadership style), and several factors, including gender, influence these styles.

While progress has been made in recent decades to increase the representation of women in leadership roles, significant disparities remain globally. Although the gender gap is prevalent worldwide, it is far more significant in the Arab World (ILO, 2022). Women are

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still significantly underrepresented in management, administration, and decision-making positions, particularly at a high level (Elias, 2018).

However, progress in women's Leadership in the Gulf countries and mainly the UAE is gaining momentum (Sethuraman & Suresh, 2014; Burton & Leberman, 2017; Demers et al., 2019). The UAE is among the leaders in closing the gender gap as measured in female labor-force participation, at 47 percent, considerably higher than the regional averages of 11 to 31 percent (ILO, 2022).

Leo et al. (2021) report that in the UAE, the number of women in Leadership in technical and academic roles is 15 percent. In the public sector, women comprise 30 percent of the leadership positions compared to 70 percent of their male counterparts. These findings are nearly identical to the global average, which shows that women occupy up to 31 percent of the leadership positions in the world (Leo et al., 2021).

Various factors contribute to this gender gap, including unconscious bias, gender stereotypes, and systemic barriers within organizations (Ammerman & Groysberg, 2022). Considering these factors, our current study seeks to explore the influence of gender on the manifestation of Managerial Practices Survey (MPS) behaviors. To accomplish this objective, We conducted a survey among UAE employees to examine their perception on gender-based differences in leadership styles during the pandemic.

One of the critical challenges facing women in leadership roles is the lack of support and encouragement from managers and senior leaders. As the SHRM research (2022) highlights, women are less likely than men to receive the support they need to grow their careers and progress into leadership roles. This can be due to various factors, including biases and assumptions about women's capabilities and priorities and the lack of formal support structures and opportunities for career development and advancement (Appelbaum et al., 2003).

At the same time, studies have demonstrated that companies with a greater representation of women in leadership roles tend to have a higher level of profitability, exhibit greater social responsibility, and deliver superior customer experiences, among other advantages (Post et al., 2021). Moreover, recent research shows that when women embrace leadership roles during crises, they usually constitute as effective leaders as their male counterparts. For instance, Williams and O'Reilly (2009) examined the interactions between gender and ethnicity in shaping leadership behavior during a crisis. The authors found that both gender and race can have a significant impact on Leadership during a crisis, and they recommended that organizations create diverse and inclusive crisis management teams to ensure effective Leadership.

Although men and women can be effective leaders during crises (Hoyt, 2010; Bowles, 2012; Perdue, 2016), they tend to exhibit different leadership and managerial behaviors. For instance, Women frequently refer to their efforts to encourage participation, share power, and information, and increase the motivation of their subordinates (Walker & Aritz, 2015). They attribute their leadership ability to personal characteristics such as charisma, social contact, or hard work. Hence, female leaders appear to share more decision-making and make their subordinates collaborate more (Chin, 2011; Cook & Glass, 2014; Gipson et al., 2017). Female Leadership is then described as interactive, more relationship-oriented, and more transformational, while male Leadership is considered more directive, task-oriented, and transactional. Men attribute their power mainly to their organizational position and formal authority (Hoyt, 2010). Differences also appear in the perceptions of male or female leaders by their subordinates. Indeed, some studies show that women are perceived as more humane leaders while men are perceived as more pragmatic leaders (Cleveland et al., 2000).

Research tells us that leading effectively during a crisis requires a unique blend of personal traits and managerial behaviors. Our study aims to enhance the existing

leadership literature by investigating the leadership behaviors exhibited by managers during crises like the COVID-19 pandemic. We are particularly interested in how gender influences leaders' managerial behaviors during such challenging times.

We have several key questions guiding our research. First, is there a significant correlation between different categories of leaders' behaviors? Second, do men and women differ significantly in their leadership behaviors? Finally, is there a clear linear relationship between leadership behaviors and leadership effectiveness?

To explore these questions, we have rooted our study in Yukl's taxonomy of managerial behaviors (Yukl, 2012). We have gathered data from a convenience sample of 300 employees in various UAE organizations who work under a manager, aiming to understand their perceptions of their managers' leadership styles during the COVID-19 crisis.

2. Literature Review

1. Effective Leadership during Crisis

Historical research indicates that men make the most critical decisions globally and in the UAE. This has led to a misconception that women's leadership roles are insignificant. However, according to Najib (2021), the only reason men dominate women in leadership positions, as evidenced by historical facts, is that men have always used their power to suppress women (Rosabeth Moss Kanter, 1977; Sheryl Sandberg, 2013). This was evident following the COVID-19 crisis that devastated the world for two years. Additionally, studies conducted by the Peterson Institute for International Economics (2018) and McKinsey & Company (2018) have also found that companies with higher representation of women in leadership positions have better financial performance.

According to Al-Oraimi (2022), amid a crisis as severe as the COVID-19 crisis, there was a need for a leader who prioritized teamwork, including both genders. This is mainly emphasized because of the spreading nature of the disease, which needs close collaboration between both genders to overcome the crisis (Langworthy et al., 2021). Moreover, according to the World Health Organization (2021), effective Leadership during a crisis requires clear communication, transparency, and a sense of empathy, all attributes found to be more prevalent among female leaders.

Research indicates that having women take up leadership positions could benefit an organization or a country. For instance, a study by Eagly and Carli (2007) found that women tend to have a different leadership style than men, characterized by more democratic and participative decision-making. This means that having them at the decision-making table increases the pool of knowledge by highlighting their views on a particular situation and, therefore, minimizing the inaccuracy of the final decision. This was also supported by Riordan et al. (2004), who found that women leaders in the corporate sector tend to be more transformational in their leadership style, emphasizing the development and empowerment of their followers. On the other hand, Rosener (1990) found that men tend to be more effective in issues requiring assertiveness and competitiveness due to sociocultural factors that have traditionally led to men being socialized to be more aggressive and competitive in the workforce.

Furthermore, Catalyst (2020) found that companies with more women in leadership positions have better overall financial performance. Similarly, a McKinsey & Company (2015) study found that companies in the top quartile for gender diversity on executive teams were 21 percent likelier to experience above-average profitability. Women leaders in the business world can respond faster than men and communicate much more effectively about pandemic policies than men, according to Baroudi (2022). This could be due to their sociological advantages, which have been observed to be better than those of

men, through their ability to call quickly for help compared to men (Patel & Khan, 2020; Lee & Brown, 2021). Women are considered cautious of their environment and are more likely than men to continue observing COVID-19 regulation strategies even after vaccination (Sahu, 2021). Furthermore, Klasen and Lamanna (2020) suggest that women tend to be more collaborative and less confrontational than men in leadership positions, leading to more cohesive teams and better decision-making. Also, Budig and England (2001) found that companies with more women in leadership positions tend to have better financial performance. In addition, Eagly and Carli (2007) found that women are just as effective as men in leadership roles, and their leadership styles tend to be more transformational and less autocratic, which can lead to more motivated and engaged employees. The research indicates that having women in leadership roles can be advantageous for an organization or a nation, just like men.

2. Women Leaders' Actions to Fight COVID-19

The COVID-19 pandemic has generated unprecedented health, humanitarian, and development crises worldwide and revealed leadership issues (Hong, 2020). Worldwide, women are at the front lines of actions to fight COVID-19, either as heads of state and government, health workers, home care workers, or leaders within organizations (Hong, 2020). The leaders of several countries are carrying out beneficial actions, thus providing excellent examples of how women's Leadership and participation can give rise to policies, plans, and more effective and equitable actions to respond to the pandemic. In several countries, women are the leaders of inclusive action to fight COVID-19, even if they are often underrepresented at the highest decision-making levels in areas directly impacted by the COVID-19 pandemic (Dent, 2020). The female leaders from Danish, Ethiopian, Finnish, German, New Zealand and Slovak governments have been recognized for the speed of their actions, which have not only included measures to "flatten the curve," such as confinement, social distancing, and widespread screening, but also for their communication, transparent and empathetic public health information (Gabster et al., 2020; Nayak and Dixit, 2021). In Canada, Ethiopia, India, and Madagascar, we see more and more medical experts and health leadership positions stake the lead in daily press releases and public service announcements. Mayors from around the world, from Banjul (Gambia) to Barcelona (Spain), have been the subject of significant media coverage as part of the actions they have taken to fight against the pandemic and share their experiences in online forums (Meagher et al., 2020; Profeta, 2020). The leadership styles of women leaders who led actions to combat COVID-19 compared to men's leadership have been described as more collective than individual, more focused on collaboration than competition, and coaching than command (Mayer and May 2021; Rivera-Mills, 2021; Eichenauer et al., 2022).

3. Women's Leadership in the Arab World

Despite making steady progress towards creating a more women-friendly environment, many women in Arab countries still face stigma and stereotypes that limit their leadership opportunities. Although women in the Arab world have almost closed the education gap with men, their integration into economic activity remains very low in many Arab countries, with only 5% occupying leadership positions (Al-Ahmadi, 2011; Sikdar & Mitra, 2012). Arab women often remain invisible and contribute informally to the daily life of the company (Langlois & Johnston, 2013; Hadabi et al., 2019), and those who do integrate into organizations often change their surname to that of their spouses to be recognized for their skills and what they bring to the company (Kemp et al., 2015).

Even when Arab women break the glass ceiling and attain high positions, they often maintain a conservative attitude (Suliman & Hayat, 2011; Kemp et al., 2013), fearing failure and the inability to assume responsibility, which could endanger their organizations. While management style depends on personality traits and situational and relational backgrounds, women tend to be more cautious and risk-averse than men (Dinh

and Lord, 2012). However, Malik et al. (2012) suggest that women on the board of directors of many organizations are vigilant and aware of the risks inherent in their environments and advocate for well-structured governance mechanisms to avoid or mitigate the effects of these risks.

The International Labour Organization (2019) surveyed 13,000 companies in over 70 countries including Arab countries, and the report shows that initiatives taken by companies in favor of gender diversity improve their results, with over 57% of respondents agreeing. Nearly three-quarters of companies susceptible to gender diversity in their positions report increased profits of 5 to 20%, and nearly 57% indicate that attracting and retaining talented people is more accessible when gender parity is respected in the company. More than 54% say they have seen progress in creativity, innovation, and openness, and effectively favoring gender parity has strengthened their company's brand image. Nearly 37% believe that this allows them to gauge customer opinion better.

Research has also shown that female workers in leadership positions exhibit higher productivity and performance (Shaya & Khait, 2017; Prager, 2020). However, motivation and commitment are decisive factors in women's career progression compared to men (Schuh et al., 2014). Furthermore, women leaders in the Arab world exhibit transactional Leadership compared to male leaders, who exhibit more significant transformational leadership characteristics. Women leaders in the Arab world outperform men on four transformational leadership variables: personal influence, inspirational motivation, intellectual stimulation, and personalized consideration. Arab men outperform Arab women on two transactional scales: passive management and active management, while women outperform men on contingent rewards (Panda & Banik, 2020; Setia, 2021; Makekau, 2022).

To pursue the main objective of this study, we rely on Yukl's taxonomy of managerial behaviors (Yukl, 2012), presented below, which provides a valuable framework for understanding the different types of behaviors that managers exhibit and how they can effectively lead and manage their teams.

3. Theoretical Framework

In 1989, Yukl presented an integrative taxonomy of effective managerial behavior. The taxonomy includes fifteen "middle-range behavior categories (i.e., managerial practices) that have been operationalized in the Managerial Practices Survey (MPS) questionnaire (Yukl, 2008). This taxonomy categorizes the different types of behaviors that managers exhibit. Yukl (2012) found that planning, problem-solving, clarifying, monitoring, and motivating behaviors had consistently high correlations with ratings of managerial effectiveness and that each of the fifteen managerial practices was significantly related to leadership effectiveness.

This study uses Yukl's MPS questionnaire to identify the managerial behaviors of Managers in the UAE as perceived by their subordinates. The managerial practices are designed to measure leadership behaviors known as MPS behaviors, which are generic behaviors applicable to all types of managers and organizations. Yukl (2012) divided the managerial practices into fifteen different behaviors as follows:

1. Planning/Organizing—determining long-term objectives and strategies, allocating resources according to priorities, determining how to use personnel and resources efficiently to accomplish a task or project, and improving coordination, productivity, and effectiveness.
2. Problem-Solving—identifying work-related problems, analyzing problems systematically but timely to determine causes and find solutions, and acting decisively to implement solutions and resolve the crisis.

3. **Monitoring Operations**—gathering information about work activities and external conditions affecting the work, checking on the progress and quality of work, and evaluating the performance of individuals and the effectiveness of the organizational unit.
4. **Networking**—socializing informally, developing contacts with people who are a source of information and support, and maintaining contacts through periodic visits, telephone calls, correspondence, and attendance at meetings and social events.
5. **Clarifying**—assigning work, providing direction on how to do the work, and communicating a clear understanding of job responsibilities, task objectives, priorities, deadlines, and performance expectations.
6. **Supporting**—acting friendly and considerate, being patient and helpful, showing sympathy and support when upset or anxious, listening to complaints and problems, and looking out for someone's interests.
7. **Recognizing**—praise and recognition for effective performance, significant achievements, and unique contributions.
8. **Developing**—providing career counseling and doing things to facilitate someone's skill development and career advancement.
9. **Delegating and empowering**—allowing others substantial responsibility and discretion in carrying out work activities and giving them authority to make crucial decisions.
10. **External Monitoring**—analyzing information about relevant events and changes in the external environment and identifying threats and opportunities for the leader's group or organization.
11. **Envisioning Change**—articulating a clear, appealing vision of what can be attained by the work unit or organization to build commitment to new strategies and initiatives.
12. **Representing**—lobbying for resources and assistance, promoting and defending the reputation of the team or organization, negotiating agreements, and coordinating related activities.
13. **Encouraging Innovation**—encouraging and facilitating creative ideas and innovation in a team or organization by creating a climate of psychological safety and mutual trust to suggest novel ideas.
14. **Facilitating Collective Learning**—using systematic procedures to improve work unit performance, helping members understand causes of work unit performance, encouraging members to share new knowledge.
15. **Advocating Change**—explaining an emerging threat or opportunity; explaining why a policy or procedure is no longer appropriate and should be changed; proposing desirable changes; taking personal risks to push for approval of essential but complex changes.

Yukl (2012) has organized these practices into four Managerial behavior meta-categories as shown in table 1. Each meta-category has a different primary objective, but all of the objectives involve determinants of performance. For Task-oriented behavior, the primary objective is to accomplish work efficiently and reliably. For Relations-oriented behavior, the primary objective is to increase the quality of human resources and relationships, sometimes called "human capital." For Change-oriented behavior, the primary objectives are to increase innovation, collective learning, and adaptation to the external environment. For External leadership behavior, the primary objectives are to acquire necessary information and resources and to promote and defend the team's or organization's interests. In addition to these differences in primary objectives, each meta-category includes specific behaviors for achieving the objectives. The relevance of each

component behavior depends on aspects of the situation, and the effect is not always positive for the primary objective or other outcomes.

Table 1 Hierarchical Taxonomy of Leadership Behaviors

Meta-categories	Leadership Behaviors Components
Task-Oriented	Clarifying
	Planning
	Monitoring Operations
	Problem-Solving
Relations-oriented	Supporting
	Developing
	Recognizing
	Empowering
Change-oriented	Advocating Change
	Envisioning
	Encouraging Innovation
	Facilitating collective learning
External behavior	Networking
	External Monitoring
	Representing

The study aims to delve into the role of gender in the manifestation of various leadership styles as depicted through the different managerial behavior categories during the COVID-19 pandemic. To achieve this goal, we surveyed employees in the UAE to examine the differences in leadership practices between men and women during the COVID-19 pandemic. We formulated the following seven main hypotheses:

H₁: There is a positive correlation between leaders' behavior meta-categories.

H₂: There are significant differences between men and women in leadership behaviors.

H₃: There are significant differences between men and women in Task-oriented behavior.

H₄: There are significant differences between men and women in Relationship-oriented behavior.

H₅: There are significant differences between men and women in Change-oriented behavior.

H₆: There are significant differences between men and women in External behavior.

H₇: There is a linear relationship between leadership behaviors and leadership effectiveness.

3.1. Reliability and Validity of the Data Collection Instrument

The study explores employees' perceptions of their leaders' leadership styles and tries to distinguish variances in leadership styles based on the gender of the manager. It uses a modified MPS of Yukl (Yukl, 2012) to measure the leadership effectiveness of women and men leaders. The 51-item modified MPS form number provided fifteen generic behaviors applicable to all types of managers and organizations. Items were rated on a Likert scale ranging from 1 (not at all) to 5 (to a great extent) to explore the extent to

which women's Leadership is effective or not in COVID-19 compared to men. The leadership practice scores of the leaders were first computed by averaging across the three items of each behavior and then across respondents to produce fifteen scores for each leader.

To ascertain scale reliabilities for this dataset, we computed Cronbach's Alpha coefficients for all behavioral leadership practices. The internal consistency is high for all fifteen scales (alphas range from 0.84 to 0.93).

4. Research Methodology

The Managerial Practices Survey (MPS) is used in this study to examine the difference in leadership practices between men and women managers in the UAE during the Covid-19 pandemic as perceived by their subordinates. It was administered to 300 employees in private and government organizations.

Sample and Population

This study was conducted over a period spanning from 2021 to 2022, a timeframe that was notably marked by the global COVID-19 pandemic. The implications of the pandemic were widespread and significant, directly affecting work environments and leadership strategies. This context greatly informed and shaped the experiences and perceptions of the survey participants.

This study uses a convenience sample of 300 employees working in private and government organizations in Dubai and Abu Dhabi. The participant pool consisted of individuals with subordinate roles, spanning government, semi-government, and non-government organizations.

The survey aimed to capture a holistic view of leadership effectiveness during the COVID-19 pandemic across different sectors and roles by encompassing various respondents' profiles. As such, this study provides a valuable snapshot of leadership during a crisis, with potential implications for how organizations navigate similar challenges in the future.

Reliability and Validity of the Data Collection Instrument

The Managerial Practices Survey (MPS) is used in this study to examine the difference in leadership practices between men and women managers in the UAE during the Covid-19 pandemic as perceived by their subordinates.

Fifteen managerial behaviors were tested. Each of these behaviors is assessed on a Likert scale, ranging from 1 (not at all) to 5 (to a great extent). This evaluation technique enables us to determine the degree to which women's leadership has been effective during the COVID-19 pandemic and how it stands compared to men's leadership. To compute the leadership practice scores of the leaders, we first average the ratings for the items corresponding to each behavior. We then calculate the mean of these averages across all respondents to yield fifteen distinct scores for each leader. This scoring system provides a comprehensive and nuanced understanding of leadership effectiveness.

A solid body of evidence supports the MPS instrument's validity. It has been employed and validated across various studies, such as those conducted by Yukl, Wall, and Lepsinger in 1990. These studies have demonstrated the efficacy of the MPS as a reliable measure of leadership practices, further reinforcing its credibility and utility in this study.

We used Cronbach's Alpha coefficients for all the behavioral leadership practices scales to measure reliability. The internal consistency for all fifteen scales was high, with alphas ranging from 0.84 to 0.93. This high level of internal consistency indicates that the items

in the survey are closely related as a group, providing strong evidence that the MPS is a reliable instrument for measuring leadership practices in this context.

Measures

The variable "leadership behaviors" was measured using the 15-item MPS questionnaire developed by Yukl et al. (2012). Participants were asked to rate their responses on a scale of 1 to 5, where 1 indicated "not at all or not applicable" and 5 indicated "to a very great extent". The scale score for this variable is identical to earlier versions of the MPS created by Yukl et al. in 1989.

The variable "leader effectiveness" was measured using a scale of two items. The score for a manager was the average of these item scores. The first item asked respondents to indicate their level of agreement with the statement: "My boss is one of the most effective managers in the organization." Responses ranged from 1 - strongly disagree to 6 - strongly agree. The second item asked respondents to rate the overall effectiveness of their managers with the statement, "rate your boss in terms of his or her overall effectiveness as a manager." Responses on this item ranged from 1 - very ineffective to 6 - very effective.

To measure each of the four meta-categories variables, this study uses a scale consisting of three component behaviors. Each of these component behaviors was presented as an item in the MPS and scaled using a Likert-type response format with five options, ranging from 1 (not at all or not applicable) to 5 (to a very great extent). The researchers then calculated the average response across the three items for each meta-category, resulting in a scale score for each meta-category of behavior.

Data Analysis

The researchers used various descriptive statistics tools such as percentages, means, and standard deviations to analyze the characteristics of the participants of this study. To test the stated hypotheses, they used the independent samples t-test to determine the differences in leadership practices between men and women during the COVID-19 pandemic, specifically for the Task-oriented, Relations-oriented, Change-oriented, and External categories of leadership practices. Analysis of variance (ANOVA), correlation analysis, and multiple regression analysis were used to assess how women's leader behaviors are related to leadership effectiveness based on the meta-categories of leadership practices. The primary data collected from the respondents were tabulated and analyzed using the Statistical Package for the Social Sciences (SPSS) version 25.

5. Results

Demographic Characteristics of the Respondents

Preliminary results presented in Table 2 and Figure 1 summarize the demographic characteristics of the survey respondents. The sample size included 300 participants, with 183 (61.0%) working in government organizations, 90 (30.0%) in semi-government organizations, and 27 (9.0%) in private organizations. This indicates that most respondents (91.0%) were from government and semi-government organizations. Table 4 shows that 128 (42.7%) of respondents were male, while 172 (57.3%) were female.

Regarding positions, more than one-third of respondents, 108 (36.0%), held mid-level manager positions, followed by 67 (22.3%) in administrative or support positions, 56 (18.7%) in professional or technical positions, 46 (15.3%) in entry-level manager positions, and 23 (7.7%) in upper-level manager positions. This indicates that most respondents (58.3%) were mid-level managers and administrative or support staff.

Almost two-thirds of respondents, 192 (64.0%), had more than three years of working experience with their current manager, followed by 50 (16.7%) with one to two years of

experience. This suggests that most respondents (80.7%) had more than a year of working experience with their current manager and were well acquainted with the current managerial practices to assess their leadership behavior. Of the remaining respondents, 58 (19.3%) had less than a year of experience.

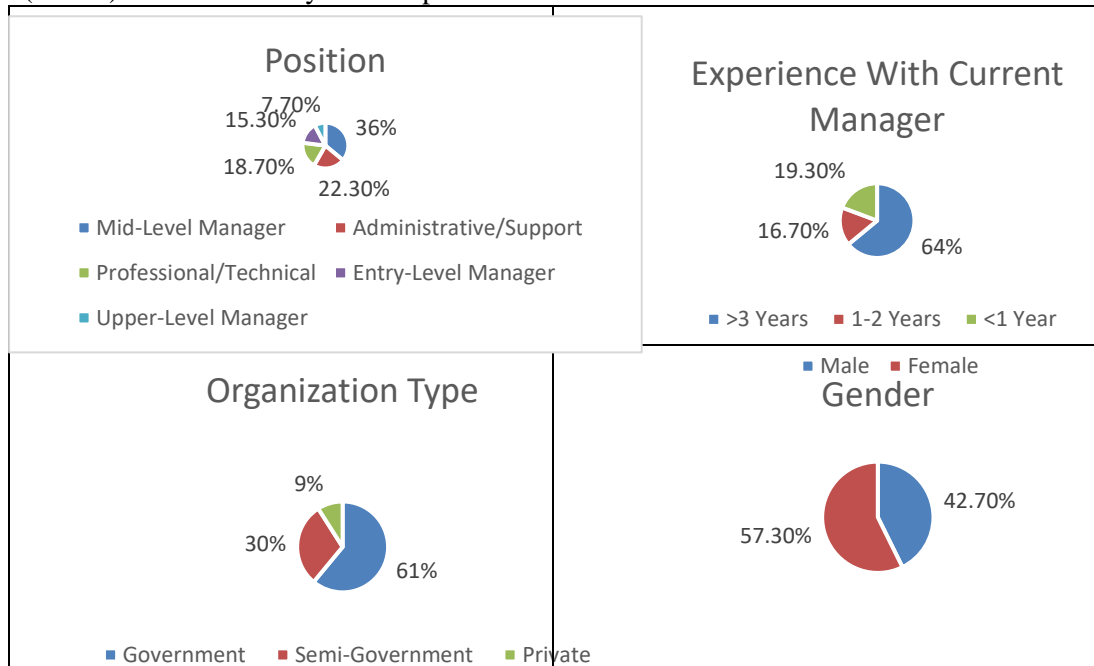


Figure 1: Demographic Characteristics of the Respondents.

Table 2 Sample Description

		Frequency (n)	Percent (%)
Gender	Male	128	42.7
	Female	172	57.3
Position	Upper-level manager	23	7.7
	Mid-level manager	108	36
	Entry-level manager	46	15.3
	Professional or technical	56	18.7
	Administrative or support	67	22.3
Time worked for their current manager	Less than five months	18	6
	Six months to a year	40	13.3
	One to two years	50	16.7
	Three to five years	90	30
	More than five years	102	34
Age group	25 years or younger	44	14.7
	25-35 years	104	34.7
	35-45 years	123	41
	45-55 years	9	3

	More than 55 years	20	6.7
Organization	Government	183	61
	Semi-Government	90	30
	Non-Government	27	9

Correlation Analysis

The results of the correlation analysis showed a significant positive correlation between the behavior meta-categories used by leaders and their subordinates at the $p < .01$ level. Table 3 shows the strongest correlations between the Task-oriented and Relations-oriented components of MPS behaviors ($r = 0.910$) and between the Relations-oriented and Change-oriented components ($r = 0.902$). Therefore, the correlation analysis results support the first hypothesis stating that There is a positive correlation between leaders' behavior meta-categories.

Table 3: Intercorrelations of Meta-Categories of Leadership Behaviors

Meta-Categories of Leadership Behaviors		Task-oriented	Relations-oriented	Change-oriented	External behavior
Task-oriented	R	1			
Relations-oriented	R	.910**	1		
	Sig.	.000			
Change-oriented	R	.883**	.902**	1	
	Sig.	.000	.000		
External behavior	R	.875**	.884**	.906**	1
	Sig.	.000	.000	.000	

Note. ** $p \leq .01$ level; * $p \leq .05$ level (2 – tailed)

Two Independent Samples T-test

To test for significant differences in leadership behaviors between men and women during the COVID-19 pandemic, we conducted a two independent samples t-test. As shown in Table 5, the t-test results indicated a significant difference between men and women in their leadership behaviors. Specifically, the average and standard deviation of the leadership behaviors score were higher for men ($M=3.84$, $SD=0.73$) than women ($M=3.23$, $SD=0.71$), thus supporting the second hypothesis stating that there are significant differences between men and women in leadership behaviors.

Table 4: Descriptive statistics: MPS behaviors Across Gender

Gender	M	SD
Men	3.84	.73
Women	3.23	.71

Based on the descriptive statistics provided in Table 4, there appears to be a gender difference in MPS behaviors, with men reporting a higher mean score ($M = 3.84$, $SD = 0.73$) than women ($M = 3.23$, $SD = 0.71$). This suggests that, on average, men tend to engage in more MPS behaviors than women. The Box Plot in Figure 2 clearly shows this result.

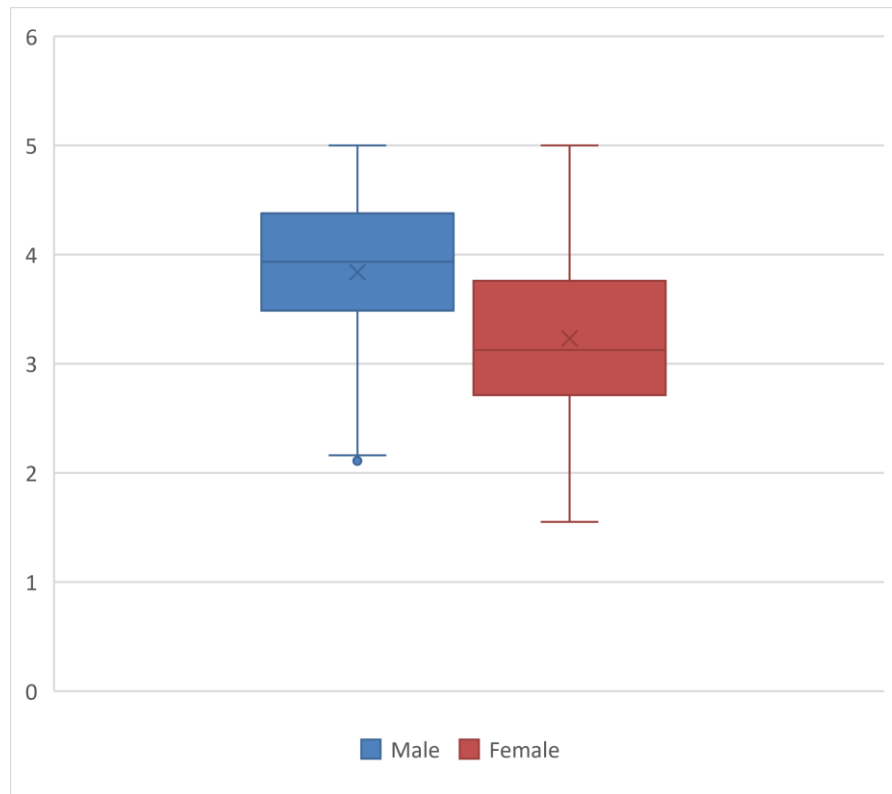


Figure 2: MPS Behaviors of the Respondents Based on Gender of Managers.

Table 5: Two Independent Samples T-test for the leadership Behaviors Based on Gender

Variable	t	df	Sig. (2-tailed)	Mean Difference
MPS behaviors	7.238	298	.000	0.605191

The results of the two independent samples t-test suggest a statistically significant difference in MPS behaviors based on gender ($t(298) = 7.238, p < .001$). Specifically, men ($M = 3.84, SD = 0.73$) scored significantly higher on MPS behaviors than women ($M = 3.23, SD = 0.71$), with a mean difference of 0.61. This indicates that men tend to engage in more MPS behaviors than women in this sample. It is important to note that the sample size ($N = 300$) is large enough to increase the confidence in these findings.

Moreover, the study used the two independent samples t-test to verify hypotheses three up to six, which assumed statistically significant differences between genders in the MPS behavior meta-categories of (a) Task-oriented, (b) Relations-oriented, (c) Change-oriented, and (d) External behavior. As shown in Table 6, the p-values of the four behavior meta-categories were less than the significance level of 0.05, indicating that significant differences exist between genders in these MPS behavior meta-categories.

Table 6: T-tests for the Meta-Categories of Leadership Behaviors Based on Genders

Meta-Categories of Leadership Behaviors	t	df	Sig. (2-tailed)
Task-oriented	7.264	298	.000
Relations-oriented	8.038	298	.000
Change-oriented	6.800	298	.000

External behavior	6.804	298	.000
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The results of the t-tests for the meta-categories of leadership behaviors suggest statistically significant gender differences across all four categories (Task-oriented: $t(298) = 7.264$, $p < .001$; Relations-oriented: $t(298) = 8.038$, $p < .001$; Change-oriented: $t(298) = 6.800$, $p < .001$; External behavior: $t(298) = 6.804$, $p < .001$).

Multiple Regression Analysis

A multiple regression analysis was performed to examine the existence of a linear relationship between the meta-categories of leadership behaviors and leadership effectiveness. In this regard, we modeled these factors as follows: $y_i = \beta_0 + \beta_1 x_{1i} + \beta_2 x_{2i} + \beta_3 x_{3i} + \beta_4 x_{4i} + \epsilon_i$

Where y_i is the leadership effectiveness, x_{1i} Task-oriented, x_{2i} Relations-oriented, x_{3i} Change-oriented, and x_{4i} External behavior, β_i , $i=1, 2, 3, 4$ are the regression coefficients, and ϵ_i is the white noise for the respondent i . The ANOVA table (Table 7) confirms a linear relationship between the meta-categories of leadership behaviors and leadership effectiveness for men and women.

The ANOVA analysis in Table 7 demonstrates the significance of our constructed regression model, which fits the data well. This indicates that the Task-oriented, Relations-oriented, Change-oriented, and External behavior categories are good predictors of women's and men's leadership effectiveness.

Regression results in Table 8 show that all the leadership behaviors categories for women positively affect leadership effectiveness except the Relations-oriented category, which has an insignificant negative effect. The positive regression coefficients indicate a significant positive relationship between the women's leadership effectiveness and each one of the leadership behaviors of Task-oriented, Change-oriented, and External behavior categories. This means that the higher the value of each one of the leadership behaviors categories, the more effective the women's leadership. In contrast, the negative regression coefficient of the Relations-oriented category indicates that the lower the value of the leadership behaviors components of this category, i.e., Supporting, Developing, Recognizing, and Empowering, the more effective the women's leadership $y_i = 1.756 + 0.784 x_{1i} - 0.468 x_{2i} + 0.331 x_{3i} + 0.093 x_{4i}$ Compared with men, Table 8 shows that only Task-oriented and Change-oriented have a positive effect on leadership effectiveness, but not the Relations-oriented and External behavior categories, which have negative effects although not significant. Only the Change-oriented is significant for the men, as shown in the following estimated regression model:

$$y_i = 0.497 - 0.09 x_{1i} + 0.523 x_{2i} + 0.901 x_{3i} - 0.307 x_{4i}$$

Both regression models show that the Change-oriented category positively contributes to leadership effectiveness. This indicates that the higher the value of the leadership behaviors components of this category, i.e., Advocating change, Envisioning, Encouraging innovation, and Facilitating collective learning, the more effective the leadership effectiveness, which shows that the Change-oriented category components constitute the primary determinant of leadership effectiveness for both genders.

Table 7: ANOVA Table for the Leadership Behaviors According to MPS Respondents

Model		SS	df	MS	F	Sig.
	Regression	69.304	4	17.326	10.594	.000 ^b
Men	Residual	201.165	123	1.635		
	Total	270.469	127			

	Regression	56.686	4	14.172	8.698	.000 ^b
Women	Residual	272.081	167	1.629		
	Total	328.767	171			

a. Dependent Variable: Overall effectiveness

b. Predictors: (Constant), External behavior, Task-oriented, Change-oriented, Relations-oriented

Based on the ANOVA table provided in Table 7, there appears to be a statistically significant difference in leadership behaviors based on the gender of the respondents ($F(4, 123) = 10.594, p < .001$). The model accounts for a significant proportion of variance in leadership behaviors in men ($R\text{-squared} = .345$) and women ($R\text{-squared} = .172$).

The regression analysis suggests that the leadership behaviors of men and women differ significantly about task-oriented, relations-oriented, change-oriented, and external behaviors (all predictors have $p\text{-values} < .001$). The mean scores for these behaviors were higher in men than in women. The results suggest that men tend to exhibit more of these leadership behaviors than women in this sample.

Table 8: Regression Analysis of Women's and Men's Leadership Effectiveness Based on the Meta-Categories of the Leadership Behaviors

Gender		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error			
Men	(Constant)	.497	.650		.764	.446
	Task-oriented	-.090	.405	-.044	-.223	.824
	Relations-oriented	.523	.407	.275	1.28	.201
	Change-oriented	.901	.431	.442	2.09	.039
	External behavior	-.317	.370	-.174	-.85	.392
Women	(Constant)	1.756	.458		3.83	.000
	Task-oriented	.784	.317	.419	2.47	.014
	Relations-oriented	-.468	.355	-.239	-1.31	.189
	Change-oriented	.331	.335	.178	.987	.325
	External behavior	.093	.299	.051	.312	.756

The regression analysis suggests that leadership effectiveness is related to specific meta-categories of leadership behaviors for both men and women. The results in Table 8 indicate that for men, change-oriented behavior is the only meta-category of leadership behaviors that has a statistically significant positive relationship with leadership effectiveness ($B = .901, p = .039$). For women, task-oriented behavior is the only meta-category of leadership behaviors with a statistically significant positive relationship with leadership effectiveness ($B = .784, p = .014$).

In addition, there are no statistically significant relationships between leadership effectiveness and the other meta-categories of leadership behaviors for either men or women. It is important to note that the results suggest that women have a higher overall level of leadership effectiveness than men, as indicated by the higher constant coefficient ($B = 1.756, p < .001$) for women. However, differences in leadership behaviors may not necessarily explain this difference in leadership effectiveness.

6. Discussion

First Hypothesis

H₁: There is a positive correlation between leaders' behavior meta-categories.

The analysis revealed a significant positive correlation between leaders' behavior meta-categories and their subordinates. The Management Practices Survey (MPS) is widely used in business to measure leadership effectiveness due to its simplicity and effectiveness in evaluating leaders' actions and their impact on others. Positive reactions such as trust, loyalty, and influence are considered desirable behaviors, while adverse reactions such as fear and lack of confidence indicate issues with emotional intelligence. This study evaluated the relationship between MPS behaviors and leadership effectiveness, and the results suggest that MPS behavior meta-categories are an effective tool for predicting leadership effectiveness among managers. Additionally, a positive relationship was observed between the behavior meta-categories during the COVID-19 Pandemic, indicating that good planning, problem-solving, monitoring operations, networking, clarification, and support in business during the pandemic resulted in effective Leadership.

Planning and organizing are essential components of leadership effectiveness in business as they provide a clear picture of what needs to be done, who will do it, and when. Effective delegation is also possible when the leader clearly understands each team member's role. Problem-solving is another crucial skill for leaders, who must be able to address complex challenges develop and evaluate possible solutions. Monitoring operations is one of the most effective ways to lead a team, as it allows for establishing and enforcing goals by monitoring performance, prioritizing what needs to be done next, and helping the team remain engaged, productive, and motivated. These findings confirm the results obtained by Alam (2022).

The positive relationship between MPS behavior meta-categories during the COVID-19 Pandemic suggests that these findings could have implications for understanding organizational change and adaptation to the new era. Organizations need leaders who can lead with empathy and compassion and develop team-building skills among their employees during a pandemic.

Second Hypothesis

H₂: There are significant differences between men and women in leadership behaviors.

The two independent sample t-tests indicated a significant difference between men and women regarding leadership behaviors, which confirms the findings of previous studies conducted by Eagly, Karau, and Makhijani (1995) and Eagly, Makhijani, and Klonsky (1992). The primary difference between men and women is that men tend to be more impulsive, often making hasty decisions without careful consideration. In contrast, women tend to be more cautious in decision-making, considering all relevant factors before acting. These results are consistent with the findings of other studies, including those by Lahti (2013), Gipson, Pfaff, Mendelsohn, Catenacci, and Burke (2017), and Roberts and Brown (2019)

Hypotheses Three to Six

H₃: There are significant differences between men and women in Task-oriented behavior.

H₄: There are significant differences between men and women in Relationship-oriented behavior.

H₅: There are significant differences between men and women in Change-oriented behavior.

H₆: There are significant differences between men and women in External behavior.

The study assumed statistically that there are significant differences between genders with the MPS behavior meta-categories individually. According to this study, there was a considerable difference between the male and female respondents, taking into account their perception of Leadership MPS behaviors. Thus, all the null hypotheses are rejected since all the listed behavior meta-categories showed very small p-values. For example, if we consider task-oriented behavior, notable distinctions are observed between genders, with men being more prone to employing a task-oriented communication style. Men tend to assume that others know what they want and how they want things done, which can lead to conflicts when working in teams with other men because they assume they know what their colleagues want without sitting down to communicate clearly or ask questions. Women, however, tend to be more open about communicating needs and asking questions upfront to avoid potential conflicts.

Similarly, results show that contrary to the findings in other studies (Hoyt, 2010; Bowles, 2012; Perdue, 2016), males are more likely than females to work on Relations-oriented activities. This phenomenon is linked to gender-specific dissimilarities in motivation, goal orientation, and job tasks that entail more significant interpersonal interaction. Furthermore, the empirical findings highlight several hypotheses regarding the impact of situational factors on individuals' interpersonal relationships.

There are also significant differences between genders in Change-oriented behavior, especially regarding Communication, Managerial, and Decision Making. Women seem more open to change and comfortable dealing with change management decisions. Due to these different attributes of the two genders, they have a higher chance of success when working together. Furthermore, there are significant differences between genders in Externalizing, Intercept, and Dimensionality. Males have a slightly higher Externalizing score, while females have higher Dimensionality and Intercept scores. In terms of Internalizing, the results were identical.

The study's findings indicate notable gender disparities in external expectations. Specifically, women tend to anticipate more favorable treatment regarding career opportunities, pay, and promotions, whereas men expect to receive more advantageous treatment concerning family responsibilities.

Seventh Hypothesis

H₇: There is a linear relationship between leadership behaviors and leadership effectiveness.

The study confirms a linear relationship between the meta-categories of leadership behaviors and leadership effectiveness. The meta-categories of leadership behaviors are positively related to one another and leadership effectiveness. Leadership effectiveness involves influencing and guiding those around to achieve common objectives. This can vary from one leader to another depending on the type of Leadership used and the situation in which it is required. Leaders' behaviors will differ depending on whether they want to influence, build confidence, or gain compliance from others at work. While the nature of Leadership varies across contexts and cultures, there is a linear relationship between the meta-categories of leadership behaviors and leadership effectiveness during Covid-19.

7. Conclusion and Research Implications

The current study provides evidence for a positive link between MPS behavior and leadership effectiveness. Additionally, it challenges the idea that men and women have no significant difference in MPS behavior. The results show notable differences in how men and women exhibit MPS behavior, supporting the idea that they take different approaches to various aspects of effective Leadership in the context of the UAE.

Based on the findings of this research, there are several differences between male and female leadership behaviors and effectiveness. First, the descriptive statistics show that men score higher on average in MPS behavior than women, which suggests that men might display more transformational leadership behaviors in this sample. Second, the independent samples t-test reveals a statistically significant difference in leadership behaviors between men and women, with men showing significantly higher levels overall. Third, the ANOVA table shows that the leadership behaviors of men and women differ significantly regarding task-oriented, relations-oriented, change-oriented, and external behaviors.

The regression analysis uncovers some intriguing nuances in leadership behavior based on gender. For men, it was found that change-oriented behavior was the only leadership category that exhibited a statistically significant positive correlation with leadership effectiveness. This is a noteworthy finding, as it suggests that male leaders tend to be more effective when they demonstrate adaptability and a willingness to instigate and manage change, particularly during crises such as the COVID-19 pandemic.

Change-oriented behavior, as implied by its nomenclature, is an approach to leadership that prioritizes adaptability, innovation, and openness to altering established procedures or norms in favor of new, potentially more effective ones. This leadership behavior is often crucial in crisis management situations, where the status quo may no longer be sustainable or effective, and innovative solutions are required. The regression analysis suggests that male leaders during the COVID-19 crisis were more likely to embrace this change-oriented approach and, importantly, that it was positively associated with their perceived leadership effectiveness.

In contrast, for female leaders, the regression analysis highlighted task-oriented behavior as the only leadership category with a statistically significant positive correlation with leadership effectiveness. Task-oriented behavior is characterized by a focus on accomplishing specific tasks or objectives, often involving meticulous planning, organization, and the efficient use of resources. This finding suggests that women leaders in the study were more effective when they concentrated on the practical, task-focused aspects of crisis management during the COVID-19 pandemic.

However, it is essential to note that these findings do not necessarily imply any inherent or natural predispositions towards these behaviors based on gender. Instead, they reflect the behaviors that were most prevalent and effective among the men and women leaders within the context of this study. Various factors, including societal expectations, organizational culture, or individual leadership styles, could influence these tendencies.

Ultimately, the key takeaway from this analysis is not a broad generalization about gender and leadership behavior but rather the impact of change-oriented and task-oriented approaches in leadership effectiveness. Whether a leader is more inclined toward one approach or the other, the ability to adapt innovate and efficiently manage tasks and resources are crucial in navigating the complex challenges posed by crises such as the COVID-19 pandemic.

The results suggest that there are differences between men and women when it comes to leadership behaviors and effectiveness. Men exhibit higher levels of leadership behaviors overall and in specific categories, while women perform better in task-oriented behavior, which is positively related to leadership effectiveness. It is important to note that these findings are based on a specific sample and might not apply to other populations. More research is needed to explore the factors that could contribute to these gender differences in leadership effectiveness and to determine whether the observed differences can be generalized to other populations.

Theoretical Implications

Women's Leadership during a crisis can be divided into three areas: (1) the role of women in a community, (2) women's leadership qualities related to their different values, perceptions, and societal beliefs, and (3) social change in leadership roles necessary during the crisis. Women leaders in crises can lead organizations through the crisis as they have a more comprehensive range of resources available to use at critical junctures. Theoretically, women leaders are expected to use multiple work roles, allowing them to release more creativity and problem-solving ability that can tackle the crisis effectively.

The present study contributes to the existing literature on gender differences in Leadership during COVID-19 by proposing a novel theoretical perspective that focuses on the specific leadership behaviors in task-oriented, relations-oriented, change-oriented, and external behavior categories. By identifying and examining these distinct behavioral categories, the study highlights the unique approaches men and women adopt in their leadership roles. The study's findings open new avenues for research to investigate the underlying factors contributing to these gender differences in leadership behaviors and effectiveness, ultimately leading to the development of more inclusive and effective leadership strategies that capitalize on the diverse talents and skills of both genders.

Practical Implications

This study offers meaningful insights into the practical implications of women's leadership during a crisis, focusing on whether women make better crisis managers than men and whether they can be more effective in restoring confidence. Our research shows that women's leadership behavior is more task-oriented than men's, and women exhibit higher external behavior in Leadership. Women's Leadership, particularly in a crisis, tends to be more inclusive, collaborative, and less hierarchical. In the event of a disaster or a catastrophe, these leaders are called upon to ensure all is "under control" and keep their employees calm and secure throughout the process.

Furthermore, people uncomfortable with women in positions of authority will likely have many challenges working with them due to their ability to deal with change. In contrast, those who feel more positive about women in positions of power may be motivated to do a better job and help promote the qualities that make their supervisors effective leaders. Effective leadership requires the contributions of both men and women. Each gender brings unique perspectives, experiences, and skills, allowing for a more well-rounded approach to decision-making and problem-solving. Studies have shown that gender-diverse teams perform better, innovate more, and make better decisions than homogeneous teams (Post et al., 2021, 2022).

To address these challenges, organizations must proactively promote gender equity and inclusion in their leadership ranks. This may involve implementing policies and practices that support the recruitment, development, and retention of women leaders and providing training and education for managers and employees on unconscious bias and gender stereotypes. Additionally, organizations must hold their senior leaders accountable for ensuring all employees have equal access to career opportunities and advancement, regardless of gender.

Ultimately, achieving gender equity in leadership requires a concerted effort from all stakeholders, including individual leaders, managers, HR professionals, and organizational leaders. By working together and taking a proactive approach to addressing gender disparities, we can create more inclusive and equitable workplaces that support the success of all employees, regardless of gender.

In addition, women leaders must consider the different leadership styles of male and female counterparts to maximize productivity during a business crisis. In recent years, the role of women has become increasingly prominent in organizations, and women have proven to be competent leaders who can succeed in organizations while also meeting the

demands of their families. Women's Leadership is not just being an excellent leader but also understanding an organization's vision, the process of accomplishing a mission, and how to motivate and inspire others. This was clearly shown through the research results that highlight the supremacy of women over men in external leadership behavior. It has been observed that women leaders during a crisis can bring back customer trust.

Even if women are not at the top of the corporate ladder during a crisis (Garikipati et al., U. 2020) they play a significant role in strengthening their organizations (Eagly, A. H et al. (2007); Desvaux, G et al. (2008); Noland, M. et al. (2016)). They play an active role in leading others and managing crises, which is critical to a company's success. Women's Leadership helps deal with crisis management as they are more compassionate and understanding. They have been described as better at delegating tasks, seeing both sides of an argument, and having better communication skills. These attributes enable them to be good leaders during a crisis.

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