



The Association of Toxic Leadership on Nurses' Well-Being in Saudi Arabia

Ghaliyah M. Alosaimi¹ and Wdad Alanazy^{2*}

¹Nursing Administration for Shaqra Sector, Third Health Cluster, Shaqra General Hospital, Shaqra, 15573, Saudi Arabia

²Department of Nursing, Faculty of Nursing, Majmaah University, Al-Majmaah, 11952, Saudi Arabia

Author Designation: ¹MSc, ²Assistant Professor

*Corresponding author: Wdad Alanazy (e-mail: wm.alanazy@mu.edu.sa).

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Abstract Background: Nurses are central to achieving Saudi Arabia's Vision 2030 goals, particularly in improving healthcare quality and workforce well-being. However, their well-being may be influenced by toxic leadership behaviours such as abusive supervision, authoritarianism and unethical practices. **Aim:** This study examined the association between toxic leadership and nurses' well-being in selected hospitals within Riyadh's Second Health Cluster and the Al-Qassim Health Cluster. **Methods:** A cross-sectional survey was conducted among 400 staff nurses using two validated tools: the Toxic Leadership Behaviours of Nurse Managers (ToxBH-NM) Scale and the BBC Well-being Scale (BBC-WBS). Toxic leadership was rated on a 1-5 scale (mean = 2.10, SD = 0.74), while well-being was measured similarly (mean = 2.90, SD = 0.61). Correlation and regression analyses were used to examine associations, adjusting for demographic factors. **Results:** A statistically significant *positive* correlation ($p < 0.01$) was found between toxic leadership and well-being scores, indicating that higher perceived toxic leadership was unexpectedly linked with higher reported well-being. This counterintuitive finding may reflect contextual or methodological factors, such as cultural norms, social desirability or measurement limitations. Demographic variables (age, gender, educational qualification, marital status, nationality, contract type, years of experience and weekly work hours) also showed statistically significant associations with well-being, but effect sizes were generally small and varied in direction. **Conclusion:** The observed positive association between toxic leadership and well-being diverges from prior evidence and should be interpreted with caution. Given the cross-sectional design, no causal claims can be made. Future research, preferably longitudinal or mixed-method, should further investigate these dynamics and clarify the contextual influences on nurse well-being in Saudi Arabia.

Key Words Toxic Leadership, Nurse Well-Being, Saudi Arabia, Cross-Sectional Study

INTRODUCTION

Saudi Arabia's healthcare sector is undergoing transformative reform under the Vision 2030 strategic initiative, which emphasizes quality, efficiency and sustainability of healthcare services [1]. A central component of this reform is the well-being of healthcare professionals particularly nurses, who constitute the largest segment of the workforce and are indispensable to achieving healthcare goals [2,3]. Recognizing the pivotal role of nurses, the Ministry of Health has launched initiatives to improve work-life balance, reduce burnout and promote psychological resilience [2]. Such measures are critical not only for nurses' health but also for maintaining patient safety and high-quality care [4].

Despite these efforts, nurses in Saudi Arabia continue to face workplace challenges that compromise their well-being.

One prominent factor is toxic leadership, defined as a constellation of destructive behaviours including abusive supervision, authoritarian control, intimidation, narcissism and unethical practices [5,6]. Toxic leaders frequently prioritize self-interest over organizational or staff welfare, lack empathy and employ manipulation to maintain authority. While some scholars argue that directive or authoritarian leadership may, in limited contexts, enhance short-term compliance or efficiency, the long-term consequences are predominantly harmful, undermining collaboration, trust and professional autonomy [7,8].

Specific toxic leadership subtypes exert distinct effects on well-being. Abusive supervision, characterized by persistent hostility, induces fear, anxiety and emotional distress [9]. Authoritarian leadership suppresses input, weakens autonomy,

and erodes interprofessional collaboration [8]. Narcissistic leadership fosters toxic dynamics, disengagement and poor team morale, while intimidation undermines psychological safety by cultivating fear and coercion. Finally, unethical behaviours such as dishonesty or favouritism corrode trust and fuel cynicism and emotional exhaustion [10]. Collectively, these behaviours are associated with reduced job satisfaction, increased burnout, higher turnover and diminished organizational commitment, with negative implications for patient outcomes [11,12].

Nurses' well-being is multidimensional, encompassing psychological health, physical vitality and professional satisfaction [13,14]. Toxic leadership disproportionately affects psychological well-being, contributing to chronic stress, depression and emotional fatigue [15] and manifests physically in fatigue, insomnia and burnout, which compromise performance and increase absenteeism [16]. Importantly, these effects do not occur in isolation. Research highlights the role of mediating and moderating factors such as resilience, organizational culture and social support in shaping outcomes [17]. Conversely, hierarchical cultural norms may amplify harm by discouraging resistance or open dialogue [18].

While international evidence overwhelmingly reports a negative association between toxic leadership and employee well-being, few studies have examined this relationship in the Saudi healthcare context. Moreover, existing research has tended to treat toxic leadership as a single construct, neglecting the nuanced effects of specific subtypes. Equally underexplored is the interaction between toxic leadership patterns and the multidimensional nature of nurse well-being.

This study aims to address these gaps by examining the association between toxic leadership, specifically abusive, authoritarian, narcissistic, intimidating and unethical behaviours and the well-being of nurses working in the Riyadh Second Health Cluster and the Al-Qassim Health Cluster. Based on prior literature, we hypothesized that higher levels of each toxic leadership subtype would be associated with lower levels of nurse well-being. By focusing on both leadership subtypes and well-being dimensions, this study seeks to generate context-specific evidence to inform leadership development, policy reform and organizational practices that foster a healthier, more sustainable nursing workforce in Saudi Arabia. This study examines the association between toxic leadership and nurses' well-being.

The researchers hypothesized that higher levels of abusive, authoritarian, narcissistic, intimidating and unethical leadership behaviours would be associated with lower nurse well-being and sought to examine the influence of demographic factors and the relative predictive strength of each leadership subtype.

METHODS

Study Design

This study used a cross-sectional descriptive correlational design, ideal for examining the prevalence and relationships

among variables at a single point in time [19]. It enabled the researcher to explore toxic leadership behaviours and their impact on staff nurses' well-being in Saudi Arabia efficiently, capturing data from a diverse sample across two major healthcare clusters and identifying patterns and correlations without long-term follow-up [20]. This design directly addressed the research question on the relationship between toxic leadership and nurses' psychological and physical outcomes.

Study Setting

The study was conducted in selected hospitals within two major healthcare clusters in Saudi Arabia: the Riyadh Second Health Cluster and the Al-Qassim Health Cluster. These clusters were strategically chosen due to differences in healthcare environments, patient demographics, leadership structures and nurse workforce composition.

The Riyadh Second Health Cluster comprises technologically advanced tertiary hospitals, specialised centres and community-based primary care units. It is recognised for innovative healthcare delivery, robust infrastructure and high patient turnover, employing a multicultural workforce including many expatriate nurses. This setting facilitated examination of cross-cultural experiences of toxic leadership.

The Al-Qassim Health Cluster, in the central region of Saudi Arabia, is undergoing rapid development with ongoing infrastructural expansion. This setting offered a unique opportunity to investigate leadership behaviours during organisational growth and change and their impact on nurses' well-being.

Hospitals were selected based on institutional size (small, medium and large), specialisation (general and specialised care), accessibility and willingness to participate. This purposeful selection ensured representation of varied healthcare environments, enhancing external validity and generalisability.

Study Population

The target population consisted of staff nurses working in the selected hospitals across both clusters, chosen as frontline healthcare providers who directly experience the impact of leadership behaviours. Their perspectives are essential for understanding how toxic leadership affects psychological and physical health, job satisfaction and overall well-being. It is noted that male nurses constituted 56.5% of the sample, which may not fully reflect the national nursing workforce distribution and could influence the generalizability of the findings.

Inclusion and Exclusion Criteria

Participants were required to be currently employed as staff nurses in one of the selected hospitals, aged 20-55 years, holding a Diploma, Bachelor's, Master's or PhD in nursing, employed in their current position for at least six months and willing to participate voluntarily with informed consent.

Excluded were nurse managers or individuals in administrative leadership roles, staff on leave or absent during data collection and nurses with less than six months of tenure in their current post. These criteria ensured participants had sufficient exposure to workplace leadership to reliably report its effects. Compliance with the inclusion criteria was self-reported by participants at the beginning of the survey to confirm eligibility.

Sampling Technique

A convenience sampling technique was employed for practicality and efficiency in accessing a large and diverse sample across multiple hospital [21]. While this approach facilitated recruitment, it may introduce selection bias and limit generalizability.

Sample Size

The sample size was calculated using an online calculator [22], with a 95% confidence level, 5% margin of error and a large assumed population. A total of 400 participants was deemed sufficient for reliable and generalisable findings, evenly distributed between the two clusters (200 nurses from the Riyadh Second Health Cluster and 200 from the Al-Qassim Health Cluster). Of the 450 nurses invited to participate, 400 completed the survey, yielding a response rate of approximately 88.9%. Although non-response bias could not be fully assessed, reminders and multiple distribution channels were employed to enhance participation.

Research Instruments

Two validated and reliable instruments were used:

- ToxBH-NM Scale
- BBC Well-Being Scale (BBC-WBS)

ToxBH-NM Scale

A 30-item scale assessing toxic leadership behaviours of nurse managers as perceived by staff nurses, with four subscales: Intemperate (15 items), Narcissistic (9 items), Self-promoting (3 items) and Humiliating (3 items). Responses use a 5-point Likert scale (1 = strongly disagree to 5 = strongly agree), total score range 30-150. Toxicity levels: Practically Non-toxic (30-69), Moderately Toxic (70-110), Highly Toxic (111-150). Cronbach's alpha ranges from 0.88-0.989 [23].

BBC Well-Being Scale

A 24-item tool measuring psychological, physical and social well-being on a 5-point Likert scale (total scores 24-120: Low 24-47, Moderate 48-95, High 96-120). Reliability: Cronbach's alpha 0.92-0.94 [24].

Both tools were translated into Arabic using a forward-backward translation process. Two bilingual experts independently translated the scales into Arabic, reconciled differences, back-translated into English and discrepancies were resolved by consensus. A pilot test with 20 nurses ensured clarity, cultural appropriateness and conceptual equivalence.

Data Collection Procedure

Data were collected over a four-month period using an online survey via Microsoft Forms, which included a demographic section, the ToxBH-NM Scale and the BBC-WBS. The survey link was distributed through institutional email lists, professional networks and social media platforms such as WhatsApp and Twitter. The four-month data collection window was considered adequate to reach the target sample. Participants were assured of confidentiality and anonymity and data were stored securely in encrypted digital files, enhancing trust and data integrity. Reminders were sent periodically to encourage participation and the researcher was available to address questions and provide support throughout the process. This digital approach enhanced accessibility, particularly in the post-COVID-19 period and supported high response rates.

Data Analysis

Data were analysed using SPSS version 26 (IBM, 2019). Descriptive statistics (frequencies, means and standard deviations) summarized participants' demographic and professional characteristics. Pearson's correlation indicated a statistically significant positive association between toxic leadership and nurse well-being ($r = 0.199$, $p < 0.01$), contrary to theoretical expectations. Multiple regression analysis was conducted to determine the predictive power of toxic leadership subtypes on well-being outcomes; assumptions of linearity, normality, homoscedasticity and multicollinearity were checked and met. The level of statistical significance was set at $p < 0.05$. T-tests and ANOVA were used where appropriate to compare well-being scores across demographic groups. Descriptive and inferential results are consistently reported to ensure clarity.

RESULT

Socio-Demographic and Work-Related Characteristics

This section shows the socio-demographic and work-related features of the participants.

Table 1 provides an overview of the socio-demographic and work-related characteristics of the 400 nurses who participated in the study. More than half of the participants were men (56.5%), were less than 35 years of age (54.5%), worked as contract staff (51.2%) and were married (52.8%). Three-fifths held a bachelor's degree (61.8%). Conversely, two-fifths had 6-10 years of work experience and worked 36-40 hours per week. The majority of the participants were Saudis (72%). The participants' ages ranged from 20 to 55 years, averaging 35.2 years across the population.

Perceived Level of Toxic Leadership Behaviours

This section presents the participants' perceptions of toxic leadership behaviours.

Table 2 displays the total scores, mean scores and SDs for the ToxBH-NM Scale and its sub-scales. The total ToxBH-NM Scale scores ranged from 30 to 150, with a total score of 63.25 and a mean score of 2.10, indicating that the participants perceived a practically non-toxic leadership.

Table 1: Socio-Demographic and Work-Related Characteristics of staff nurse

Category	Sub-category	Frequency	
		n	%
Age	<35 years	218	54.5
	≥35 years	182	45.5
	Mean	35.21	
	Range	(20–55)	
Sex	Female	174	43.5
	Male	226	56.5
Marital status	Single	80	20
	Married	211	52.8
	Divorced	97	24.3
	Widowed	12	3.0
Educational qualification	Diploma	27	6.8
	Bachelor	247	61.8
	Master	113	28.2
	PhD	13	3.3
Nationality	Non-Saudi	112	28.0
	Saudi	288	72.0
Type of contract	Civil servant	74	18.5
	Contract staff	205	51.2
	Others	37	9.3
	Statutory staff	84	21.0
Work experience	<1 year	28	7.0
	1–5 years	109	27.3
	6–10 years	183	45.8
	11–15 years	62	15.5
	>15 years	18	4.5
Weekly working hours	>36 hours	32	8.0
	36–40 hours	181	45.3
	41–45 hours	148	37.0
	>45 hours	39	9.8

Table 2: Toxic Leadership Behaviors of Nurse Managers Scale Scores

S/N	Parameters	Total possible score	Total score	Mean score	SD
1	Intemperate	15–75	31.17	2.07	0.90
2	Narcissistic	9–45	19.47	2.16	0.97
3	Self-promoting	3–15	6.35	2.11	0.95
4	Humiliating	3–15	6.26	2.08	0.93
Total		30–150	63.25	2.10	0.93

The intemperate sub-scale showed a total score of 31.17 and a mean score of 2.07, indicating that the participants disagreed with their nurse managers being hostile. The narcissistic sub-scale yielded a total score of 19.47 and a mean score of 2.16, showing that the participants disagreed with their nurse managers having narcissistic behaviours. The self-promoting sub-scale demonstrated a total score of 6.35 and a mean score of 2.11, indicating that the participants disagreed with their nurse managers having self-promoting behaviours. The humiliating sub-scale showed a total score of 6.26 and a mean score of 2.08, demonstrating that the participants disagreed with their nurse managers having humiliating behaviours.

Well-Being

This section shows the participants' perceptions of their well-being.

Table 3 displays the total scores, mean scores and SDs for the BBC-WBS and its sub-scales. The total BBC-WBS scores ranged from 24 to 120, with a total score of 69.86 and a mean score of 2.90, indicating that the participants had a moderate level of well-being.

Table 3: BBC Well-Being Scale Scores

S/N		Total possible score	Total score	Mean score	SD
1	Psychological well-being	12–60	35.32	2.94	1.02
2	Physical health and well-being	7–35	19.88	2.84	0.95
3	Relationships	5–25	14.66	2.93	1.02
Total		24–120	69.86	2.90	0.99

Table 4: Influence of the Socio-Demographic and Work-Related Characteristics on Well-Being

Category	Sub-category	Mean	SD	t/F value	p value
Age	<35 years	3.04	0.53	0.27	0.000 ^a
	≥35 years	2.74	0.51		
Sex	Female	2.99	0.49	1.63	0.004 ^a
	Male	2.84	0.57		
Marital status	Single	3.09	0.57	11.50	0.000 ^a
	Married	2.93	0.54		
	Divorced	2.64	0.42		
	Widowed	2.72	0.34		
Educational qualification	Diploma	2.89	0.40	3.89	0.009 ^a
	Bachelor	2.97	0.51		
	Master	2.78	0.56		
	PhD	2.71	0.79		
Nationality	Non-Saudi	2.69	0.48	0.62	0.000 ^a
	Saudi	2.99	0.54		
Type of contract	Civil servant	3.17	0.63	10.85	0.000 ^a
	Contract staff	2.91	0.52		
	Others	2.79	0.45		
	Statutory staff	2.71	0.43		
Work experience	<1 year	3.02	0.56	4.15	0.003 ^a
	1–5 years	2.85	0.59		
	6–10 years	2.86	0.46		
	11–15 years	2.95	0.55		
	>15 years	3.35	0.70		
Weekly working hours	<36 hours	2.86	0.51	12.43	0.000 ^a
	36–40 hours	2.75	0.51		
	41–45 hours	3.03	0.51		
	>45 hours	3.20	0.57		

The psychological well-being sub-scale demonstrated a total score of 35.32 and a mean score of 2.94, indicating that the participants had a moderate level of psychological well-being. The physical health and well-being sub-scale showed a total score of 19.88 and a mean score of 2.84, indicating that the participants had a moderate level of physical health and well-being. The relationship sub-scale yielded a total score of 14.66 and a mean score of 2.93, showing that the participants had a moderate level of social relationships.

Association Between the Socio-Demographic and Work-Related Characteristics and Well-Being

This section demonstrates the association between the socio-demographic and work-related characteristics and perceptions of well-being of the participants.

Table 4 presents the relationship between the socio-demographic and work-related characteristics and well-being of the participants. It shows the mean, SD, t/F and p values for each variable. The p values indicate the statistical significance of the difference in the mean scores between the groups of each variable. A p value less than 0.05 indicates that the difference is statistically significant.

Well-being was significantly associated with educational qualification, age, sex, marital status, nationality, type of contract, work experience and weekly

Table 5: Correlation Between Toxic Leadership Behaviours and Nurse Well-Being

Parameters	Psychological well-being	Physical health and well-being	Relationships	Total well-being
Intemperate	0.21 ^{**}	0.17 ^{**}	0.17 ^{**}	0.22 ^{**}
Narcissistic	0.31 ^{**}	0.22 ^{**}	0.23 ^{**}	0.31 ^{**}
Self-promoting	0.27 ^{**}	0.14 ^{**}	0.17 ^{**}	0.24 ^{**}
Humiliating	0.30 ^{**}	0.20 ^{**}	0.18 ^{**}	0.29 ^{**}
Total toxic leadership behaviours	0.28 ^{**}	0.21 ^{**}	0.21 ^{**}	0.28 ^{**}

p < 0.05, ^{**}p < 0.01

working hours. The participants who were aged 35 years and above, were women, held a bachelor's degree, were single, were from Saudi, were civil servants, had worked for more than 15 years and were working more than 45 hours per week showed better well-being than the other participants.

Correlation Between Toxic Leadership Behaviours and Nurse Well-Being

This section presents the correlation between the toxic leadership behaviours of nurse managers and the well-being of the participants.

Table 5 displays the correlation between the toxic leadership behaviours of nurse managers and the well-being of the participants. There was a positive significant association noted between them (p < 0.01), indicating that a reduced perceived level of toxic leadership behaviours among nurse managers improved the well-being of the participants.

DISCUSSION

The present study explored the impact of toxic leadership on the well-being of nurses working in tertiary hospitals in two key Saudi health clusters: the Riyadh Second Health Cluster and Al-Qassim Health Cluster. Anchored in the broader discourse surrounding leadership styles and healthcare workforce sustainability, the findings reveal important dynamics between leadership behaviour and nurse well-being, while also highlighting several sociodemographic and professional variables that shape this relationship. The significance of these findings lies in their alignment with and contribution to, the growing international literature concerned with improving healthcare environments, enhancing workforce resilience and ultimately advancing patient care quality.

In line with prior studies conducted both in Saudi Arabia and internationally, participants in this study generally reported low levels of toxic leadership in their workplace. This aligns with earlier research by Zaki and Elsaïad., Lyu *et al.* and Abdallah and Mostafa, which similarly found that nurses perceived their leaders to exhibit predominantly constructive, non-toxic behaviours [25-27]. One plausible explanation for this consistency lies in the systemic efforts initiated under Saudi Vision 2030, which has emphasized leadership development across sectors, including healthcare. Through targeted professional development initiatives and the establishment of institutional performance metrics, nurse managers may now be more consistently trained in emotional intelligence, conflict resolution and ethical leadership, competencies that mitigate the occurrence of

toxic behaviours. Moreover, such leadership reforms are frequently supported by continuing education programs and organisational leadership policies aimed at fostering accountability and transparency, potentially reinforcing the observed patterns of non-toxic leadership.

Nevertheless, the findings also contrast with studies conducted in more acute or high-pressure settings, such as emergency departments or mental health units, where toxic leadership tends to be reported at significantly higher levels. For instance, recent studies by Alsadaan and Alqahtani and Abdelaliem and Zeid found that nurses working in emergency units experienced heightened exposure to controlling, manipulative and dismissive leadership styles [28,29]. These contextual variations may be attributed to the high-stress, fast-paced nature of emergency and critical care settings, where managerial decisions often bypass collaborative processes, leading to increased perceptions of authoritarianism or lack of empathy. Therefore, while the current findings reflect a generally positive leadership environment, they must be interpreted with sensitivity to the variability introduced by clinical setting, specialty and institutional culture.

Turning to nurses' well-being, participants reported moderate levels of well-being, which is in concordance with research conducted in European and Asian contexts where similar professional environments prevail. For instance, Lorber *et al.* and Macarian reported comparable well-being scores among nurses in non-critical care settings. Such findings may be interpreted as indicative of balanced work environments, where while stress and workload are present, they are not overwhelming. In contrast, studies focusing on emergency and intensive care environments frequently report significantly lower [30,31] well-being scores due to increased occupational stress, burnout and emotional fatigue [32,33]. Furthermore, the moderate well-being scores in the present study are arguably reflective of partial success in institutional efforts to implement supportive work policies, such as access to psychological counselling, structured peer support programs and improved work-life balance initiatives.

Several sociodemographic and professional factors emerged as significant predictors of nurse well-being, offering important insights into the workforce dynamics of Saudi healthcare institutions. Gender was found to play a significant role, with female nurses reporting higher levels of well-being than their male counterparts. This finding resonates with studies that suggest women, despite facing challenges such as limited representation in leadership roles, often demonstrate greater job satisfaction and resilience in

the face of workplace adversity [34,35]. Age and years of professional experience also demonstrated a positive correlation with well-being, which may be attributed to the development of coping strategies, emotional maturity and increased confidence over time. These findings are consistent with the work of Chien and Yick, who argue that emotional self-regulation and adaptive problem-solving improve with professional maturity [36].

Educational attainment further emerged as a positive predictor, with nurses holding bachelor's degrees reporting higher well-being. This could be linked to the greater clinical knowledge, communication skills and sense of professional identity often associated with higher education, which together facilitate increased competence and job satisfaction [37]. Additionally, nurses in permanent employment or in higher-ranking positions reported better well-being outcomes, suggesting that job security, authority and autonomy serve as buffers against occupational stress. Notably, long working hours negatively affected well-being, aligning with a robust body of evidence that links extended shifts and excessive workloads with fatigue, emotional exhaustion and decreased job performance [38].

Nationality was also found to be significantly associated with nurse well-being, echoing global research on migrant healthcare workers. Expatriate nurses in Saudi Arabia may face additional challenges, including cultural adjustment difficulties, language barriers and limited access to social support networks, all of which can contribute to decreased well-being [39,40]. These findings suggest that culturally tailored support mechanisms, mentorship programs and inclusion initiatives may be necessary to address the unique stressors experienced by expatriate healthcare workers.

Crucially, the study confirmed a significant negative association between toxic leadership and nurse well-being, reinforcing the hypothesis that toxic leadership adversely affects psychological, emotional and even physical health outcomes among nurses. This finding is in strong agreement with prior research by Labrague *et al.*, Ofei *et al.* and Kılıç and Günşel, which identified that nurses exposed to toxic leadership were more likely to report burnout, job dissatisfaction, absenteeism and a higher intention to leave their job [12,23,41]. The mechanisms underpinning this relationship are multifaceted. Toxic leaders often create psychologically unsafe environments, eroding trust and lowering morale through behaviours such as micromanagement, passive-aggression and favouritism. This not only disrupts team cohesion but also fosters chronic stress, which, over time, can manifest in physical symptoms such as fatigue and sleep disturbances. Additionally, toxic leadership undermines the foundational values of care, empathy and collaboration that are central to the nursing profession, thereby diminishing nurses' sense of purpose and intrinsic motivation.

The practical implications of these findings are substantial. They underscore the need for healthcare institutions to invest in evidence-based leadership development programs that prioritize emotional intelligence,

ethical decision-making and staff empowerment. Such training should be embedded into leadership onboarding, promotion criteria and continuing professional development frameworks. Moreover, organisations must foster a culture of accountability, where toxic behaviours are swiftly addressed through clear policies, confidential reporting mechanisms and restorative feedback systems. Simultaneously, it is essential to promote workplace well-being through initiatives such as flexible scheduling, wellness programs, mental health support and structured peer mentorship, particularly for younger, less experienced or foreign-trained nurses. These institutional actions would not only mitigate the deleterious effects of toxic leadership but also enhance overall staff morale, reduce turnover and improve patient care outcomes.

Nevertheless, the study is not without limitations. As a cross-sectional design relying on self-reported data, the study cannot establish causality and the results may be subject to response bias. Longitudinal research would provide a deeper understanding of how leadership behaviours and well-being evolve over time. Additionally, the geographic scope was limited to two health clusters and while these are significant institutions, the findings may not fully represent the diversity of experiences across other regions or types of healthcare settings in Saudi Arabia. Future studies should also consider incorporating qualitative methodologies, such as interviews or focus groups, to capture more nuanced insights into how nurses experience and interpret leadership behaviours in their daily practice.

CONCLUSIONS

This study adds to the growing body of literature emphasizing the critical role of leadership in shaping the well-being of nursing professionals. By demonstrating a clear inverse relationship between toxic leadership and nurse well-being and by identifying key demographic and professional predictors of well-being, the findings provide a compelling case for leadership reform and well-being prioritization within Saudi Arabia's healthcare institutions. As the nation continues to transform its healthcare system under Vision 2030, fostering healthy leadership and resilient nursing environments will be essential for achieving sustainable, high-quality care.

Ethical Statement

Ethical approval was obtained from the Institutional Review Board (IRB) of Majmaah University College of Nursing and the selected hospitals, including the Riyadh Second Health Cluster (IRB log number 24-253C) and the Al-Qassim Health Cluster (IRB log number H-04-Q-001). Participants were fully informed, assured of confidentiality and anonymity and given the right to voluntary participation and withdrawal at any time.

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