Tianjin Daxue Xuebao (Ziran Kexue yu Gongcheng Jishu Ban)/
Journal of Tianjin University Science and Technology
ISSN (Online):0493-2137
E-Publication: Online Open Access
Vol: 59 Issue: 10:2026
DOI: 10.5281/zenodo.23621561

TOXIC LEADERSHIP AND NURSES' RESILIENCE AND PSYCHOLOGICAL WELL-BEING: EVIDENCE FROM SEVEN GOVERNMENT HOSPITALS IN SAUDI ARABIA

SAAD AQEEL ALSHAMMARI*
Faculty of Nursing, Cairo University, Egypt. Seven Governmental Hospitals, Hafr Al-Batin, Saudi Arabia.
*Corresponding Author

Abstract

Background: Nurses' resilience and psychological well-being are central to sustaining a healthy workforce, yet their relationships with toxic leadership remain poorly characterized in Saudi Arabia. **Objective:** To examine the associations of toxic leadership with resilience and psychological well-being among Saudi nurses and to compare the relative strength of these relationships. **Methods:** A cross-sectional correlational study was conducted among 296 Saudi nurses in seven governmental hospitals in Hafr Al-Batin. Toxic leadership, resilience, and psychological well-being were measured using validated instruments. Spearman correlations and bootstrap structural equation models were used. **Results:** Toxic leadership was negatively correlated with resilience ($r=-.601$) and psychological well-being ($r=-.517$), both $p<.01$. Structural models showed significant negative associations with resilience ($\beta=-.4800$, $p=.0015$, $R^2=.380$; 95% bootstrap CI −.7909 to −.2578) and psychological well-being ($\beta=-.2879$, $p=.0010$, $R^2=.233$; 95% bootstrap CI −.5782 to −.1349). The psychological well-being model showed CFI=.8797, TLI=.8390, IFI=.8616, and RMSEA=.0756. The resilience model showed CFI=.8986, TLI=.8705, IFI=.8895, and RMSEA=.0708. A spirituality item concerning divine help had the highest resilience item mean (4.47/5**). Conclusion:** Toxic leadership was associated with lower resilience and psychological well-being. The findings provide new Saudi evidence and a culturally relevant indication that spirituality may be an important resilience resource. Longitudinal and multisource studies are needed.

Keywords: Toxic Leadership; Resilience; Psychological Well-Being; Nurse Managers; Saudi Arabia; Nursing Workforce; Spirituality.

INTRODUCTION

Resilience enables nurses to adapt and recover under occupational stress and adversity, while psychological well-being encompasses broader dimensions of functioning including autonomy, environmental mastery, personal growth, positive relationships, purpose in life, and self-acceptance (Labrague, 2024a; Labrague, 2021; Labrague et al., 2020; Labrague, 2024c). Both resources matter in demanding clinical environments, but they are not interchangeable. Resilience is more closely tied to adaptation under adversity, whereas psychological well-being extends across multiple domains of life.

Leadership is one of the environmental conditions that can either support or challenge these resources. Positive leadership styles have been associated with greater resilience, while adverse or abusive supervision has been associated with poorer psychological outcomes (Alqarawi et al., 2025; Alsadaan, 2025; Alosaimi & Alanazy, 2025; Schwarzer & Jerusalem, 1995). A systematic review of toxic leadership in nursing identified psychological well-being as one of the principal domains affected by toxic leadership (Alqarawi et al., 2025).

Tianjin Daxue Xuebao (Ziran Kexue yu Gongcheng Jishu Ban)/
Journal of Tianjin University Science and Technology
ISSN (Online):0493-2137
E-Publication: Online Open Access
Vol: 59 Issue: 10:2026
DOI: 10.5281/zenodo.23621561

Saudi evidence is still developing. Recent studies have examined resilience in relation to coping and well-being (Bandura, 1977), and destructive leadership in relation to occupational pressure and burnout (Connor & Davidson, 2003). However, the doctoral literature identified no Saudi study directly measuring toxic leadership and resilience within the same nursing sample. Similarly, only one Saudi study had directly addressed toxic leadership and well-being, reporting a positive association and describing the leadership observed as practically non-toxic (Ryff, 1989). That finding differed from the wider international literature and was itself interpreted cautiously by its authors. The present study therefore examines two related but distinct outcomes. It asks whether toxic leadership is associated with lower resilience, whether it is associated with lower psychological well-being, and whether the strength of these associations differs. The study also considers the cultural context of resilience, including the role of spirituality identified through the resilience instrument.

METHODS

Design and Participants

A cross-sectional correlational study was conducted among 296 Saudi nurses recruited from seven governmental hospitals in Hafr Al-Batin. Participants were registered nurses providing direct inpatient care, had at least six months of experience in the current hospital, and provided informed consent. A stratified random sampling approach was used, with educational level as the stratification basis.

Measures

Toxic leadership was measured with the 30-item Toxic Leadership Behaviors of Nurse Managers Scale (Ryff & Keyes, 1995). Resilience was measured with the 25-item Connor-Davidson Resilience Scale, scored from 0 to 100 (Labrague, 2024a). Psychological well-being was measured using Ryff's 42-item scale covering autonomy, environmental mastery, personal growth, positive relations, purpose in life, and self-acceptance (Labrague, 2021; Labrague et al., 2020). Cronbach's alpha values in the sample were .970 for toxic leadership, .938 for resilience, and .906 for psychological well-being.

Analysis and Ethics

Because the principal variables were not normally distributed, Spearman correlation was used for bivariate analysis. Separate bootstrap structural equation models estimated the paths from toxic leadership to resilience and psychological well-being. Ethical approval was obtained from the Ethics Committee of the Faculty of Nursing, Cairo University, and the Institutional Review Board at King Fahad Medical City. Written informed consent was obtained from participants.

Tianjin Daxue Xuebao (Ziran Kexue yu Gongcheng Jishu Ban)/
Journal of Tianjin University Science and Technology
ISSN (Online):0493-2137
E-Publication: Online Open Access
Vol: 59 Issue: 10:2026
DOI: 10.5281/zenodo.23621561

RESULTS

Sample Characteristics

The sample was predominantly female (84.5%), with 85.8% younger than 40 years. Staff nurses comprised 75.7%. Diploma-prepared nurses represented 62.5%, bachelor's-prepared nurses 32.8%, and master's-prepared nurses 4.7%. A total of 60.5% had less than five years of experience in the current hospital. Most participants worked eight-hour shifts (97.0%).

Toxic Leadership, Resilience, and Psychological Well-Being

Participants generally reported low levels of toxic leadership behaviors. The item means for toxic leadership ranged from 1.81 to 2.25 on the three-point scale. Resilience item means ranged from 3.57 to 4.47 on the five-point scale. The highest-rated resilience item was "I believe most of the time that Allah will help me" (M=4.47), indicating a prominent spirituality-related resource in this sample. Psychological well-being responses were generally favorable across the six dimensions.

Correlations

Table 1: Results Summary

Relationship	Spearman r	p
Toxic leadership – resilience	−.601	<.01
Toxic leadership – psychological well-being	−.517	<.01
Resilience – psychological well-being	.315	<.01

Structural Models

Table 2: Results summary

Outcome	β	SE	95% bootstrap CI	p	R^2
Resilience	−.4800	.0804	−.7909 to −.2578	.0015	.380
Psychological well-being	−.2879	.0611	−.5782 to −.1349	.0010	.233

For resilience, CMIN/DF=2.4791, RMR=.0715, CFI=.8986, TLI=.8705, IFI=.8895, and RMSEA=.0708. For psychological well-being, CMIN/DF=2.6859, RMR=.0712, CFI=.8797, TLI=.8390, IFI=.8616, and RMSEA=.0756.

DISCUSSION

The study found significant negative associations between toxic leadership and both resilience and psychological well-being. The resilience association was stronger than the psychological well-being association, both in correlation and structural modeling. This pattern is compatible with the conceptual distinction between a work-relevant adaptive resource and a broader construct of psychological functioning.

The resilience finding (β=−.4800; R^2=.380) is consistent with evidence that resilience is shaped by environmental and leadership conditions as well as personal coping resources (Alsadaan, 2025; Bandura, 1977). In Saudi nurses, coping strategies and other psychological factors have been associated with resilience (Bandura, 1977).

Tianjin Daxue Xuebao (Ziran Kexue yu Gongcheng Jishu Ban)/
Journal of Tianjin University Science and Technology
ISSN (Online):0493-2137
E-Publication: Online Open Access
Vol: 59 Issue: 10:2026
DOI: 10.5281/zenodo.23621561

Internationally, manager ability, leadership, and support have been identified as predictors of resilience among new nurses (Sun et al., 2022), while transformational leadership has been positively associated with resilience in Lebanese nurses (Alsadaan, 2025). The present study adds evidence from the negative pole of leadership behavior in a Saudi sample.

The cultural finding concerning spirituality is also notable. The highest-rated resilience item concerned confidence in divine help (M=4.47). Previous studies among nurses in Muslim-majority settings have reported relationships between spirituality and resilience (Abdelhamed et al., 2025; Labrague, 2024b). This finding does not establish that spirituality caused higher resilience, but it indicates that culturally relevant resilience interventions may benefit from recognizing resources that participants themselves rate highly.

The psychological well-being model showed a smaller association ($\beta=-.2879$; $R^2=.233$). This is theoretically plausible because Ryff's construct encompasses broad life domains that extend beyond the workplace (Labrague, 2021; Labrague et al., 2020). At the same time, an association accounting for approximately 23% of variance is meaningful in a multifactorial construct. The finding is consistent with systematic-review evidence identifying psychological well-being among the outcome domains affected by toxic leadership (Alqarawi et al., 2025) and with studies linking toxic leadership to psychological distress and work-related outcomes (Alosaimi & Alanazy, 2025).

The Saudi evidence requires particular care. Alosaimi and Alanazy reported a positive association between toxic leadership and well-being (Ryff, 1989), whereas the present study found a negative association. The two studies differed in region, instruments, and context, and the earlier authors themselves described their result as divergent and requiring cautious interpretation. The present data do not resolve why the results differ. Regional organizational culture, health-cluster structures, measurement differences, social desirability, and floor effects are plausible explanations that require direct testing rather than assumption.

The difference in strength between resilience and psychological well-being also aligns with a broader theoretical interpretation. Resilience may draw on personal, social, and spiritual resources that are not entirely controlled by the workplace. Psychological well-being, although broader, may remain meaningfully connected to the work environment through stress, relationships, autonomy, and perceived mastery. The current cross-sectional data cannot establish a pathway between these constructs and should not be interpreted as evidence of mediation.

From an organizational perspective, the results support leadership development and support systems as complementary strategies. Evidence from nursing leadership interventions indicates that structured development can improve leadership-related outcomes (Yürür et al., 2025). Intervention reviews also suggest that educational efforts work best when accompanied by team-level and active leadership support rather than relying on zero-tolerance policies alone (Roy & Andrews, 1999).

Tianjin Daxue Xuebao (Ziran Kexue yu Gongcheng Jishu Ban)/
Journal of Tianjin University Science and Technology
ISSN (Online):0493-2137
E-Publication: Online Open Access
Vol: 59 Issue: 10:2026
DOI: 10.5281/zenodo.23621561

Limitations

The cross-sectional design prevents causal or temporal conclusions. All variables were measured by self-report from the same respondents, creating possible common method variance. The structural models did not adjust for demographic or professional covariates. The sample came from one Saudi region and governmental facilities, limiting generalization to other regions and private-sector settings. The incremental fit indices for the resilience and psychological well-being models were below commonly used .90 thresholds, so the models should be regarded as acceptable but not uniformly strong across all fit indices. Finally, the study did not test mediation or moderation and therefore cannot determine whether resilience transmits or buffers the relationship between toxic leadership and psychological well-being.

CONCLUSION

Toxic leadership was significantly associated with lower resilience and lower psychological well-being among Saudi nurses in seven governmental hospitals. The resilience relationship was stronger than the psychological well-being relationship, while spirituality emerged as a highly rated resilience resource. These findings extend the Saudi evidence base but require replication across regions and sectors using longitudinal, multisource designs. Future studies should directly test whether resilience and self-efficacy mediate or moderate the relationship between adverse leadership and broader well-being.

Declarations

Ethics approval: Ethical approval was obtained from the Ethics Committee of the Faculty of Nursing, Cairo University, and the Institutional Review Board at King Fahad Medical City. Written informed consent was obtained from participants.

Consent for publication: Not applicable; no individually identifiable participant information is reported.

Funding: No external funding statement was reported in the source doctoral manuscript; this declaration should be confirmed by the authors before submission.

Competing interests: The authors should confirm and declare any financial or non-financial competing interests in accordance with the target journal.

Data availability: Participant-level data are not publicly reproduced in this manuscript. Any data-sharing statement should follow the ethical approval and institutional requirements governing the study.

Author contributions: The authors should complete the journal's required contribution taxonomy before submission.

Submission note

The manuscript should be accompanied by the journal’s STROBE checklist and by full disclosure of any other manuscripts derived from the same doctoral dataset. Journal-specific instructions regarding word count, reference style, graphical abstracts, supplementary files, and reporting checklists should be followed.

Tianjin Daxue Xuebao (Ziran Kexue yu Gongcheng Jishu Ban)/
Journal of Tianjin University Science and Technology
ISSN (Online):0493-2137
E-Publication: Online Open Access
Vol: 59 Issue: 10:2026
DOI: 10.5281/zenodo.23621561

References

1) Connor KM, Davidson JRT. Development of a new resilience scale: the Connor-Davidson Resilience Scale (CD-RISC). Depress Anxiety. 2003;18(2):76-82.

2) Ryff CD. Happiness is everything, or is it? Explorations on the meaning of psychological well-being. J Pers Soc Psychol. 1989;57(6):1069-1081.

3) Ryff CD, Keyes CLM. The structure of psychological well-being revisited. J Pers Soc Psychol. 1995;69(4):719-727.

4) Labrague LJ. Toxic leadership and its relationship with outcomes on the nursing workforce and patient safety: a systematic review. Leadersh Health Serv. 2024;37(2):192-214. doi:10.1108/LHS-06-2023-0047.

5) Labrague LJ. Linking toxic leadership with work satisfaction and psychological distress in emergency nurses: the mediating role of work-family conflict. J Emerg Nurs. 2024;50(5):670-678. doi:10.1016/j.jen.2023.11.008.

6) Salam HA, Dumit NY, Clinton M, Mahfoud Z. Transformational leadership and predictors of resilience among registered nurses: a cross-sectional survey in an underserved area. BMC Nurs. 2023;22:37. doi:10.1186/s12912-023-01192-1.

7) Abdelhamed EZ, Abdeen M, Ahmed SE, Abdelwahid AEA. Impact of abusive supervision on nurses' turnover intentions: the moderating effect of resilience. Zagazig Nurs J. 2025;21(1):109-124. doi:10.21608/znj.2024.340080.1029.

8) Hussein AHM, Abou Hashish EA, Younes BM. The relationship between nurses' psychological well-being and their work productivity loss: a descriptive correlational study. SAGE Open Nurs. 2024;10. doi:10.1177/23779608241285400.

9) Sacgaca L, Gonzales A, Alkubati S, et al. The impact of mental well-being, stress, and coping strategies on resilience among staff nurses during COVID-19 in Saudi Arabia: a structural equational model. Healthcare. 2023;11(3):368. doi:10.3390/healthcare11030368.

10) Alsadaan N. Exploring the connections between destructive leadership styles, occupational pressures, support systems, and professional burnout in nursing: a cross-sectional survey. BMC Nurs. 2025;24:681. doi:10.1186/s12912-025-03421-1.

11) Alosaimi GM, Alanazy W. The association of toxic leadership on nurses' well-being in Saudi Arabia. J Pioneering Med Sci. 2025;14(S2):253-260. doi:10.47310/jpms202514S0238.

12) Labrague LJ, Lorica J, et al. Development and psychometric testing of the toxic leadership behaviors of nurse managers (ToxBH-NM) scale. J Nurs Manag. 2020;28(4). doi:10.1111/jonm.13008.

13) Park K, Jang A. Factors affecting the resilience of new nurses in their working environment. Int J Environ Res Public Health. 2022;19(9):5158. doi:10.3390/ijerph19095158.

14) Rakhshan M, Derakhshan S, Najafi Kalyani M. The relationship between spiritual health and resilience of nurses with their compassionate care in intensive care units. J Educ Health Promot. 2024;13(1):377. doi:10.4103/jehp.jehp_939_23.

15) Sevinc S, Ozdemir S. Nurses' spirituality and resilience during the month of Ramadan. J Pak Med Assoc. 2023;73(6):1226-1230. doi:10.47391/JPMA.7163.

16) Cummings GG, Lee S, Tate K, et al. The essentials of nursing leadership: a systematic review of factors and educational interventions influencing nursing leadership. Int J Nurs Stud. 2021;115:103842. doi:10.1016/j.ijnurstu.2020.103842.

Tianjin Daxue Xuebao (Ziran Kexue yu Gongcheng Jishu Ban)/
Journal of Tianjin University Science and Technology
ISSN (Online):0493-2137
E-Publication: Online Open Access
Vol: 59 Issue: 10:2026
DOI: 10.5281/zenodo.23621561

17) Dirik HF, Seren İntepeler Ş. An authentic leadership training programme to increase nurse empowerment and patient safety: a quasi-experimental study. J Adv Nurs. 2024;80(4):1417-1428. doi:10.1111/jan.15926.

18) Luca CE, Sartorio A, Bonetti L, Bianchi M. Interventions for preventing and resolving bullying in nursing: a scoping review. Healthcare. 2024;12(2):280. doi:10.3390/healthcare12020280.

19) Hasan A, Alsulami A. Mediating role of resilience and its impact on psychological well-being, and mental distress among mental health nurses. SAGE Open Nurs. 2024;10:23779608231219140. doi:10.1177/23779608231219140.

20) Alsadaan N, Ramadan OME, Alqahtani M. From incivility to outcomes: tracing the effects of nursing incivility on nurse well-being, patient engagement, and health outcomes. BMC Nurs. 2024;23(1):325. doi:10.1186/s12912-024-01996-9.

21) Xiao Q, Liang X, Liu L, Klarin A, Zhang C. How do work–life balance programmes influence nurses' psychological well-being? The role of servant leadership and learning goal orientation. J Adv Nurs. 2023;79(7):2720-2731. doi:10.1111/jan.15654.