





Gender differences in leaders' crisis communication: a sentiment-based analysis of German higher education leaderships' online posts

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ABSTRACT

This study examined the communication styles of rectors and vice-rectors of German public universities during the COVID-19 pandemic to explore the influence of gender on leadership communication. We collected data from social media and university websites; and analysed the language used to identify transformational, transactional, and servant leadership styles. Our results showed that female leaders demonstrated more positive communication than men and a stronger preference for transformational leadership, while male leaders tended to use a transactional style. Additionally, we found that both male and female leaders exhibited a high degree of empathetic concern for their stakeholders, contributing to the overall positive tone of communication. These findings suggest that gender may play a role in how university leaders communicate during times of crisis, highlighting the importance of inclusive and compassionate leadership in higher education.

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Introduction

Crises are rare events that can harm organizations if poorly managed (Milburn, Schuler, and Watman 1983), with their conditions capable of disrupting organizational structures to require extensive repair work (Nguyen, Malik, and Budwhar 2022). Unanticipated crises demand expertise to offset the damage, and leaders must quickly develop a strategy (Bundy et al. 2017). Leaders must handle upcoming issues in such situations to prevent a backlog of other essential tasks (Nguyen, Malik, and Budwhar 2022). Crisis management requires an early warning from leaders (James, Wooten, and Dushek 2011), while solid crisis communication correlates to leadership style (Ulmer, Sellnow, and Seeger 2007). Leaders must communicate timely, honestly, and empathetically with stakeholders via appropriate channels and be sensitive (Bundy et al. 2017; Hadley et al. 2011).

Gender affects leadership style while influencing organizational outcomes (Eagly and Johnson 1990). Female leaders prioritize health and safety, while male leaders value knowledge and

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control (Lemoine, Aggarwal, and Steed 2016). Men seek problem-oriented, task-oriented coping mechanisms under stress (Kulich, Iacoviello, and Lorenzi-Cioldi 2018; Ptacek, Smith, and Dodge 1994), whereas women rely on emotion-oriented coping mechanisms (Batson et al. 1996). Women show more positive emotions than men during adversity, allowing them to re-evaluate the crisis's harmful effects and develop a more adaptive response (Hülshager et al. 2013). Since the onset of COVID-19, prior studies identified that female leaders have been protecting their followers' health (Henley and Roy 2020), while the media portrayed women as more competent and effective in tackling the outbreak with a distinct leadership style than men (Garikipati and Kambhampati 2021; Sergent and Stajkovic 2020). Men make less prudent choices in unexpected situations than women (Lerner et al. 2003). Both genders must balance collaborative behaviour, relationship building, and asking for help in times of crisis to be influential leaders (Rosette, Mueller, and Lebel 2015).

Literature review

Transformational leadership and female leaders

By addressing their followers' needs and serving as role models, transformational leaders encourage and inspire them to contribute to the organization's success (Burns 1978). Transformational leadership involves five key qualities: idealized personal influence, influence conduct, inspiring motivation, intellectual stimulation, and individual consideration (Bass 1985; Bass et al. 1996).

Transformational leaders prioritize organization and their followers' development (van Dierendonk 2011), and women tend to benefit more from this style of leadership (Druskat 1994). Female leaders may also value responsive leaders and mentor more than men (Eagly, Johannesen-Schmidt, and Van Engen 2003).

However, several factors can hinder female leaders' engagement in higher education institutions (HEIs), such as gender stereotypes, selection, career mobility, and discipline (Bagilhole and White 2008). The 'command-and-control' leadership style often emphasized in male-dominated hierarchical businesses may also be more beneficial to male executives (Douglas 2012; Eagly, Johannesen-Schmidt, and Van Engen 2003).

Transactional leadership and male leaders

Transactional leadership focuses on leader-follower interaction and emphasizes completing specific tasks and goals through rewards and punishments (Bass 1997). It is characterized by contingent compensation and exception-based management (Bass 1997). Transactional leadership is more effective in stable periods and is preferred by men, who are generally more 'task-oriented' (Eagly and Johnson 1990; Suranga and Mendis 2017).

A successful reward system in transactional leadership can boost morale and resolve role incongruence by recognizing subordinates' achievements and helping followers to extend their authority (Chemers 1997; House and Podsakoff 1994). On the other hand, female leaders may be viewed as untrustworthy if they adopt a dominant communication posture or display too much authority (Eagly and Karau 2002). Transactional leadership is effective when rewards and punishments are linked to the leader's ability to govern, the organization's strategy, and economic stability (Bass and Avolio 1990).

Servant leadership and both genders leaders

Several styles have been studied in organizational leadership, including transformational, transactional, and servant leadership. Servant leadership is often connected to both transformational and transactional leadership, as it involves sacrifices for followers and a focus on their goals (Lemoines

and Blum 2021). Still, it also departs from transactional principles by prioritizing altruism and empathy over reward and punishment (Lemoines and Blum 2021). Servant leaders are characterized by personal drive, empathic attitude, community focus, institutional knowledge, and ability to set the organization's future success (Barbuto and Wheeler 2006).

Servant leadership combines both agentic and collaborative activities; and may be necessary for a changing context because it emphasizes service to others, personal growth, and participatory management (Lemoines and Blum 2021). It involves listening to and influencing followers while caring about people rather than robots or budgets (Bass and Bass 2008). According to some researchers, this leadership style is more commonly adopted by women, who may be viewed as more influential leaders when they exhibit stereotypically feminine traits such as emotionality and a focus on relationships (Brescoll 2016; Hogue 2016).

Leadership at HEI and gender discrimination

Women are underrepresented in higher education institutions' (HEIs) leadership roles due to various factors, including gender stereotypes, selection procedures, career mobility, and disciplinary foundations (Alsaleh 2022; Bryman 2007). In some cases, cultural stereotypes of masculinity and expectations of competitiveness, persistence, and aggression can hinder women's advancement (Koenig et al. 2011; White, Bagilhole, and Riordan 2012). Women may also be affected by a lack of training, informal promotion tactics, low morale, and an ineffective management culture (Burkinshaw 2015). Gender bias can also negatively impact women's research profiles and leadership prospects (Doherty and Manfredi 2006), discouraging them from future risk-taking since the consequences differ between genders (Morgenroth, Ryan, and Fine 2022). Still, proper training can help to reverse this trend (Showunmi, Atewologun, and Bebbington 2016).

Improving working conditions and promoting gender equality through leadership training can help to increase the number of women in leadership roles in HEIs (Gallant 2014; Omolayo and Ajila 2012). Significant interventions on gender inequality in organizations advance the case that the systems and organizational structures need fixing rather than the women (Ryan 2023). In specific cases, women may be more likely to be nominated for risky or cautious leadership roles than men (Ryan et al. 2011) since the 'glass cliff' concept suggests that women may have an advantage as leaders during times of crisis or instability due to their innovativeness, openness to daring ideas, and adaptability to change (Furst and Reeves 2008; Peterson 2016).

Nowadays, the qualifications and selection criteria for university leaders, such as rectors and vice-rectors, can also play a role in determining who is chosen for these positions (Akanji et al. 2020). Institutions should strive to promote gender equality and prevent discrimination by increasing women's representation in leadership roles (Kloot 2004; Özkanlı and White 2008). Ultimately, a combination of organizational qualities and gender-specific training may be necessary to effectively manage and promote women in university leadership positions (Sánchez-Moreno, López-Yáñez, and Altopiedi 2015).

The communication style of leadership during a crisis

Effective crisis communication involves empathy, transparency, honesty, and flexibility in problem-solving, and the effectiveness of a leader's communication can depend on the appropriateness and timeliness of their response (Jablin et al. 1994; James, Wooten, and Dushek 2011). Transformational leadership, which excels in times of crisis and transition, involves being innovative and adaptable (de Bussy and Paterson 2012; Pearson and Sommer 2011; Young 2004). Research suggests that women may be more likely than men to demonstrate transformational leadership during times of crisis due to their adaptability and ability to navigate uncertainty (Adams, Gupta, and Leeth 2009; Eagly and Johnson 1990; Eagly, Karau, and Makhijani 1995; Haslam et al. 2009; Hunt, Boal, and Dodge 1999; Pillai and Meindl 1998; Ryan et al. 2011).

The present study investigates whether female rectors and vice-rectors of German public universities are more likely than males to use a transformational leadership communication style during the COVID-19 pandemic.

Hypothesis 1: The communication style of female rectors and vice-rectors is more likely to exhibit signs of transformational leadership than that of their male counterparts in crises.

Transformational leadership, which focuses on collaboration and inspiration, is more commonly demonstrated by women (Eagly, Johannesen-Schmidt, and Van Engen 2003). Male rectors and vice-rectors of German public universities are more likely to use a transactional leadership communication style, which emphasizes rewards and punishments, during crises.

Hypothesis 2: The communication style of male rectors and vice-rectors is more likely to exhibit signs of transactional leadership than that of their female counterparts in crises.

Research has found mixed results on whether men and women have different leadership styles. Some studies suggest that women may benefit from collaborative styles, while men may benefit from more assertive approaches (Vinkenburg et al. 2011); in contrast, other research has found no significant differences between men's and women's leadership styles (Nieva and Gutek 1981; van Engen, van der Leeden, and Willemsen 2001).

Servant leadership, which combines transformational traits (i.e. enhancing behaviour beyond expectations) and transactional traits (i.e. reinforcing desirable behaviour), has been linked to gender equality (Barbuto and Gifford 2010). Both genders are more likely to use a servant leadership communication style, which relies on trust, unselfishness, and participatory management (Lemoines and Blum 2021), in our case, the rectors and vice-rectors of German public universities during crises.

Hypothesis 3: The communication style of male and female rectors and vice-rectors will equally exhibit servant leadership styles in crises.

Research has found that female leaders tend to express more positive emotions and exhibit more adaptive behaviour in the face of adversity than male leaders (Hülshager et al. 2013). Additionally, female leaders have been shown to have positive communication skills (which makes people feel good) and to be more empathetic (Boneva et al. 2001; Lemoine, Aggarwal, and Steed 2016; Sergent and Stajkovic 2020). Positive communication relies on empathy, clearness, respect for others, positiveness, and confidence (Pitts and Socha 2013). On the other hand, negative communication follows an unclear and confusing pattern; and is overbearing, passive, and indirect (Pitts and Socha 2013). During the initial phase of the COVID-19 pandemic, female leaders demonstrated decisive and direct communication (Garikipati and Kambhampati 2021) since countries with female leaders were more successful in fighting the pandemic (as measured by the number of cases and mortality rate) (Park 2022).

Hypothesis 4: Female rectors and vice-rectors will exhibit more positive communication than male rectors and vice-rectors in crises.

Hypothesis 5: Male rectors and vice-rectors will exhibit more negative communication than female rectors and vice-rectors in crises.

Method

Sample and data collection procedure

We conducted qualitative sentiment research and analysed web-based data such as online text and voice utterances to test the hypotheses. In the present study, we used gender as binary since it represents membership of different groups and refers to the cultural interpretation of sex and gender identity, despite the socialization or nurture of these groups varying (Lee, Pillutla, and Law 2000;

Morgenroth and Ryan 2021). The human population remains connected to the sex-based dichotomy of gender, following the sex-biological unique values and traits each brings to work-related decisions and actions (McCabe, Ingram, and Dato-on 2006). ‘Most men and women fall in the excluded middle in their qualities, abilities, beliefs, values, and abilities.’ (Tavris 1992, 90); in logic, this approach states that it has to be one or other excluding middle.

Given the importance of social media to leadership due to its wide reach as a public source (Barberá and Zeitzoff 2018), we collected COVID-19 communication statements of rectors and vice-rectors of 86 German public universities listed on the Higher Education Compass (HRK) (Hochschulkompass 2021) from LinkedIn (LI), Twitter (T), Facebook (F), YouTube (YT), University Websites (UW) and Google News (GN). All social media networks allow direct access, immediacy, and communication with the public since each platform can express different messages or emotions (Quinton and Wilson 2016). The criteria for inclusion in the data set were: (i) Active German rector or vice-rector, (ii) COVID-19-related posts in (iii) English/German (iv) between January 2020 and March 2021. NVivo 12 was used to code and analyse all data.

Coding procedure

Automated sentiment coding and text-based opinion analysis are beneficial when dealing with large amounts of data (Liu 2010) and have been used well in social media studies, such as Twitter (Kaur et al. 2021a, 2021b), YouTube (Amarasekara and Grant 2019), Facebook (Caton, Hall, and Weinhardt 2015), and online newspapers (Shor, van de Rijt, and Miltsov 2019). We studied a sample of the retrieved communications to create identities and cases for each leadership aspect: Boundary Spanning, Nurturing Human Talent, Social Contribution, and Operations (Banker and Bhal 2020). We set coding criteria for each leadership dimension and used the findings to reduce manual coding discrepancies. Messages were divided by coding. The second subgroup is divided into the four academic leadership dimensions of Banker and Bhal (2020) (Table 1). Transformational, transactional, and servant leadership styles correspond to four leadership communication aspects (Legutko 2020). Finally, we collected cases and topics to use as a coding template and to build a crisis communication framework for future study.

Data analysis

We conducted a qualitative sentiment analysis to test hypotheses about the communication styles of male and female rectors and vice-rectors at German public universities during the COVID-19 pandemic. We collected data from social media and university websites. Next, we used NVivo 12 for auto-coding and analysis (NVivo 2023). Furthermore, we used matrix coding and crosstab queries in NVivo to compare communication and leadership styles and the tone of male and female

Table 1. Banker and Bhal’s (2020) leadership dimension framework.

Dimensions	Responsibilities	Themes
Boundary Spanning (Transformational leadership style)	Visioning Fundraising Safeguarding	Internal fundraising, outlook statements, wishing for better times, advocating commitment.
Nurturing Human Talent (Transformational leadership style)	Managing intellectuals Attracting students	Thanking stakeholders, talking to prospective students, sharing scientific news, mentioning new platforms.
Social Contribution (Servant leadership style)	Social Inclusion Social Responsibility	Fundraising for the externals, calling for solidarity and responsibility.
Operations (Transactional leadership style)	Academics Administration	Exams, classes, administrative processes, pandemic measures within the university.

leaders' communications. We also added dimensions of transformational leadership to compare it to other styles.

After collecting and processing communication data, we used NVivo to analyse leaders' communication styles concerning four leadership dimensions (Banker and Bhal 2020). We performed phrase-level sentiment analysis for each code. The matrix coding question considered each code's emotion. All comments were rated 'very negative', 'moderately negative', 'moderately positive', or 'very positive'. Following the simplified definition of sentiment analysis as the personal expression of positive or negative feelings or opinions (Pang and Lee 2008), we summed these four subgroups and provided 'negative' or 'positive' comments to compare. Also, a 'good' life is related to experiencing positive emotions and feelings, and a diametrically opposite 'bad' life with negative emotions and feelings (Kuppens, Realo, and Diener 2008).

We also conducted gender and communication channel analyses with different levels of detail. The first query returned the number of coded words, while the second returned the number of files ('files coded count'). 'WCC/FCC' is the ratio of words coded to files coded. We computed percentages for all absolute figures to compare and evaluate the data.

Results

Our sample included 436 former and newly elected rectors and vice-rectors (leaders) of 86 German public universities who were present during the data collection period (Table 2).

During the study period, some HEI leaders' employment terms ended (Table 3). At the end of the data-collection period, there was little change in gender distribution favouring women in leadership.

We collected 2772 data points (online posts), 72% from male rectors and vice-rectors and 28% from female leaders (Table 4). Accordingly, university websites, Google News, and YouTube were the most popular communication channels. Hence, the study showed that the proportion of male and female rectors and vice-rectors posting through these channels was proportional to their representation in the sample. Additionally, 32% of the participants abstained from posting anything to the outlets we have included in our data collection period.

A total of 72.2% of the participants posted during the data collection period used a transformational leadership style, 24.5% a transactional style and the rest (3.3%) a servant style. Thus, our study found that rectors and vice-rectors of German public universities used the transformational leadership style most frequently during the COVID-19 pandemic. Also, 79.1% of the female participants chose transformational leadership, while 60.5% of the males exhibited the same leadership style, and 76.7% of both genders participants who adopted transactional leadership were men. Female leaders tended to exhibit a transformational style more often than male leaders and male leaders preferred a transactional style more than females.

Female leaders had a more balanced tone in their communication than males, who had a more negative tone. The most popular communication channels for COVID-19 communication were university websites, Google News, and YouTube. In all these channels, male leaders had a negative tone, while female leaders had a positive tone. Results also showed that male leaders had more negative communication in Google News compared to females. On YouTube, male leaders had a negative but milder tone compared to female leaders' very positive tone.

Table 2. Participant's gender and position allocation.

	All		Rectors		Vice-Rectors	
	Sum	%	Num.	%	Num.	%
Females	162	37%	29	29%	133	40%
Males	274	63%	72	71%	202	60%
Sum	436	100%	101	100%	335	100%

Table 3. Split according to the duration of the mandate period.

	The entire period (15 months)			Less than the 15 months		
	Sum	Rectors	Vice-Rectors	Sum	Rectors	Vice-Rectors
Females	108 (33%)	17 (22%)	91 (37%)	54 (48%)	12 (48%)	42 (48%)
Males	215 (67%)	59 (78%)	156 (63%)	59 (78%)	13 (52%)	46 (52%)
Sum	323 (100%)	76 (100%)	247 (100%)	113 (100%)	25 (100%)	88 (100%)

Discussion of findings

The first study question was to differentiate and identify any potential variations between the leadership communication styles of male and female rectors and vice-rectors at German HE public institutions.

While the communication of both genders demonstrated transformational leadership, the data indicated that the transformational leadership style was more dominant among female leaders than their male counterparts. The findings supported Hypothesis 1 and were consistent with past research showing that transformative leadership is more common among women than men (Alimo-Metcalfe 1995; Suranga and Mendis 2017; Young 2004). Both genders maintained all elements of transformational style across all communication channels and demonstrated this behaviour while handling major crises and supporting organizational transformations. Female university leaders adopted a more transformative communication style and approached their followers by encouraging positive changes and visions.

The research of communication data of university rectors and vice-rectors revealed that males were more likely than females to adopt a transactional communication leadership style. The findings supported Hypothesis 2 and were consistent with prior research indicating that men are more likely to be credited with transactional leadership attributes (Alimo-Metcalfe 1995; Suranga and Mendis 2017; Young 2004). Therefore, male university leaders were more likely than their female counterparts to adopt a transactional communication leadership style, focusing on short-term goals, delighting in following rules to do things perfectly, and tending to be inflexible at times of crisis or rapid change. Nonetheless, Yukl and Mahsud (2010) suggest that a flexible leadership style, in which leaders can incorporate innovations, overcome obstacles, and achieve their goals, has grown more popular in recent years. Thus, males would alter their leadership strategy in times of crisis to adapt to ambiguity and unpredictability since transformational leadership is best suited for handling change (Young 2004) and crises (de Bussy and Paterson 2012).

In addition, the data analysis revealed no major gender differences in how German university leaders portray the servant communication leadership style. The representation of this leadership style through communication channels was the lowest, and the findings were insufficient for analysis. Therefore, it is ambiguous that both genders of German university rectors and vice-rectors display equivalent servant leadership traits. Theoretically, all public university leaders should demonstrate a greater level of servant leadership while displaying the highest level of accountability to their students and the university's population (Adda et al. 2020). In terms of communication, however, individual leaders preferred to adopt a more personal leadership style by acting more consistently or more consistently choosing from alternatives (Byrne and Bradley 2007), especially considering the pandemic crisis's high level of uncertainty. Despite the lack of clear evidence, the servant leadership style remains vital and warrants more study, particularly in the university environment.

In times of crisis, like the COVID-19 pandemic, uncertainty heightens people's anxiety about the future. Therefore, many rely on the words and acts of leaders to provide emotional support and reassurance (Mendy et al. 2020). The research findings indicated that female rectors and vice-rectors communicated positively across all channels, which supports and validates Hypothesis 4 (women leaders are more likely to speak positively amid challenging circumstances). In addition, females appear more empathic and supportive (Sergent and Stajkovic 2020); they are more knowledgeable and successful in handling crises, as good communication skills are the defining characteristic of

Table 4. Data breakdown of communication channels according to the mandate and gender (%).

	Sum	Female	Male	R	R (Fem.)	R (Male)	V-R	V-R (Fem.)	V-R (Male)
UW	1108 (40%)	329 (30%)	779 (70%)	699	180 (26%)	519 (74%)	409	149 (36%)	260 (64%)
GN	712 (26%)	179 (25%)	533 (75%)	397	77 (19%)	320 (81%)	315	102 (32%)	213 (68%)
T	499 (18%)	168 (34%)	331 (66%)	194	80 (41%)	114 (59%)	305	88 (29%)	217 (71%)
LI	92 (3%)	26 (28%)	66 (72%)	37	2 (5%)	35 (95%)	55	24 (44%)	31 (56%)
F	17 (1%)	0 (0%)	17 (100%)	17	0 (0%)	17 (100%)	0	0 (0%)	0 (0%)
YT	344 (12%)	85 (25%)	259 (75%)	246	37 (15%)	209 (85%)	98	48 (49%)	50 (51%)
Sum	2772 (100%)	787 (28%)	1985 (72%)	1590	376 (24%)	1214 (76%)	1182	411 (35%)	771 (65%)

Note: LinkedIn (LI), Twitter (T), Facebook (F), YouTube (YT), University Websites (UW) and Google News (GN).

female leaders (Lemoine, Aggarwal, and Steed 2016). It is crucial to recognize that communication during a crisis tends to be influenced by negative bias since issues with negative implications are emphasized (Chang et al. 2020). Since how and what one says may generate distinct emotions in the audience (James, Wooten, and Dushek 2011; Nutt 1998), leaders must place greater emphasis on the way they construct their communication, and all relevant information must be presented often, clearly, and simply.

The communication of male rectors and vice-rectors was more unfavourable across all platforms than that of females, supporting and confirming Hypothesis 5. This is consistent with prior research indicating that male leaders tend to be more task-oriented, less empathic, and appear to communicate more directly (Lemoine, Aggarwal, and Steed 2016) in difficult times. The sentiment varied depending on the communication channel, with Google News having the most unfavourable emotion.

The research also concludes with an interesting discovery about the length of time that female rectors and vice-rectors held their positions. The number of female representatives in these roles increased over the course of the data collection for this study, both before and during the COVID-19 crisis. This trend reflects gender equality in leadership roles and the 'glass cliff' phenomenon, which suggests that women are often recruited to leadership positions in times of hardship (Peterson 2016). In addition, women are often associated with transformational leadership, which is more effective than transactional leadership in a constantly changing context (Gregory Stone, Russell, and Patterson 2004). The COVID-19 pandemic was characterized by a rapid rate of change and timely, effective communication. As crises require empathy from leaders, women appeared more empathic and better equipped to handle the COVID-19 crisis.

Limitations

Despite the large sample size, we may not have captured every online interaction per person, which may have led to an uneven gender sample. Most of this research is written in and translated from German. Tone and message may not be conveyed, and language inconsistencies may occur. These findings should not be interpreted as proof that men generally communicate poorly.

Future research directions and contribution

This study promotes gender studies, crisis management, and university leadership communication. We focus on German public HEIs with few women in leadership roles. Future research can delve into cultural differences to compare and contrast gender equality and leadership styles in different country contexts as preferences could change (Carvalho and de Lourdes Machado 2011). Some incentives and efforts could be effective with legislation, like Austria's requirement that women and men be equally represented in top management (Bundesministerium 2019). According to the presented study, women are more empathic and communicate better than men during times of turmoil. Female rectors and vice-rectors quadrupled during the study period compared to before the COVID-19 crisis. The 'glass cliff' may explain this rise (Peterson 2016), with the prolonged COVID-19 pandemic providing an opportunity to analyse the phenomenon on a larger scale by comparing women in leadership positions before and during the outbreak. Supporting this, an interesting post-COVID finding points to a 10% reduction of women in the specific leadership positions that we examined. While we concur with O'Connor and White (2021), further research is needed to better understand how COVID-19 may have impacted progress toward gender equality in higher education leadership.

Conclusion and implications

This study presents a socially significant contribution to the call for better use of female leaders since women are underrepresented in HEI leadership roles, also in Germany. HEI leaders must convey

stability, confidence, and command during unpredictability. We examined how German university rectors and vice-rectors communicated about the COVID-19 pandemic and their gender differences in leadership communication styles. There was a distinct profile of traits per style and gender. Both genders maintained all transformative leadership characteristics (Eagly, Johannesen-Schmidt, and Van Engen 2003), but female academic leaders were more likely to exhibit them during the focused COVID-19 crisis. Male leaders are more attuned to the transactional leadership style (Bass and Bass 2008), which they push on universities during crises. Despite inconsistencies in gender representation, public university leaders must demonstrate servant leadership. Some researchers say there is no difference between men's and women's leadership styles (van Engen, van der Leeden, and Willemsen 2001). Still, social role theorists say leaders act according to a social category (Barreto, Ryan, and Schmitt 2009). Women are more empathetic, collaborative, and helpful during upheaval than men (Hülshager et al. 2013). Female academic leaders are more likely to be supportive and empathetic during crises while male leaders are more independent and proactive (Barreto, Ryan, and Schmitt 2009). In a crisis, men use a task-oriented, less empathic communication leadership style (Barreto, Ryan, and Schmitt 2009).

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No potential conflict of interest was reported by the author(s).

Data availability statement

On reasonable request, the corresponding author will share the article's data.

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